Convention on Biological Diversity

SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL
  AND TECHNOLOGICAL ADVICE
Twenty-fourth meeting
Online, 3 May – 9 June 2021
Item 3 of the provisional agenda[*]

COMMENTS FROM THE SURVEY ON HEADLINE INDICATORS

POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

Note by the Executive Secretary

1.   The present document reproduces the comments from the survey prepared by the Secretariat, at the request of the co-chairs of the contact group established on agenda item 3 (post-2020 global biodiversity framework) during the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice, to collect feedback from SBSTTA focal points or CBD national focal points (where SBSTTA focal points have not been designated) and representatives of observer organizations on the applicability and usability of each of the headline indicators proposed in document CBD/SBSTTA/24/3/Add.1. The survey is considered an in-session document.

2.   The comments received from SBSTTA focal points and observer organizations are contained in annexes I and II, respectively, below. The results of the survey are summarized in the co-chairs' summary of the work of the contact group on item 3 and will be taken into consideration in the revision of the monitoring framework for the post-2020 global biodiversity framework.

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[*] CBD/SBSTTA/24/1.

Comments received from Parties on the survey on Headline Indicators

Goal A. The area, connectivity and integrity of natural ecosystems increased by at least [X%] supporting healthy and resilient populations of all species while reducing the number of species that are threatened by [X%] and maintaining genetic diversity		
A.0.1 Extent of selected natural ecosystems (forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)		
A.0.1 If you selected "yes, however requires further work", please describe:	**A.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**A.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
In respect of the "natural ecosystems" part of the Goal, the current indicator only addresses the increase in area. It would need to be improved to address the missing elements i.e. connectivity and integrity.		
Continuity in map development is needed	There are groups that work on this information, however they need to be greatly strengthen to process and compile information.	
The indicators only measures extent (area), which is only one element of the goal. Means to measure the other aspects – connectivity and integrity – are also required in the indicators framework. In order to limit proliferation of headline indicators, these could be captured as component indicators. The lack of a measure for connectivity is a particular gap. Australia supports the submission made by the Convention on Migratory Species on possible ways to fill this gap. Also, we query why we would limit measurement to only those selected natural ecosystems.		
Definition for "natural ecosystems" is needed. The HI should include "all" natural ecosystems (e.g. also mountainous ecosystems).		
		1/ The headline indicator for Goal A should assess the total area of the planet that is under sustainable management measures for biodiversity, either via

		conservation, restoration or sustainable use. We should thus not limit this HE and its goal to natural ecosystems. Semi natural ecosystems, managed/productive/extractive/urban ecosystems having sustainable management practices favouring biodiversity should also be accounted for, even if disaggregated in sub categories. It is crucial that this headline indicator (and its related Goal A) assesses how we protect and sustainably manage the biodiversity. Goal B can then be about the benefits we get from nature as a result of a good implementation of Goal A. Thus HI could be: A.0.1: "Extent of selected natural, semi natural, sustainably managed and sustainable productive and urban ecosystems" with disaggregation by ecosystem type or by management type (PA, productive, mixed etc…) 2/ A HI on genetic diversity should be added regarding this goal, as it is one of the 3 level components of biodiversity. 3/ what about Indicator on connectivity which is missing even though in the Goal elements? connectivity is not even in the component indicators, it should at least be there.
The indicator must also include Mountain Ecosystems	Require capacity building and assistance with data	
		The coverage of ecological network
		Extent of natural ecosystems within both public and private areas per countryExtent of natural ecosystems within both public and private areas per country.
Thank you for this survey, which is positive to help structure feedback on the proposed headline indicators for the upcoming OEWG3 discussions. Canada is pleased to express its views though our responses should not be considered as implicit acceptance or not of the updated zero draft of the post-2020 global biodiversity	We are not aware of widespread nationally-based monitoring mechanisms or global indicators that can measure natural ecosystem extent / integrity and connectivity for all ecosystems but there are some options that we have been made aware of for individual ecosystem types listed under	We understand that the following proposed complementary indicators could be used for measuring 'natural' ecosystems / areas with high ecological integrity: a.32. Ecoregion Intactness Index (or Ecosystem Intactness Index, still being developed), a.8. Red List of Ecosystems (still being

framework, its structure, goals and/or targets. Canada will continue to express our views on the draft framework during meetings of the OEWG. Canada is glad to see that the first question that is being asked for each proposed headline indicator is whether it is relevant to the goal and / or target, e.g. in terms of whether the indicator can measure the outcome or activity. In this case, indicator A.0.1 is relevant for measuring one aspect of Goal A – area / extent of ecosystems - but not as we understand it for 'natural ecosystems' / 'integrity' and 'connectivity'. This is problematic as the aim of Goal A is not just to measure the extent of ecosystems which can be very coarse information (e.g. forest that is regenerating 50 years after a clearcut can be very different from one that is regenerating 50 years after a fire and different again to one that has never been cut in terms of its biodiversity). One of the key considerations is biodiversity along with ecosystem services, which contribute to integrity. However, currently no other headline indicators have been proposed for Goal A to measure natural ecosystems / integrity or connectivity. Another issue with indicator A.0.1 is that it describes what is intended to be measured (extent of natural ecosystems) but not the actual mechanism used to measure this, though some examples are provided in Add1 (e.g. SDGs 6.6.1, 11.3.1, 15.1.1 , 15.3.1). Of these, we find SDG indicator 15.1.1 (forest area as a proportion of total land area – a global indicator where data can be disaggregated for national use) one of the most relevant but we don't think that it measures 'natural' forest / integrity or connectivity. Is the information for A.0.1 on natural ecosystems / integrity and connectivity to be derived from national data then? If so, are most countries able to report on this?	component or complementary indicators. The unit of measurement for these indicators will need to address whether it is globally or nationally aggregated and also whether there is to be a '% increase' or a 'net gain' in extent of natural ecosystems / area of high ecological integrity.	developed), a.26 Forest Landscape Integrity Index (still being developed), a.15. Global coral reef extent (developed), a.46. Fish abundance and biomass (listed as still being developed), a.13. Live coral cover (developed) and a.14. Hard Coral cover and composition (developed), which could be combined, and a.20. Cover of key benthic groups (still being developed) and a.21. Fleshy algae cover (developed), which could be combined. We have checked all of these to make sure that if global, the data can be disaggregated for national use.
		this indicator is relevant
	Need for capacity building for Parties in order to properly monitor, evaluate and report by type of natural ecosystem.	
The measurement of extension should cover all the planet instead of naming which ecosystems, to avoid being prescriptive. The extent does not by itself measure	Capacity-building on the use of the IUCN Global Ecosystem Typology 2.0,using indicator A.0.1 with the IUCN Typology will allow standardization and	

progress on the connectivity and integrity of natural ecosystems, so this indicator although relevant is just measuring one component of the goal. We suggest using component indicator A.2.1 of ecosystem integrity index as a more sound indicator that measures area, connectivity and integrity. This indicator is led by Montana State University and Northern Arizona University, methodological information about this indicator and an example of its application can be found in https://www.nature.com/articles/s41597-019-0214-3	comparability between national reporting, otherwise each country will report based on their own typology making standardization and comparability very difficult .	
Most developing countries do not have substantial studies on this topic.	Most developing countries do not have substantial studies on this topic.	
To our knowledge, this indicator has not been developed yet.	Since this indicator has not been developed yet, there will be a need to create the capacities for its implementation. In order to implement this indicator, agreed definitions about natural ecosystems are needed.	
Note that the HI has a narrower scope than the Goal. Marine Ecosystems beyond coastal areas (via monitoring of species. Eg.g indicators by CMS) and Semi-natural terrestrial should also be included.	See comments above	
The extent of the ecosystems does not necessarily show a condition of value of importance or ecological representativeness, this indicator should be clarified taking into consideration the comments presented by several Parties.	First, we need to know how can we use the new format to do the national report and which mechanism is proposed to enhance standardization and comparability in national reporting and what are the opportunities of international cooperation to address the capacity building needs of developing countries in this regard.	
Should take into account also traditionally managed semi-natural grasslands.	Natural ecosystems types definitions need harmonized approach.	
Yes, but needs clarity on whether the indicator covers all relevant natural ecosystems. Integrity and connectivity are missing.	see other comments	The indicator needs to cover more ecosystems and we miss information on integrity, connectivity and health of ecosystems. The indicator should also use the global ecosystem typology: https://global-ecosystems.org/explore by UN SEEA EA by UN SEEA EA

		Use Global coral reef extent developed by ICRI. For forest, use "forest ecosystem extent" or "tree cover/tree cover loss" Three important components of ecosystems under goal are missing HI: 1) Ecosystem integrity Options include: Hansen et al. (2021, see https://ecoevorxiv.org/eyqw5) propose a framework around 13 indicators to address ecosystem integrity. A composite indicator could be derived from this work. or Indicator name: A.1.2. Ecosystem Intactness Index Organization: WCS. 2) Connectivity Various indicators addressing various elements exists. See review by CMS. Structural connectivity rather than functional connectivity could be taken into account. Organisation: EC/JRC 3) Ecosystem Health/functioning To be possibly addressed by assessing no net loss of natural capital or provisioning of ecosystem functions and associated services caused by anthropogenic pressures. This should be relatively easy to translate into measurable indicators such biomass of fish, area covered by eel grass/coral reef, etc. See e.g. for the marine ecosystems: https://www.nature.com/articles/s41586-021-03371-z
The term "natural" could have a connotation of being "people out" of ecosystems, when many ecosystems with high biodiversity are often under the stewardship of Indigenous peoples and local communities for instance. There will be a need to define "natural" so as to not exclude these areas. Furthermore, measures of integrity and connectivity are not captured by this indicator, which are crucial qualitative measures.	See above.	
Connectivity and integrity of the ecosystems are missing. A fraction of these selected ecosystems must be on areas with high species richness and diversity, including deep-	Yes, as far as they include areas of important value for biodiversity conservation	

sea environments. There are several algorithms and methods that shows that conservation of areas solely performs very worst for conserving biodiversity, independently of the facet considered. The list of selected ecosystems should be based on defined criteria – vulnerable/threatened ecosystems.		
Missing quality and connectivity. Gaps on biogeographic units.	Extent (Quantity) of all natural and seminatural ecosystems must be included in the indicator; the indicator should also cover the aspects of quality and connectivity	A.1.2. Ecosystem Intactness Index (by WCS, underway to become BIP indicator) Indicator : « Trends in ecosystem and habitat fragmentation » (indices covered by this indicated would be those proposed as complementary indicators for the Goal, being Trends in mangrove forest fragmentation, Forest Fragmentation Index, Relative Magnitude of Fragmentation, River Fragmentation Index, Dendritic Connectivity Index, Connectivity Status Index
	Each country must have a clear definition of each ecosystem and the boundary in order to set the baseline.	
Es necesario definir el sistema y la metodología con el cuál se van a identificar y medir los ecosistemas naturales. El índice es insuficiente para medir "conectividad"		
	The element should reflects the parties capacities, and can be reflected from the proportions of the ecosystem category	
The list of selected ecosystems leaves out most of the arid ecosystems - basically the whole desert biome is omitted. This biome has unique biodiversity and is highly important on the global level; and on the national level might constitute the majority of the terrestrial habitat. We suggest to add "desert" to the list. On the same note, a broader definition of coastal habitats should be used so as to include e.g. coastal dunes, known for their unique biodiversity.	Needs inclusion of the desert biome, additional habitats - please see the above.	
There is a gap regarding ecosystem quality/integrity and connectivity. Besides the extent, it is important also to evaluate the	A standard, global-wide, valid definition of ecosystem types, based on few and clear pragmatic descriptive elements (species and	A expert considers that the same indicator SDG 15.31 may be conveniently used.

condition of habitats in the ecosystems in terms of biotic and abiotic structure and its functions relevant to evaluate the ecosystem resilience. It should be considered that some ecosystems, such as forests, are also productive/managed ecosystems. Trends in natural areas conversion towards managed ones and vice-versa should also be assessed. (A transition matrix, such the one used by IPCC Guidelines on LULUCF is a good example, also with the aim to create synergies and trade-offs).	vegetation types describing both structure and function) is missing and needs to be developed. Consistent and comparable inventories and mapping are only effective if based on standardization in definition. It has to be considered land-use change of ecosystems induced by human activities (for example transformation of forest in grasslands) It is suggested to include semi natural ecosystems, managed/ productive/ extractive/ urban ecosystems having sustainable management practices favouring biodiversity. The integrity of ecosystems is also related to the stress on their components. An unbalance in water bodies quantitative status inevitably reflects on the related ecosystems, Therefore, indicator of water stress should also be taken into account.	It is based on a combination of land use change, as transformational ecological variable, net primary productivity as fast ecological variable, and soil organic carbon as slow ecological variable. It could allow to address ecosystem (or habitat) quality and integrity. The indicator is utilized by UNCCD with a net loss mechanisms. It is relevant also the coherence and synergy with Agenda 2030 reporting system and it is already utilized a large number of countries.
	Data gaps would have to be filled and additional capacity would be required to carry out required work to fill data gaps and to collect data on a timely basis.	
We support for this indicator, while we would like to add a footnote to show that "socio-ecological production landscapes and seascapes" (SEPLS) is also included in the "selected natural ecosystems" here. SEPLS is defined as "dynamic mosaics of habitats and land and sea uses" where the harmonious human-nature interaction maintains both biodiversity and human well-being (IPSI Charter) (Nishi and Yamazaki 2020), and this definition should also be added to the monitoring framework. Ref) Nishi M and Yamazaki M (2020). Policy Brief No.21 Landscape Approaches for the Post-2020 Biodiversity Agenda: Perspectives from Socio-Ecological Production Landscapes and Seascapes. United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS) Tokyo, Japan. https://collections.unu.edu/eserv/UNU:7774/UNU-IAS-PB-No21-2020.pdf		

Malaysia requests suitable metrics to measure connectivity and integrity of ecosystems. While many ecosystems have been mapped in Malaysia, the mapping has yet to be completed hence measuring an increase by [X%] is of our concern. Malaysia would like to suggest to remove the term 'natural' and keep ecosystems, as 'virgin' habitats untouched by man is rare.	Malaysia request assistant in capacity building for the following: -GIS and remote sensing capabilities to accurately measure area; -Measuring the new metrics like connectivity and integrity	Malaysia suggests to enhance standardization of the type of habitats. This could possibly be done through reporting according to biomes (Olsen, 2001)
Indicators for genetic diversity are needed to be in line with the objective that refers to the integration of healthy ecosystems and populations. Consider the inclusion of agroecosystems, since some of the complementary indicators include them. Also we suggest including indicator(s) for ecosystem integrity and connectivity.		
Complementary indicators need not to be limited only to hard coral cover and composition and fleshy algae cover. To provide a clear picture of decline or improvement these two indicators need to come with an indicator on benthic cover and composition, which will also show interaction of hard coral species and fleshy algae with other key benthic species, particularly for coral reefs. The suggestion is to have a more holistic indicator such as benthic cover.		
New investment in and adaptation of existing Monitoring and reporting systems is required		Extent of priority habitats and species important for conservation
indicator should include seminatural and managed natural areas, integrety and connectivity are missing		
Important to retain the qualifier, "natural".		The Component Indicator A.2. "Ecosystem integrity and connectivity (terrestrial, freshwater and marine ecosystems)" should include coastal ecosystems.
The "selected" criterion does not work. The list in parentheses is an incomplete and ostensibly random selection of both major and more specialized ecosystems, while other important ecosystems are missing. The list	The "selected" criterion also does not work for national reporting, given variations in which ecosystems exist and are important and relevant in any given country. Some countries may not have any of those ecosystems covered in parentheses.	Should be reworded as: "Extent of all major ecosystems"

should either be an _exhaustive high level list of ecosystems_ or _be removed_.		
This indicator does not mention connectivity or integrity, it measures only changes in the area of particular major habitat types. It also seems to be secondary with regard to the Species Habitat Index (which measures the proportion of suitable habitats for country's species that remain intact, relative to a baseline set in the year 2001).	It would need to be clearly described what and how would be to be calculated.	
Connectivity and integrity of the ecosystems are missing. The list of selected ecosystems should be based on defined criteria – vulnerable/threatened ecosystems. It should include the deep-sea environments that, due to their intrinsic characteristics, are considered vulnerable to anthropogenic stressors, either through direct impacts like the extractive industries (deep-sea mining), or through indirect impacts associated with climate change. Alternatively, all natural ecosystems should be included: "Extent of natural ecosystems in good conservation status".	See above. Aso, definitions and criteria are needed to allow setting the reference extent for future monitoring.	
This indicator must include an assessment process of connectivity among ecosystems.	CBD must develop a program that can help developing countries' capacity-building by increasing scientific and technological transfer from developed countries to developing countries.	
The indicator is conceptually simple and appropriate in that both national and global data can be used (national preferred); but further input is required in selecting the "focal" ecosystem "types" e.g. Mediterranean shrublands are one of the world's most diverse functional ecosystem types, yet shrublands are not included in the list. In addition, this indicator, when applied across multiple functional ecosystem types could be collated using the Ecosystem Area Index (Rowland et al 2019). The major limitation of focussing on area is that other facets of ecosystem health (i.e. integrity and connectivity) are ignored, and ecosystems are not "lost" in the same sense as they are on land, they are altered. To deal with this an alternative head line indicator for selected functional types could be the Ecosystem Health index (Rowland et al 2019). The EHI can be usefully applied in all realms (land, sea and freshwater). The same comments apply to this	Though conceptually simple and clear; the indicator will require careful coordination to ensure that it is consistently applied by parties in national reporting. There are alternative methods in use, and it would simply be a case of good metadata and clearly articulated recommendations for computation.There also needs to be clear guidance on when national data should be used, and alternatively when global datasets are preferred. In most cases both national and globally derived data are useful and can be compared and contrasted in national reports.	An alternative to the ecosystem area indicator is the Ecosystem Health index (Rowland et al 2019). The EHI can be usefully applied in all realms (land, sea and freshwater). The same comments apply to this index as to the EAI, it can be computed top down and bottom up. Allowing parties to use their own data on ecosystem connectivity, function composition and structure, where available, and to use global models if preferred. This indicator can track loss of extent and or integrity of ecosystems, but also track gains through restoration. However, it is worth noting the time lags involved in restoration and the huge costs contrast starkly with rapid and immediate effects of habitat loss or degradation. To make this indicator useful, careful thought is required about how to include restoration efforts vs outcomes.

index as to the EAI, it can be computed top down and bottom up. Allowing parties to use their own data on ecosystem connectivity, function composition and structure, where available, and to use global models if preferred. This indicator can track loss of extent and or integrity of ecosystems, but also track gains through restoration. However, it is worth noting the time lags involved in restoration and the huge costs contrast starkly with rapid and immediate effects of habitat loss or degradation. To make this indicator useful, careful thought is required about how to include restoration efforts vs outcomes.		
In respect of the "natural ecosystems" part of the Goal, the current indicator only addresses the increase in area. It would need to be improved to address the missing elements i.e. ecological connectivity and integrity. Further clarity on the concepts concerned by this indicator (including the concept of « natural ecosystem » would be needed.	Lack of information about distribution of marine habitats	Proposed indicator: "Trends in ecosystem and habitat fragmentation". It is a composite meta-indicator reflecting various indices of ecosystem and habitat fragmentation which address the corollary of "reduced connectivity". The indices covered by this indicator are those proposed as complementary indicators for the Goal, being: ž Trends in mangrove forest fragmentation ž Forest Fragmentation Index ž Relative Magnitude of Fragmentation ž River Fragmentation Index ž Dendritic Connectivity Index ž Connectivity Status Index
we need more research to report the progress on this indicators		
SE considers that the indicators A.0.1 / A.0.2 / A.0.3 / A.0.4 / A.0.5 are adequate and relevant, but they need to be supplemented with several different indicators, to fully cover the components of the goal. One indicator should show the number of species becoming extinct. Indicator A.0.1 is also useful to report on particularly vulnerable ecosystems to climate change effects, including ocean acidification. The indicator A.0.1 needs specification regarding "selected natural ecosystems". A wide range of ecosystems would be relevant, and each needs a clear definition. In order to guarantee comparability, it would be relevant to use (as much as possible) existing definitions, reporting	Some of the available "sub-indicators", for specific natural ecosystems, are today not based on aggregated national reports, but derived from global databases. There may hence be a lack of capacity at the national level to deliver data in national reports, and probably a wide range of different definitions and measurement methods employed in different countries.	

and data-providers/hosts. Especially concerning "forest" there is some ambiguity as to what should be considered a "natural ecosystem". Internationally the FAO functions as the coordinator for forest related data through its Global Forest Resources Assessment (GFRA) - being responsible for reporting on SDG 15.1, and overall, the indicators of the UN Strategic Plan on Forests. However, the GFRA does not use the term "natural ecosystems". Instead, it uses the terms: "naturally regenerating forest", "planted forest", "plantation forest". The use of the term "primary forest" is currently under revision in order to streamline reporting and increase comparability.

In short, in order for the HI to be useful there needs to be consensus on the exact meaning (and thus reporting requirement) of the term "natural ecosystem".

The indicator needs to be more specific and measurable		The indicator should be specific to ensure which ecosystem shall be measured as not all ecosystem can be conserved and protected. The indicator should focus on key biodiversity area and areas that provide important ecosystem services. Suggest indicator: Extent of important natural ecosystems supporting healthy and resilient populations of all species

We are generally supportive of a headline indicator which relates to extent of natural ecosystems. This indicator requires consistent definition of 'natural ecosystems' globally, ensuring inclusion of semi-natural ecosystems. Therefore, it should either refer to "natural and semi-natural" ecosystems or should be simplified with removal of reference to "natural" ecosystems. Further work is required to identify those semi-natural ecosystems which could be included. There are possible indicators for coral cover, saltmarshes, seagrass, and macroalgae (including global extent indicators proposed at complementary level), although there may be differences between existing nationally reported data and those which would be collected at the global scale. There is a gap in relation to the measurement of intact ecosystems and restoration of degraded ecosystems. Restoration to improve the quality of degraded ecosystems is an important step in

The current proposed indicator is composed of multiple ecosystem types. Indicators exist for some but not all of these types and may have different definitions of 'natural' ecosystems or approach to measuring extents. It is not clear how an indicator can be aggregated and assessed for different types of ecosystems in a meaningful way. Consistency in measurement/ baselines/ intervals/ natural state between indicators would probably make this very challenging and the assumption to hold that the integrity threshold to designate an ecosystem as "natural" is consistent across metrics. There are no suitable existing alternatives which can capture all these elements together. Natural and semi-natural ecosystems are not very well represented in broad scale assessments. If the approach is to have global data sets and to derive national data on the basis of those global assessments, the data would not compare, and

improving quality - if the indicator focuses just on intact ecosystems it will miss progress towards the Goal.	there could be conflict between different data scales.	
We consider that this headline indicator could provide information on one element of Goal A "area" of the ecosystems. We recommend that terminology of "extent" and "area" be standardized, preferably as extent. However, we note that quantity will not indicate quality or provide information on the integrity and connectivity of ecosystems, which have also been supported by parties as critical elements of this goal and is fundamental to support nature's benefits to people (or ecosystem services). Furthermore, parties have already flagged that marine ecosystems are evaluated in terms of integrity or condition, and "quantity" may not reflect improving conditions. In addition, it is also not clear precisely which indicator would be used for each ecosystem. In our view, extent of natural ecosystems needs clarification, e.g., does this mean extent of natural ecosystems conserved, protected, managed? We are not clear what is meant by "natural" in this context.

One suggestion to address these concerns and to enable measure of extent and integrity (at a headline level) could be to add specificity in the indicator to read "Extent and integrity of selected natural ecosystems," and then selecting one key indicator per selected ecosystem, rather than listing biomes in parentheses.

As another example, for coral reef ecosystems we suggest that a headline indicator could be "live coral cover" or "hard coral cover and composition" (currently listed a.13 and a.14), which are functionally the same, address aspects of both extent and integrity, and have been approved by BIP, GOOS, and used as leading indicators in previous CBD global assessments (including GBO-5). An alternative, and potentially more effective formulation could be "Cover of live coral and other key benthic groups [in coral reef ecosystems]," which would take advantage of existing efforts by the Global Coral Reef Monitoring Network (GCRMN) to report on coral reef ecosystems around the world, and would effectively combine current indicators a.13, a.14, a.20 and a.21, | We believe that capacity building may be needed for some parties to map ecosystem extents. | |

thereby simplifying the monitoring framework significantly and comprehensively address a flagship ecosystem.		
We are generally supportive of a headline indicator which relates to extent of natural ecosystems. This indicator requires consistent definition of 'natural ecosystems' globally, ensuring inclusion of semi-natural ecosystems. Therefore, it should either refer to "natural and semi-natural" ecosystems or should be simplified with removal of reference to "natural" ecosystems. Further work is required to identify those semi-natural ecosystems which could be included. There are possible indicators for coral cover, saltmarshes, seagrass, and macroalgae (including global extent indicators proposed at complementary level), although there may be differences between existing nationally reported data and those which would be collected at the global scale. There is a gap in relation to the measurement of intact ecosystems and restoration of degraded ecosystems. Restoration to improve the quality of degraded ecosystems is an important step in improving quality - if the indicator focuses just on intact ecosystems it will miss progress towards the Goal.	The current proposed indicator is composed of multiple ecosystem types. Indicators exist for some but not all of these types and may have different definitions of 'natural' ecosystems or approach to measuring extents. It is not clear how an indicator can be aggregated and assessed for different types of ecosystems in a meaningful way. Consistency in measurement/ baselines/ intervals/ natural state between indicators would probably make this very challenging and the assumption to hold that the integrity threshold to designate an ecosystem as "natural" is consistent across metrics. There are no suitable existing alternatives which can capture all these elements together. Natural and semi-natural ecosystems are not very well represented in broad scale assessments. If the approach is to have global data sets and to derive national data on the basis of those global assessments, the data would not compare, and there could be conflict between different data scales.	

A.0.2 Living Planet Index

A.0.2 If you selected "yes, however requires further work", please describe:	A.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	A.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
	it requires not only capacity building but also institutional framework to be in place	"Conservation status of terrestrial and aquatic migratory species, as a proxy indicator of connectivity." This indicator is based on the disaggregated sub-sets of the existing global species indices being considered for the framework (Red List Index, Living Planet Index, Wild Bird Index), providing a proxy measure for the status of connectivity of natural ecosystems as it affects these species. Given that migratory species by definition are a connection between places, a change in status of these species can itself represent a change in the quality of the connection. The Strategic Plan for

		Migratory Species 2015-2023 adopted exactly this approach. The Living Planet Index (LPI) for migratory species would show trend in the abundance of migratory species of all taxonomic groups. As migratory species are better conserved (including improved connectivity) and populations increase, the index goes up. As their abundance declines (and ranges shrink and are less well connected), the index goes down - CMS.
While the Living Planet Index is a useful tool, we consider that the indicator would be more appropriately framed around how this tool is applied. We have proposed text changes below to this effect. A.0.2 Population trends of vertebrate species from terrestrial, freshwater, and marine habitats, measured by the Living Planet Index		
One HI indicator on species should be enough for goal A. Choose between A.0.2, A.0.3, A.0.4		
	The indicator requires the development of monitoring capacity at the national level	
		We suggest the deletion of this indicator, as the baseline adopted by headline indicator A.0.2 does not provide a comprehensive and balanced of population trends of vertebrate species.
The Living Planet Index (LPI) indicator as we understand it is a relevant global indicator with data that can be disaggregated for national use for measuring 'population abundance of species', which is a critical element needed to assess global species conservation (biodiversity). This is a well-established and used indicator (e.g. it was used in IPBES assessments as well as for CMS and Ramsar). The one reason to say further work is needed is that we understand it is based upon vertebrate data and wonder if this could be expanded to other taxonomic groups as well.	The Living Planet Index is an established indicator but it needs to be clarified how available and in what format the global data from the Living Planet Index on species abundance would be for countries that don't have this kind of data nationally. Also, for countries that have comparable data such as Canada (we have a national indicator based on the Living Planet Index) how this data could be utilized in addition to the Living Planet Index data.	This is not a suggestion of an alternative headline indicator but we understand that proposed complementary indicator a.42. Wild Bird Index could be used as component indicator to add to the Living Planet Index since it is measured at a continental scale while the Living Planet Index represents a mix of datasets from local to continental scales, with local more akin to biotic integrity than overall species abundance.

While this might be a relevant indicator, we think there are too many headline indicators, which difficults national monitoring and reporting.		
We suggest using the methodology described in McRae et al 2017 to account for data bias in the LPI: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0169156		
only considers about 4% of all living animals (only vertebrates). Mainly calculated at global level with very sparse sampling Options: focus on the use of the Red List of Threatened Species which embeds abundance in its assessments	Not suitable for national reporting.	
Although this indicator can be relevant to measure in terms of quantitative data of the global populations of vertebrates, it does not have necessarily includes a comprehensive vision in terms of the framework and its header indicators, and therefore could be seen as a complementary indicator. A new wording needs to be explored.	We need to know how we can enhance standardization and comparability in national reporting. Based on capacity building for the calculation of the indicator, this indicator will be included in the national reports in a standardized form that allows for international comparability	
Depends on the level of application, is it possible on country level. Currently it uses only vertebrate information, however, it should include other groups of organisms.		
Yes, replicability of process to be addressed. Note that 1) the indicator is heavily biased towards populations that go extinct (remove 3% of the vertebrate species from the index and the LPI shows no trend or is even increasing the last years). 2) In Europe, LPI is increasing at continental scale and also inside several countries like Belgium and The Netherlands (See IPBES regional ECA assessment).		
The interpretation of the LPI (and other indices based on geometric averaging) is in need of careful scrutiny. LPI should be carefully re-evaluated noting that the LPI has been adopted by CBD as an indicator towards 2011-2020 target. The rationale and reasons are:	See above.	

• The usual interpretation of the LPI as an indicator of change in population abundance is not valid. The problems with interpretation of LPI are due to geometric averaging used in the method. The problem is explained in the manuscript by Puurtinen et al (2021, accepted for publication in Nature April 26, 2021). In short, the value of LPI is not directly related to changes in population abundance, and is prone to be interpreted as exaggerated declines in abundance. • Note also that the issue with geometric averaging and misinterpretation of results is not limited to LPI but also affects e.g. the Wetland Extent Trends index, and possibly other indices as well. * See additional info at the end of the Survey.		
The Living Planet Index (LPI) is based on population trends of vertebrate species only. Further work is needed for other groups of organisms, as plants, fungi and invertebrates, and for marine species.		
	At the national level methodology will be required how to deal with this indicator. Also, depending on a methodology it may require substantial funding.	
The Living Planet Index (LPI) is a measure of the state of the world's biological diversity based on population trends of vertebrate species from terrestrial, freshwater and marine habitats. The LPI has been adopted by the Convention of Biological Diversity (CBD) as an indicator of progress towards its 2011-2020 target to 'take effective and urgent action to halt the loss of biodiversity' (https://www.livingplanetindex.org/home/index). However it only considers about 4% of all living animals (only vertebrates). Mainly calculated at global level with very sparse sampling.	National capacity building and investment may be needed to implement monitoring schemes to mobilise sufficient data to allow national indices to be developed. Recent examples for monitoring birds in Uganda, Kenya and Botswana show this can be achieved at low cost in many cases.	
Es necesario establecer "que queremos con el indicador", no solamente colocarlo. Ej. El índice de planeta vivo se mantiene constante o aumenta para "xx" número de especies.		
Needs further elaboration of the elements of LPI and f that overlap substantially with other Indexing	Some elements could be "a new" indicator to the ongoing database collection for certain parties, therefore flexibility of the elements is required	

The index is currently not measured in all countries, hence needs clarification in order to be applicable for national level reporting		
	It requires significant work in terms of capacity building related to Information on the condition of populations and habitats of plants and animals and to understanding potential conflicts in multiple use objectives in the context of nature conservation	
	Jamaica is currently not utilizing the LPI and additional capacity will be required to contribute information to the Index so that data reflected for Jamaica will be accurate.	
	It would be useful to have clear indications on the repository and submission of information to inform the index. Also need information to clarify the level of data needed to inform this index, the effect of data gaps on time series and the final calculation of the index. The level of expertise required is unclear to collect the data needed to inform the index.	
		Have no suggestion for alternative indicator.
Relevant for measuring global progress, but only that. There needs to be a separate approach in the GBF to cover indicators that are only meaningful on the global level .	Living Planet Index is not meaningful to disaggregate on the regional or the national level, and is therefore unsuitable for national reporting.	
	If capacity building is required for developing countries to be able to apply this indicator, support and collaboration, scientific and technical cooperation, and financial, to be able to obtain the data to be able to apply the indicator.	
	It would need to be explained how to disaggregate this indicator and transfer it to the national level.	
The Living Planet Index (LPI) is based on population trends of vertebrate species only. Further work is needed	National capacity building and investment may be needed to implement monitoring schemes to mobilise sufficient data to allow national indices to	

for other groups of organisms. Also, few marine species are assessed by this indicator.	be developed. There are major geographic gaps in the marine species data in several regions of the world (not EU) (Living Planet Report 2016).	
It seems like Living Plant Index is more specialized for the population's increase or decrease rather than the ecosystem's link/connection or its integrity.	It should be developed some aspects for enhancing standardization and comparability in national reporting.	
This indicator is an index and requires further refining of species that comprise this index at national level in each country and are relevant as indicators (e.g. for Slovenia there are at the moment about 75 species comprising this index, where ca. 10% aren't relevant at national level, additional ca. 10% are relevant, but don't include all relevant sites where monitoring is conducted and data are available, 80% are relevant and OK and there are additional relevant species, at the moment not included in the index, with available data).	This indicator has potential for regional and global reporting, but it requires further refining of species that comprise this index at regional levels and are relevant as indicators (e.g. some species, being part of the SI index are relevant not on the national level but on wider geographic levels e.g. Adriatic, bird flyway level or on the European level).	
The LPI only includes data for vertebrates and is representative of a tiny proportion of the world's species; it must be expanded to track plants, fungi and invertebrates if it is to be a meaningful indicator. Additionally, the LPI is currently vulnerable to being confounded by patchy availability of long-term datasets. For example, Leung et al. 2020 (https://www.nature.com/articles/s41586-020-2920-6) show that the declining abundance trend in the LPI is driven by <3% of the population datasets and if these extremely declining datasets are omitted, then the trend switches to an increase. This highlights the importance of establishing an EBV framework for standardised trend analysis across a subset of different taxa to prevent spurious policy messages.	This indicator is generated by one team in the UK and is computed only globally, if it is to be used by parties then work to disaggregate to the national level is needed. Furthermore, there needs to be training of monitoring centres at national level on how to gather the required information for the index and how to submit it, this is needed to increase the number of species and populations included. The focal populations selected for measurement at a national scale should also be carefully considered. For example, in some countries, vertebrate populations are managed, and population sizes maintained artificially. Including only 'wild' populations that indicate background land use and ecosystem functioning change should be a priority.	
Further work may be needed for species other than terrestrial vertebrates.	There is a lack of information on changes on species´ abundance at national level.	Although we think Living Planet Index is relevant, another indicator can be considered: "Conservation status of terrestrial and aquatic migratory species, as a proxy indicator of connectivity." This indicator is based on the disaggregated sub-sets of the existing global species indices being considered for the framework (Red List Index, Living Planet Index, Wild Bird Index), providing a proxy measure for the status

		of connectivity of natural ecosystems as it affects these species. Given that migratory species by definition are a connection between places, a change in status of these species can itself represent a change in the quality of the connection. The Strategic Plan for Migratory Species 2015-2023 adopted exactly this approach. The Living Planet Index (LPI) for migratory species would show trend in the abundance of migratory species of all taxonomic groups. As migratory species are better conserved (including improved connectivity) and populations increase, the index goes up. As their abundance declines (and ranges shrink and are less well connected), the index goes down.
Need more capacity building to use this indicator globally and nationally	No enough knowledge for parties for working with this indicator	
The Living planet index is based on a limited set of vertebrate animals, for which long term data are available. The majority of organism species are not included. The indicator needs to be supplemented with indicators for plants, fungi and invertebrates. The index combines data on both threatened and non-threatened species, and hence functions less well to monitor development of abundance in threatened species specifically, which would be much more relevant to the goal. The index has recently been questioned in scientific literature for not being representative for all vertebrates. Increased access to data from a wider range of species, and subdivision into separate indices for threatened and non-threatened species, as well as development of index calculation methods can improve the situation.	This indicator is not based on national reporting. It is based on data in a global database held by the Zoological Society of London, who also calculates and publishes the index. CBD Parties can contribute to the database by sharing more population data with the database keepers.	
	Work is required to transfer the LPI methodology at the national level.	
The indicator does not consider invertebrate species, many of which are important bioindicators and all of which provide important ecosystem services and have critical roles in maintaining ecosystem functions. Plants and other organisms are also not considered. Additionally, the	In order for the index to be useful, data gaps need to be filled and regular surveys of key species need to be conducted. This requires capacity building and funding to carry out population surveys with a standardised methodology.	

index is highly data deficient for Trinidad and Tobago, both in terms of recent population data as well as the type and number of vertebrate species listed. The index further does not address species ranges or distributions. According to the WWF Living Planet Report 2020, it does not show the numbers of species extinctions, does not give information with respect to the numbers of species that are showing decline, nor the percentage of populations or individuals that have been lost (pg. 16). Trends are also displayed as regional and are not readily accessible at national levels. The website that reports the Index is also not user friendly.		
Further work is required [in the long term] to extend taxonomic and geographic coverage of data, which are currently limited to terrestrial vertebrates.	Further work is required to develop approaches that can be used at the national level. The UK currently uses Bayesian statistics to calculate trends in species that have not been recorded via structured monitoring schemes - the techniques are transferable and could be used by other Parties, and a package to calculate species trends and combine these into composite indicators is available. Priority species (distribution) - fiche at: https://jncc.gov.uk/our-work/ukbi-c4b-species-distribution/ Data set and technical documents available at the Resource hub: https://hub.jncc.gov.uk/assets/c4169253-54bb-4250-919b-a0942dea2bad D1c Pollinating insects - fiche at: https://jncc.gov.uk/our-work/ukbi-d1c-pollinating-insects/ Data set and technical documents available at the Resource hub: https://hub.jncc.gov.uk/assets/3de3abe1-d7d1-417e-9684-1348dd8b9a5a	

A.0.3 Red list index

A.0.3 If you selected "yes, however requires further work", please describe:	A.0.3 If you selected "yes, however requires further work on capacity-building or other work", please describe:	A.0.3 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		"Conservation status of terrestrial and aquatic migratory species, as a proxy indicator of connectivity." This indicator is based on the disaggregated sub-sets of the existing global species indices being considered for the framework (Red List Index, Living Planet Index, Wild Bird Index), providing a proxy measure for the status of connectivity of natural ecosystems as it affects these species. Given that migratory species by definition are a connection between places, a change in status of these species can itself represent a change in the quality of the connection. The Strategic Plan for Migratory Species 2015-2023 adopted exactly this approach. The Red List Index for migratory species would show trends in survival probability (the inverse of extinction risk) for migratory species (currently birds and mammals; fish being added). As migratory species are better conserved (including improved connectivity) and populations recover, the index goes up. As they deteriorate in status and populations decline and ranges shrink (and are less well connected), the index goes down - CMS.
Methodology standardization for species of small size	Capacity to compile and process information	
While the Red list index is a useful tool, we consider that the indicator would be more appropriately framed around how this tool is applied. We have proposed text changes below to this effect. A.0.3 Overall extinction risk for species, measured by the Red list index		
One HI indicator on species should be enough for goal A. Choose between A.0.2, A.0.3, A.0.4		

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	The indicator requires the development of capacities to monitor and provide accurate data from the national level	
The Red List Index is an established, clear and well functioning global indicator that is relevant to measure one aspect of global species conservation (biodiversity) which is risk of species extinctions. The global data can be disaggregated for national use.	Though the indicator is currently fully operational and being used for SDG indicator 15.1.1. as well as other conventions, increased capacity will be needed for countries to collect their own Red List data where there is the initiative to do so.	No gaps to flag with the Red List Index but to note that in some cases, countries have robust national-level Red List data and can derive indices from this, so it should be clarified if this information is / will be integrated with the global Red List Index. A.0.4
Percentages established in the Goal and in the index refer to different measures; The RLI does not reflect the "number of species that are threatened", further work is needed so that both goal and indicator measures the same thing.	The % of species threatened will be influenced by increasing numbers of extinction risk assessments, the indicator for this goal should therefore be measured from a consistent baseline (as suggested by UICN). https://www.iucn.org/sites/dev/files/content/docume nts/iucn_interim_position_p2020_updated_zero_dr aft_09.12.20.pdf. Moreover, reducing the number of species threatened only gives a binary choice of threatened/non-threatened. Utilisation of Red List categories is more meaningful.	
	There is a need to strengthen national capacities to produce better scientific information as a base to carry out species assessments according to the IUCN criteria. Furthermore, parties must have the capacity to carry out national assessment, so the index better reflects national conditions.	
Expand to other categories up to least concern to track development in abundance of species		
Although this indicator can be relevant to measure in terms of quantitative data of the global populations of vertebrates, it does not have necessarily includes a comprehensive vision in terms of the framework and its header indicators, and therefore could be seen as a complementary indicator. A new wording needs to be explored.	We need more research, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	
Only 15% of living organisms are in red lists. Most of them are flag organisms like vertebrates and trees, and there are significant geographical biases in the proportion	These lists could benefit from recent threat assessments based on machine learning, which contribute to enlarge assessments for countries	

of red listed species, with most of them coming from developed countries where total richness is medium or low when compared to the richest ones. There are many studies using machine learning algorithms just published or being prepared for publication at the moment. These studies provide a threat evaluation for all species evaluated. These evaluations are based on historical data from taxonomy and natural history collections. There are research teams in France working on it right now. So, we could add here "and other threat assessments available".	and regions with few species evaluated for the red lists. This indicator should also be monitored along genetic diversity indicators that allow population viability assessment.	
	Same response as in previous case	
We support inclusion of the Red List Index as a headline indicator for Goal A, as it shows trends in overall extinction risk for species. It can be disaggregated for global to national, and thematically (i.e. for migratory species), and is already used by governments to track their progress towards targets for reducing biodiversity loss (incl. as an Aichi indicator/ SDG Indicator 15.5.1). (https://www.iucnredlist.org/assessment/red-list-index)	National capacity building and investment may be needed to implement assessments and mobilise sufficient data. Note that a few countries with well-developed monitoring schemes may also have more sensitive metrics available for tracking status of threatened species nationally. National red list indices require multiple, frequent red list assessments across a broad group of taxa to be representative and sensitive to change.	
	Requires translation into national policy and/or domestic legislation e.g. species to be included in schedules/regulations at the national level	
Que queremos con el índice?????. Ej. Se reduce el número de especies en las categorías más altas de amenaza. Mantener el número de especies amenazadas al 2020 y reducirlo en un "xx" %.		
Requires "adaptation" of the definition, whilst in Indonesia, we focus on the species as one entity in a nation, instead limited only from the "natural distribution".		It is going to be a burden for mega diversity country compare to the developed country that has maintained the existing "left over" diversity
To be applicable at national level, it is needed to map for how many countries the red lists exist and are periodically updated		

The knowledge of many taxa is still very low, even if they are fundamental for the sustenance of ecosystems (e.g. mushrooms, wild bees, soil fauna).		
	Additional capacity is required to carry out the work required for more species as the focus has been on specific species. Countries may not have the required trained personnel to carry out the work.	
Red Listing is a resource intensive process, and hence has only been carried out for selected species groups in Malaysia (Mammals and Dipterocarpaceae plants). Simply filling in the gaps through modelling (Red List Index) is inaccurate.	Malaysia requires more funding and capacity building to carry out full-scale Red Listing work.	
The Red list index may be good globally, but we need to consider what systems we already have in place nationally and not add unnecessary new monitoring and tracking systems. But this could be used nationally, but proper capacity and monitoring systems need to be put in place first.	The Red list index may be good globally, but we need to consider what systems we already have in place nationally and not add unnecessary new monitoring and tracking systems. Resources has been invested in current monitoring and database management, if a new system were to be introduced / required – additional capacity and frameworks, tools need to be set up, which will just delay collection and reporting even more.	
	This indicator require another adaptation of the countries to extent their monitoring and reporting systems.	
It is a promising indicator, and its role as a SDG indicators strengthens its candidacy as a headline indicator. However, the current version of IUCN's Red List Index is taxonomically limited and therefore not representative, with especially poor coverage of aquatic ecosystems. A fully fledged global Red List Index needs to be operational for this indicator to achieve the needed relevance.	There are two approaches for national implementation of RLI: national RLIs or disaggregation of the global sample. Currently, only a handful of countries are producing national RLIs, and even then only for selected taxonomic groups. On the other hand, national disaggregation of the global sample creates a biased and patchy picture which will likely not be relevant or acceptable to parties.	For national reporting before RLI is feasibly implemented globally and nationally, this should be a relevant indicator: "Trends in existing national Red Lists based on IUCN criteria and guidelines"
	Yes, capacity building is required for developing countries to be able to apply this indicator, support and collaboration, scientific and technical	

	cooperation, and financial, to be able to obtain the data to be able to apply the indicator.	
It would be necessary to increase frequency of calculating this index; if it is calculated and reported every 10 years, this is not enough to illustrate current trends that are resulting from the implementation of GBF post-2020.		
Currently, the RLI is only available for five taxonomic groups: birds, mammals, amphibians, cycads and warm-water reef-forming corals. However, work is already under way to expand the indicator to other groups. Deep-sea species should also be considered. Attention should also be given to the frequency of assessment (some species have assessments from 1996) and to the geographical extent of assessment of each species (for some species some populations are in a good status but the overall assessment classifies it as being in a worse condition).	Revision of threatened status of species at the national scale is done at different times and intervals, sometimes 10 years apart and it does not correspond exactly to an assessment of extinction risk. National capacity building and investment may be needed to implement more frequent assessments and gather sufficient data.	
This indicator is an index and requires further refining of species to be included in the index calculation, as well are the level, on which index calculation is relevant. For some species inclusion in calculation of the index is relevant on national, regional and global levels, for some only on regional or global levels.	It needs to be clarified which species are relevant for calculation of the index at regional and global levels.	
The RLI is a good indicator and is easy to compute, with good, standardised methodology. However, the timeframes of reporting are too short to reliably capture positive changes, because positive changes take decades to reflect, whereas increasing risks of extinction triggers immediate changes to species' Red List status. This needs to be considered when interpreting results of the RLI.	The Red List Index currently uses the IUCN Red List to provide standardised data that can be disaggregated for each country. More work is needed to increase the number of groups repeatedly assessed on the IUCNRed List as currently there are too few species in the groups included to provide meaningful extinction risk trends once disaggregated to the national level. Parties should also compute National Red List Indices using data from repeat red list assessments conducted nationally, these should be reported alongside the globally disaggregated Red List Index. There is a substantial capacity development requirement linked to this indicator as only 6 parties currently compute national red list indices however over 50% of parties that produced 6th National reports have national red list	

		assessments available to feed into producing this indicator.	
		Lack of update of UICN classifications at national level	Although we think Red list index is relevant, another indicator can be considered: "Conservation status of terrestrial and aquatic migratory species, as a proxy indicator of connectivity." This indicator is based on the disaggregated sub-sets of the existing global species indices being considered for the framework (Red List Index, Living Planet Index, Wild Bird Index), providing a proxy measure for the status of connectivity of natural ecosystems as it affects these species. Given that migratory species by definition are a connection between places, a change in status of these species can itself represent a change in the quality of the connection. The Strategic Plan for Migratory Species 2015-2023 adopted exactly this approach. The Red List Index for migratory species would show trends in survival probability (the inverse of extinction risk) for migratory species (currently birds and mammals; fish being added). As migratory species are better conserved (including improved connectivity) and populations recover, the index goes up. As they deteriorate in status and populations decline and ranges shrink (and are less well connected), the index goes down.
		The global indicator Red List Index is not based on national reporting, but on the IUCN Global Red List. It would be technically possible to disaggregate the Index to the national level, i.e. based on a list of globally threatened species that occur within a country, and their global threat status. This would however not be informative about specific contributions of that country to the global status of its globally threatened species.	Goal A is not necessarily restricted to globally threatened species, but may also refer to nationally threatened species. As species contribute to ecosystem services that are needed in all countries, the phrase "healthy and resilient populations" should be fulfilled in all countries. Hence a national red list index is also relevant, based on a national red list, and evaluation of the conservation status of species at the national level. Many countries would be able to report on such red lists, but some may need capacity building to be able to produce the index. Such national red list indices can be aggregated into a global index, that would not be the same as the Global Red List Index, but would complement it in giving a global picture of how countries succeed in achieving healthy populations within their countries.

		All red list based indices are rather sluggish as indicators, with extended reaction times following conservation action. It would be prudent to combine red list indices with an indicator that more rapidly assesses changes in the conservation status of of the most threatened species. It would also be useful to include an indicator on the number of extinctions. Data for such an indicator is already available in the IUCN red list database, and the number of species that are extinct, presumed extinct, and extinct in the wild are regularly presented by IUCN.
The indicator is data deficient for many species found in Trinidad and Tobago, which is likely a problem encountered by many other countries.	Capacity building and funding is essential for population surveys.	
Further work is required to increase the frequency of update and extend the taxonomic coverage, particularly to increase representation of marine taxonomic groups in the long term.	Further work is required to develop national protocols and address data gaps at the national level.	
Further work is required to increase the frequency of update and extend the taxonomic coverage, particularly to increase representation of marine taxonomic groups in the long term.	Further work is required to develop national protocols and address data gaps at the national level.	
A.0.4 Species habitat index		
A.0.4 If you selected "yes, however requires further work", please describe:	**A.0.4 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**A.0.4 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
	monitoring capacities as well as increase of financial resources	
While the Red list index is a useful tool, we consider that the indicator would be more appropriately framed around how this tool is applied. We have proposed text changes below to this effect.		

A.0.4 Suitable habitats of species that remain intact, measured by the Species habitat index		
	One HI indicator on species should be enough for goal A. Choose between A.0.2, A.0.3, A.0.4	
	The indicator requires the development of capacities to monitor and provide accurate data from the national level	
		We suggest the deletion of this indicator, as the baseline adopted by headline indicator A.0.2 does not provide a comprehensive and balanced of ecosystem integrity. We understand further discussions are needed to understand the linkages between the concepts of connectivity and integrity and the concept of "suitable habitats" adopted by the Species Habitat Index.
Species Habitat Index contains some gaps in species distribution as we understand. We would suggest it as a component or complementary indicator.	N/A	We think that instead the headline indicator should be the Red List, to measure human-induced extinctions.
While this might be a relevant indicator, we think there are too many headline indicators, which difficults national monitoring and reporting.		
Other indicators that complement the Species Habitat Index and that could be explored in detail for this goal are: 1. Biodiversity Habitat Index (BHI), 2. Biodiversity Intactness Index (BII), 3. Protected Area Connectedness Index, 4. Protected Area Representativeness Index and 7. Species Protection Index. No clear understanding why SHI is prefered over BHI or BII.	SHI will need national validation so that it can be reported by parties.	
In our country we are not developing this indicator and we need capacity building to use this indicator. A new wording needs to be explored.	We need more research, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	

Yes, but the need for replicability/independence from Map of Life needs to be addressed. Also a proxy of species abundance.	See other comment	
Unclear - proportion of what? Is there a qualifier, the totality? It is not a direct measure of trends in species abundance.	See above.	
	As SHI is calculated for a single species, its aggregation at national level will cover different set of species depending on countries specificities and data availability. This heterogeneity in nationally aggregated indices will not allow global aggregation. Two levels of global analysis could then be considered : a global aggregated SHI bases on a common set of species in each country, and/or aggregated SHI for individual species at global level.	
	Same as in previous two cases	
The methods for the Species Habitat Index have not been published in a format subject to peer-review, which means it fails a key criteria for selection. It is not a direct measure of trends in species abundance - and is not an appropriate proxy, as it measures the proportion of suitable habitats for a country's species that remain intact, and change within their ranges relative to a baseline set in the year 2001. Some overlap with the IUCN red list.	Needs to be adapted for national reporting.	
	Needs to be disaggregated at the national level and needs capacity building support to track	
Igual que las observaciones anteriores. Guatemala NO está cómoda con solo poner títulos en los indicadores de cabecera, y que su uso quede a una interpretación ambigua.		
Needs further elaboration of the elements of SHI	Needs further clarification the "category of habitat" of a mega diversity country	

We could not easily fond information on how this index is calculated so we could not assess its relevance	Please se the above remark	
The SHI indicator has to be applied to some key specie, such as wild bees, fungi, soil fauna, with low level of knowledge on distribution in the habitats.		
Needs to better define what the species habitat index is.	Unable to see the how this is measured and the resources required.	
We are not sure how this would work and need more information on this index before making an informed decision.	We are not sure how this would work and need more information on this index before making an informed decision. Technical capacity will need to be built around this as well and monitoring systems that need to be put in place.	
An important consideration for the selection of the Headline Indicator addressing the 'ecosystem' component of this Goal will be whether it can track improvements over time in the retention of an interconnected network of functioning, resilient and representative ecosystems.		
Capacity building is still required for developing countries to be able to apply this indicator, support and collaboration, scientific and technical cooperation, so that it can be carried out with national scientists in each country.		
More work needs to be done, in order to include the marine environment.	"While the SHI can be calculated for single species, Map of Life aggregates these metrics into a single score, with each species weighted according to the proportion of their global range that is found within the country." (https://epi.yale.edu/epi-results/2020/component/shi) This means that the aggregated index in a country depends on the set of species included, and this set of species can vary between countries therefore making the index not necessarily comparable between countries if no suitable criteria for the inclusion of species are given/followed.	

Since Species habitat index does not have a sufficient scientific background, some complementary indicators might be needed. We are also concerned that the establishment of standards/criteria would be difficult.	CBD must solve the issues related to the lack of data and scientific knowledge of developing countries. In addition, this indicator is based on the data from GBIF, some nations would take more time to collect basic data/materials.	We believe we need a headline indicator for the measurement of genetic diversity, one of Goal A elements.
This indicator is an index and requires further refining of species to be included in the index calculation, as well are the level, on which index calculation is relevant.	It needs to be clarified which species are relevant for calculation of the index at regional and global levels.	
		There is no peer reviewed published literature on the computation of this indicator, it is therefore not transparent or reproducible. It is based on globally modelled information and does not utilise national data. There is no evidence of validation at a national scale. Furthermore, it has an overlapping remit with the Red List Index, in order to minimise the number of headline indicators we suggest once this has been peer reviewed that it be included rather as a complementary indicator.
		We think this indicator is redundant with A.0.3 Red List of Threatened index
Need more capacity building on implementation of this indicator		
	This indicator is not based on national reporting, but is directly produced at the global level, based on remote sensing data and species observations databases. It can be disaggregated to the national level meaningfully. Mechanisms for that may need to be developed. Although named the Species habitat index, it does not measure species abundance or distribution, but make predictions on amount of suitable habitat area for each species. This index is hence mainly a complement to indicator A.0.1, expressing aspects of quality of natural ecosystems, based on the needs of selected species.	

	This indicator is not our prefered headline indicator for this goal. It is stull unclear how parties could report on this indicator.	
While useful in theory, no data is available for Trinidad and Tobago for this indicator, as is the case for many other countries. Other components of the Environmental Performance Index for which data is available may be more useful, especially of the Ecosystem Vitality aspects (for Trinidad and Tobago Country Profile, see here: https://epi.yale.edu/epi-results/2020/country/tto).	If this indicator is to be useful, capacity building and funding is required in order to collect the missing data.	

A.0.5 The proportion of populations maintained within species*

A.0.5 If you selected "yes, however requires further work", please describe:	**A.0.5 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**A.0.5 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
	financial support together with capacity building	
Good to have an indicator on numbers of populations but reword 'trends in number of populations maintained within species'		
	The indicator requires the development of monitoring capacity at the national level	
The indicator requires clarification on which populations in which ecosystems will be monitored.	The indicator requires clarification on which populations in which ecosystems will be monitored.	
Canada notes that this indicator is not yet operational. Canada could support this indicator when ready as relevant for measuring genetic diversity in Goal A. We understand that it is based on Hoban et al. 2020 indicator 2: "The proportion of sub populations [or geographic range] maintained within species". We also understand that Hoban et al. believe that it will be possible for countries to start reporting on it after Hoban et al. develop guidelines in 2021/2022 to standardize the approach. It would compare the number of genetically distinct populations relative to a historic baseline or would be a percentage of the species' historic range.	The indicator would compare the number of genetically distinct populations relative to a historic baseline or would be a percentage of the species' historic range. It would need to be clear how to aggregate this at a global level. It would also need to be clarified what the definition of 'maintained' would be and whether this would be calculated for all species (e.g. species at risk as well as a representative sample of common species). Population viability threshold is generally defined species by species, and is not necessarily known for each species.	Canada suggests a second headline indicator for genetic diversity – 'A.0.6 The number / proportion of populations within species with a genetically effective population size > 500'. This would address a gap since the indicator focuses on the viability of populations or the genetically effective population size (as per out above comment on what the definition of 'maintained' means. We understand that this indicator is not ready yet and would be new for most countries to report on at the national level. More explanation of this indicator can be found in Hoban et al. 2020. Simpler wording could be "The proportion of populations within species sufficiently large to maintain genetic diversity" or "The proportion of

		populations maintained at genetically safe sizes (A.0.X) by species group". This last formulation would give more flexibility to estimate the genetically viable population size per species or per species group, rather than opting for a blanket N>500.
	Further guidelines and capacity-building are needed to support national reporting.	
There is not a clear indication of how this would apply to the terrestrial, freshwater or marine environment. If it remains, It would be preferable to restrain it to the same groups of the Living Planet Index (mammals, birds, fish and reptiles populations).	Further work on enhancing national biodiversity observation systems capabilities to capture and mobilize data to global data infrastructures is needed, so that each country has equity in the information available to include on an indicator for species populations.	
To our knowledge, this indicator has not been fully developed yet. We strongly suggest to modify the indicator as follow: "The proportion of populations within species sufficiently large to maintain genetic diversity"	As this is a new proposed indicator, parties will need scientific, technical and logistic support for its implementation.	
In real terms of its application in megadiverse countries, such as Ecuador, this indicator would require huge amounts of investment, or, failing that, significant cooperation, technology transfer and financing, due to the richness of our biodiversity.	The use of this indicator depends on the analysis and result of the work carried out by the group of technical experts on indicators for the post-2020 global biodiversity framework. We suggest: The area, connectivity and integrity of natural ecosystems increased [X%] and populations of all species while reducing the number of species that are threatened by [X%] and maintaining indirectly the genetic diversity.	
Not clear what is meant by this indicator. May appear to be relevant for certain species, but not sure if it works for all species. Adequate spatial scale might be on regional not in country level as some species have transboundary populations. Indicator needs to take into account the viability of populations, as in fragmented landscapes the number of populations within species can be high. The number of populations may not show how well a species is doing within a country.		
Yes, but other indicators have been proposed.	see other comments	A HI on genetic diversity would be important as it covers one of the 3 components of biodiversity. There are many candidates (see Hoban et al, 2020, https://doi.org/10.1016/j.biocon.2020.108654) A state indicator would be indeed the proportion of

		populations/breeds within species with a genetically effective population size > 500" (which is quite similar to A.1.1.47) Organization: G-Bike network
		A response/action indicator would be the number of species and pop. in which genetic diversity is being monitored using DNA-based methods Organization: the Coalition for Genetic Diversity
		We also stress that genetic diversity between species should also be considered, and suggest to use phylogenetic diversity (PD).
		Note that PD is a metric which has been used by the IPBES to also represent two types of Nature contributions to people: i) medicinal/biochemical/genetic resources and ii) maintenance of options. There is here a clear link with Target 12.0.2
		A proposal for including PD indicators in the post 2020 framework can be found here: https://www.cbd.int/api/v2013/documents/6445B22E-1BA7-18B7-6D28-61A95052E841/attachments/IUCN-6.docx
Could it be possible to have a measure "populations in good/favorable status of total populations"?	Five headline indicators for Goal A is plenty – if the overall number of HI needs to be reduced, one or two (not the first one) could be dismissed form this goal. Indicators A.0.1-3 are sufficient to track progress under goal A. Maybe measure "populations in good/favorable status of total populations"? Genetic diversity is missing from indicators. Two suggestions to be considered: - The number of species and populations in which genetic diversity is being monitored using DNA-based methods. - The proportion of populations/breeds within species with a genetically effective population size > 500.	See above
Genetic diversity and viability thresholds are not addressed in headline indicators for goal A. We therefore recommend including a headline indicator on the proportion of populations/breeds within species with a		The indicator is too broad and vague for global monitoring and enhancing standardization and comparability in national reporting. We therefore recommend including a headline indicator on the

genetically effective population size > 500" (as proposed by G-Bike network, which is quite similar to indicator A.1.1.47).		proportion of populations/breeds within species with a genetically effective population size > 500" (as proposed by G-Bike network, which is quite similar to indicator A.1.1.47)
	The methodology should be available for the parties	
This indicator does not exist, and it is difficult to see how it would be feasible to produce such an indicator within the next decade. A HI on genetic diversity would be important as it covers one of the 3 components of biodiversity. Good to have an indicator on numbers of populations but at least reword "trends in number of populations maintained within species" as the "proportion" might not reflect correctly the expected results. The proposed HI is not ready and a better indicator is needed. Potentially A.1.1.48 or A.1.1.47.		Genetic diversity is a clear gap which can find solutions. The Coalition for Genetic Diversity proposed „The number of species and populations in which genetic diversity is being monitored using DNA-based methods" "The proportion of populations/breeds within species with a genetically effective population size > 500" (as proposed by G-Bike network. Note, it is quite similar to A.1.1.47)
Es necesario ser más explícito, serán todas las especies ???? las especies más amenazadas??? especies con importancia económica o ecológica ???? así como está parece que son todas las especies, lo cuál seria imposible de cuantificar		
Indicator of the element	For mega diversity parties can be selected only to a certain number of species as a reporting	
		We believe that this component of the goal is by large covered by LPI which has clear methodology
Headline Indicator on genetic diversity is important as it covers one of the 3 dimensions of biodiversity and there are several scientific evidences that the genetic diversity within species is decreasing at a dramatic pace.

However, due to the fact that the gene-level dimension of biodiversity has been insofar largely overlooked, there is a important gap about the current degree of genetic diversity occurring in most of the known species.

Italy, therefore, proposes the following target for genetic diversity: maintain the 95 % of the within-species genetic diversity and 90 % of within-populations genetic diversity as measured with the three genetic indicators originally proposed in a recent paper by Hoban et al. (2020). | | |

Of course, the lack of a baseline against which to measure this percentage is the first major problem to tackle. We believe that a practical and efficient way to fix this problem in the next decade is: 1. to measure the effective population size in all species as specified in Hoban et al (2020) 2. to limit as much as possible all the known processes leading to genetic erosion such as habitat fragmentation, extreme size reduction of populations, isolation of populations, over-harvesting. The challenge is admittedly huge, nonetheless we already possess knowledge and tools to tackle it. It's worth recalling that the current genomic techniques allow us to infer how much genetic diversity is retained in a particular population and species by sequencing the genomes of about 5 individuals. The budget for this endeavour is in most of the cases below the 1,000 $. In other terms, we are now not limited by major technical and budget constraints. It's ultimately a matter of willingness. Finally, there are already networks of researchers and practitioners such as The Coalition for Conservation Genetics and G-BiKE keen to provide the required expertise and capacity building skills to make this task affordable.		
		Indicator as presented is unclear. On this basis an alternative cannot be suggested.
In order to measure genetic diversity, this indicator of A.0.5 should be interpreted as "the proportion of *distinct* populations maintained within species ("distinct" is missing.)". At the same time, however, more precise guidance on how to measure this metrics is needed.	Only if our proposal for amendment as described above is reflected in the text of this indicator.	
Data for populations are only available for certain species like Malayan tigers, Asian Elephants and Malayan Tapirs. Malaysia is a developing and megadiverse country and cannot afford to track all species populations. Possible to provide flexibility and focus on keystone/umbrella species.		Malaysia suggests to keep this indicator but narrow down keystone/umbrella species populations that reflect the health of the ecosystem at large.

		Currently, this indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative.
		Have no suggestion
Il est difficile de faire le suivi de toutes les populations préservées au sein des espèces à l'échelle nationale.		
Headline indicator should cover genetic diversity in both wild and domesticated species and populations. HI could be rephrases: Genetic diversity maintained within wild and domesticated species	Further work needed to conclude on feasibility of improved (complementary) indicators for genetic diversity in wild and domesticated species. And standardization/clear definitions of indicators and capacity building are needed. Reference to component indicator A.5.1, that could also be rephrased: Genetic diversity maintained within wild and domesticated species. Cross reference to complementary indicators: a.47, a.48, a.51, a.52, a.53. Complementary indicator a.53 is SDG 2.5.2 indicator (implemented by FAO) General issue: Goal A is focusing on "natural ecosystems". Headline indicator on Genetic Diversity should cover both domesticated and wild biodiversity, and this would also imply that Goal A should be broadened, including "managed ecosystems".	
The inclusion of a 'population' dimension is important. An important consideration for the selection of the correct Headline Indicator will be its ability to measure whether the abundance (population size) of native species in their natural ranges is being enhanced through time.		
Indicator is not developed, therefore should be removed from headline indicator consideration. Also not clear what this proposed indicator would measure.		

	This would represent a huge job, and a great implementation challenge for developing countries, it requires capacity building, and financial support.	
Capacity Building		
		It is very difficult to understand what this indicator is about, it is unclear how it could be calculated and it seems that the data needed would be impossible to gather.
The indicator is not clear - does it mean "The proportion of geographical distribution area of populations maintained within species". If so, then it can be a useful indicator. Should be done species by species, and only after represented in a combined/aggregated manner. See, for instance: (https://www.sciencedirect.com/science/article/pii/S0006320720307126) Genetic diversity is not explicitly addressed. The coverage in terms of species groups is not defined. There are significant gaps of knowledge, especially in what regards the deep-sea realm.	See above. Furthermore, it is not clear how the indicator will be operationalized, more so at a national scale.	If we can have only one Headline Indicator on genetic diversity, we would prefer Complementary Indicator A.1.1.47 - The number of populations within species with an effective population size larger than 500, compared to the number below 500.
Data gap between developed and developing countries will prevent successful assessment of the goal. Therefore, CBD needs to develop a program to help developing countries' capacity-building. Besides, This headline indicator is insufficient to assess if maintaining genetic diversity is fully achieved. That's because 'the proportion of populations maintained within species (A.0.5)' cannot fully represent genetic diversity within species. It is just one of means to measure genetic diversity. Thus, we suggest the following revision. (Revision) The proportion of species for which genetic diversity has been assessed.	For successful use of this indicator at global and national reporting, gaps of data and scientific capacity between developing and developed countries must be solved. Genetic diversity means diversity within species. There are direct methods such as DNA analysis to measure genetic diversity, but those methods can be differently applied to countries depending on their capacity. Thus, not only capacity building through technology transfer, but also development of indicators that can measure diversity within species, including measuring number of populations within species, population coverage, morphological variations are needed.	
The indicator first needs to be fully developed.	The indicator first needs to be fully developed also at a global level.	
From a genetics perspective: Emphasis should also be placed on the proportion of genetically unique populations maintained within species sufficiently large enough (i.e., effective population size ([Ne] greater than 500) to	Regarding genetics: As it stands no current guidelines (indicators and targets) are available to provide a standardized measure to quantify the "proportions of populations of species"; however,	

maintain this genetic diversity. Ne of populations determines rates of inbreeding, loss of genetic variation, and loss of adaptive potential. This indicator is needed to allow for maintaining genetic diversity for populations to evolve and adapt. Ne has well established thresholds regarding genetic erosion, with Ne lower than 500 resulting in reduced ability to adapt to environmental change. Ne can be roughly approximated as 1/10th the estimated census size of a population (Nc, the number of reproductive adult individuals). In other words in absence of particular knowledge an Ne threshold of 5000 can be used to indicate genetic erosion.	with the appropriate indicators it can be. Genetic diversity has been assessed in hundreds of species and is found to be eroding as a result of habitat and population loss, direct harvest, disease, intensive agriculture and extreme climate events. A recent study documented 6% global loss of genetic diversity over the past 100 years, and 28% loss for island species, while another showed 12% lower genetic diversity in harvested fish than non-harvested fish (Leigh et al 2019 Evolutionary Applications; Pinsky & Palumbi 2013 Molecular Ecology). Further, with increased efforts to monitor genetic diversity through Targets and Indicators directed towards this level of diversity our knowledge on genetic diversity trends will increase. More relevant and focused Targets and Indicators are needed but are missing from the current proposal.	
There is a lack of data	There is a lack of data	We consider that proposals for monitoring genetic diversity should be considered: "The number of species and populations in which genetic diversity is being monitored using DNA-based methods" (Coalition for Genetic Diversity) "The proportion of populations/breeds within species with a genetically effective population size > 500" (as proposed by G-Bike network).
Need further research to measure this indicator	need technology transfer , sharing knowledge among global community to reporting in similar format	no
This indicator can be seen to represent both the extent of geographical distribution of species, as well as genetic variation, but it was designed to measure genetic variation. Genetic variation of a species can be partitioned into two dimensions, one expressed as genetic variation within populations, and the other as genetic variation between different populations of the same species. Both dimensions are important, but the within population is central both to the short and long term viability of the population, and to its adaptability when facing global change. The indicator A.0.5 addresses only the between populations dimension, and hence misses important aspects of genetic variation. The proposed complementary indicator a.47 was suggested, together with A.0.5, as a set that would capture both dimensions of genetic variation. If only one of them can be chosen as	This indicator, as well as a.47 are under development, and there is a need to build capacity at the national level for data capture, calculations and reporting.	An alternative is a.47, as described above.

headline indicator, a.47 would have higher priority than A.0.5.		
		We consider this indicator not suitable as it is unclear how it should be measured at the national level.
The species and populations that are to be monitored need to be identified and defined clearly, as it is not feasible to apply this to all plant, animal and microorganism species. Practically, this indicator requires considerable expertise and extensive funding for regular population surveys. For Small Island Developing States, this may also not be useful for many terrestrial species, as many species' ranges occupy the entire land space available, especially for larger organisms, which will be considerably easier to sample.	As stated above, due to the differences in land mass and territorial waters of various countries, comparisons across countries may not be useful as is. A 50% decline in the number of populations for a particular species in one country may mean the loss of 1 of 2 populations, whereas in a large country, a 50% decline may reflect a loss of 10 of 20 populations or more.	
		Alternative indicator: Genetic diversity Indicator for Wild Species. Developed and maintained by Nature Scot (Scottish Natural Heritage and Royal Botanic Garden Edinburgh). This is a scorecard approach for wild species of cultural and socio-economic importance which aims to promote long-term conservation of genetic diversity. Method available at: https://www.nature.scot/scotlands-biodiversity-progress-2020-aichi-targets-conserving-genetic-diversity-development-national
		We consider that this would be extremely difficult to measure, and it is unclear what "maintained" means. We suggest replacing this indicator with one related to connectivity, such as the Protected Area Connectedness Index (https://www.bipindicators.net/indicators/protected-area-connectedness-index-parc-connectedness).
		Alternative indicator: Genetic diversity Indicator for Wild Species. Developed and maintained by Nature Scot (Scottish Natural Heritage and Royal Botanic Garden Edinburgh). This is a scorecard approach for wild species of cultural and socio-economic importance which aims to promote long-term conservation of genetic diversity. Method available at: https://www.nature.scot/scotlands-biodiversity-

		progress-2020-aichi-targets-conserving-genetic-diversity-development-national

Goal B. Nature's contributions to people have been valued, maintained or enhanced through conservation and sustainable use supporting global development agenda for the benefit of all people

B.0.1 Population benefiting from ecosystem services*

B.0.1 If you selected "yes, however requires further work", please describe:	B.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	B.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
	it needs the assessment at national level in a standardized agreed format in order to compare the data. The current indicator only addresses the proportion of the area covered by land-use planning for terrestrial, freshwater and marine ecosystems. It would need to be improved to address the missing elements of the target i.e. restoration and connectivity.	
		This indicator is not meaningful as phrased, as all people benefit from ecosystem services in some way, be it through oxygen production, climate regulation or carbon sequestration. It would therefore be preferential to measure the extent and condition of ecosystem providing these essential services, or to move to a sustainable use indicator.
		What this headline indicator should monitor is the ecosystems delivering services benefiting from conservation or sustainable use measures. Thus, services provided by ecosystems being protected, restored, sustainably used or covered by biodiversity friendly NBS. Pushing for NCP or ES must benefit to biodiversity and not have the focus on the use of nature only. The HI could be rephrased e.g.: "Population benefiting services from healthy ecosystems"
It is very broad, everyone benefits in some way or other. How do we narrow down.	How do we generate data ? How do we define the criteria for population that is benefiting from ecosystem services	
		A portion of the population deprived of ecosystem service

		Indicators cannot involve commitments that depend on other policies that go beyond CBD's mandate; benefits for population demands other public policies beyond the existence of ecosystem services.
Given that Canada wishes to see the focus of this goal shift towards sustainable use, we are of the view that the headline indicators proposed are not appropriate and relevant and need further work. We believe that this headline indicator is a bit too general. One could argue that everyone is benefiting from ecosystem services. Nature underpins virtually every aspect of our daily life. If Parties were to adopt a goal on nature's contributions to people, we would need to be more specific in how we measure it and perhaps talk about the quality of the benefits, and how it improves livelihoods. As such, we are not in a position to support this indicator as currently drafted.	If this indicator is maintained, it would be important to maintain the possibility of disaggregating data from the global to national level, as an aggregated national indicator would be unrealistic. Such an indicator would also need to be disaggregated by ecosystem type and type of goods and services, even if the proposed headline indicator is amended to better reflect a shift towards sustainable use or the quality of the benefits and how it improves livelihoods.	Perhaps with more specificity, such as estimates of populations benefitting from select ecosystem services, particularly provisioning services, a headline indicator on population benefiting from ecosystem services may be an option. More investigation is needed on this.
Chile believes that when measuring population, percentages should be used rather than absolute numbers.		
The proposed headline indicator lacks specific needs to monitor progress on the desired outcomes and potential actions. If focus on measuring the amount of people benefiting but nor the valuation, maintenance or enhancement of the NCP.	we recommend using "percentage of population" rather than population in order to facilitate comparability between countries. Wherever possible and appropriate, draw on the SEEA for indicators to monitor progress towards goals and targets related to NCPs	
		all people benefit from ecosystem services already so the indicator is too generic
It is still not clear how this indicator will be measured, since in terms of population surveys it will have an important bias according to the perception of the benefit of ecosystem services, especially in countries with indigenous populations and communities, rurality and urbanity. In goal B milestone (i), we suggest including the word "prevention and" before resilience, and to eliminate the word "natural" before disasters, change the word "green investments", which does not have a clear definition and has not been agreed intergovernmental, by "sustainable investments".	The use of this indicator depends on the analysis and result of the work carried out by the group of technical experts on indicators for the post-2020 global biodiversity framework.	

		All populations should already be benefiting from ES.
		Considering that all people are benefiting from ecosystem services in one way or the other, this indicator should be rejected. The HI should take into account sustainability of the use of ecosystem services.
See below.	See below.	This target does not measure the wellbeing of biodiversity, but might be counter productive by acting as an incentive to increase production and over-exploitation. Additionally the intrinsic value of nature is poorly reflected, when it is in fact central to transformative change and shifts in behavioral change required. A better indicator could measure the intrinsic value of nature: Number of countries that have developed legislative, administrative and policy frameworks regarding the rights to Nature. We need a goal that does not put benefits at center and use that as a measuring stick, because that is an incentive to increase production, which ultimately creates more pressure in biodiversity. We need a target that looks at the % of use that is sustainable – according to Art.2 of the Convention, if use is sustainable, this would ensure long term benefits. The target also would be the indicator, % of use across all sectors that is done sustainably.
		FR supports HIs that are monitoring that ecosystem services (regulation, material and non-material) are maintained or improved through conservation and sustainable use within the planet's boundaries. Further research and support from IPBES may be needed. The trends for ecosystem services shown in the IPBES report and the ecological footprint of countries could be a good start.
	Methodology should be available	
		This is an important gap. Ideally IPBES would come up with some suitable HI indicators for this. What this headline indicator should monitor is the ecosystems delivering services benefiting from conservation or sustainable use. Thus, services provided by ecosystems being protected, restored, sustainably used or covered by biodiversity friendly Nature based Solutions. Pushing for Nature Contribution for People

		or Ecosystem Services must benefit to biodiversity and not have the focus on the use of nature only. The HI could possibly be rephrased e.g.: "Population benefiting services from healthy ecosystems". This Indicator - as all indicators addressing humans - should be disaggregated by youth, women and IPLCs. Potential alternatives: -Natural Capital is assessed, monitored and managed effectively preserving biodiversity. -Further extend to ecological footprint or to use the planetary boundaries approach.
	Needs to be disaggregated at the national level and needs capacity building support to track	
WE HAVE TO DESCRIBE THE PERCENT AND THE CATEGORIES OF POPULATION THAT BENEFING OF ECOSYSTEM SERVICES		
Criterias of "benefit" needs further elaboration		
The indicator is very relevant and fundamental for maintaining the vision and ambition of the framework. Yet, it is complex and challenging to homogeneously identify and quantify ecosystem services that are benefitted from people. However, as it is a headline indicator for a overarching goal, then we can rely on future development of metrics and indicator (including baselines and reference periods), on capacity buiding and on science. Italy, in the Fourth Report on the State of Natural Capital, has analyzed 12 ecosystem services and their change over time (specifically between 2012 and 2018). However, the amount of population that is benefiting of Nature's contributions to people need to be assessed in orfer to apply the indicator.		
	The measurement index needs to be developed.	
Malaysia suggests to standardize on one type of ecosystem service, since all humans are benefitting from ecosystem services at present (air we breathe, food we		There is a need to reexamine this indicator. The health of ecosystem needs to be measured by the ecosystem continuing to provide the services (valued and protected), not how many people benefits from it.

eat, clothes on our back). A value needs to be agreed upon and for what ecosystem service.		
		This indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative. The indicator to be develop should give focus on sustainable use. We do not think that this indicator is within the scope of CBD.
It may be useful to specify in the text 'human population' or 'people'. Also providing a unit for measurement, for example: percent of human population, can be useful as it sets the type of requirements for reporting.		
	Same as it is with many other indicators, adaptation and new investments in national monitoring and reporting systems shall be provided in most of the countries	
L'indicateur n'est pas assez claire. Il doit être precis.	Il nécessite la précision et le renforcement de capacité.	
		Goal B and its headline indicators are mainly focused on increasing nature's contribution to people, enhancing among others production levels even when this includes negative trade-offs, rather than restoring biodiversity and ecosystems so they can continue to deliver these contribution's. For this, the generic indicator "Trends in use of natural resources" and its specific indicators relating to Aichi Target 4 seem better equipped.
		This indicator is formulated in a way that in unclear and impossible to understand. There is no single person on the Earth who would not be benefiting from ecosystem services.
		Proportion of sustainable use across all sectors.
- Possible disaggregation's by sectors or by ecosystem services	-Possible disaggregation's by sectors or by ecosystem services	
All of society benefits from ecosystem services, so the level of beneficiation will need to be clearly defined and clarified to ensure that over- and under-estimation is avoided.		

Need more criteria to collect information for this indicator	It is depend on identified criteria	no
		SE supports HIs that are monitoring that ecosystem services (regulation, material and non-material) are maintained or improved through conservation and sustainable use within the planet's boundaries. Further research and support from IPBES may be needed. The trends for ecosystem services shown in the IPBES report and the ecological footprint of countries could be a good start. It should be also considered that issues of food security and sustainable diets are handled by FAO, which is the "custodian" of SDG 2.
		We consider this indicator not suitable as (1) it is unclear how it should be measured at the national level and (2) it risk to become the rough aggregation of part of the picture. We suggest to change it to: Population at risk of losing access to ecosystem services (in number of people or in share of all population). Rational: a) All people globally should benefit from ES (e.g. air, water, food fibre etc is always100% b) scientific paper SBSTTA 24/INF 9
This indicator needs to be refined. One hundred percent of every population benefits from ecosystem services. Specific ecosystem services of interest need to be identified for tracking and specific assessment methodologies need to be identified for this purpose.	It is relevant as long as specific ES are identified for monitoring and the methodology used for this purpose is used standardised and consistently used across space and time.	
		Alternative indicator: B.9 Levels of water stress: freshwater withdrawal as a proportion of available freshwater resources. The indicator is currently in the draft monitoring framework as a complementary indicator (B.1.1.9) and is also currently an indicator for Sustainable Development Goal 6 (6.4.2).
		In our view, this indicator is too general – all populations benefit from some ecosystem services. We believe that it may be better to select specific ecosystem services to map. As an example, Duke University in the United States has created maps of ecosystem services supply and demand for the Southeast United States. https://nicholasinstitute.duke.edu/project/mapping-ecosystem-services.

		Alternative indicator: B.9 Levels of water stress: freshwater withdrawal as a proportion of available freshwater resources. The indicator is currently in the draft monitoring framework as a complementary indicator (B.1.1.9), and is also currently an indicator for Sustainable Development Goal 6 (6.4.2).
B.0.2 Value of all final ecosystem services (Gross Ecosystem Product)*		
B.0.2 If you selected "yes, however requires further work", please describe:	**B.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**B.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		Robust measures for ecosystem services valuation will require significant capacity building effort, and will not likely be available for many years, even in data rich developed countries.
very broad!		
		Same as for B.0.1; we should monitor the ecosystems delivering services and benefiting from conservation or sustainable use measures: 'Value of all final ecosystem services delivered by healthy ecosystems'
	Support for countries on Gross Ecosystem Product in terms of technical capacity	
		Total climate regulation services provided by ecosystems (7.0.1). The indicator is proposed because the state of regulatory services reflects the state of all other services of the ecosystem
		Ecosystem Services Valuation is not straight forward and there are significant challenges identified by the academia on how to measure it. We suggest that the indicator should reflect that the country is including ecosystem services in its normative framework, such as "number of laws or other legal documents that include ecosystem services".
We do not consider this indicator relevant. Our main concern is that, in our view, the indicator does not measure progress against this goal. In other words, it will not give us a clear picture as to whether or not we have met the goal. Secondly, it is unclear how we would determine the value of an ecosystem service. For	N/A	N/A

example, are there calculations to determine what the value of photosynthesis is (i.e. what the value is of the air we breathe)? Would Parties use the same methodology to calculate these values, and if not, how will we be able to compare data? Also, establishing a global value of all ecosystem services would be a great challenge in itself over the next decade, let alone doing it in time to measure progress over this decade. With these points, we cannot support this headline indicator.		
It requires further work and clarification on how this would be measured.	It needs more capacity-building for national reporting.	
	Further work is needed to advance in ecosystem assets, both biophysical and in monetary terms. Capacity building will be needed to standardize the methods used for estimating the quantity and accounting the value of each ecosystem services so that the indicator can be replicable and comparable at national levels. Further work will be needed to calculate Gross Ecosystem Product at a national level, as far as we are aware this indicator has been developed only for specific provinces at subnational levels.	
		- The IPBES Values assessment may provide recommendations that should be considered for the further development of an indicator for that goal component
The value of ecosystem services is still a major challenge for several countries, in terms of quantifying benefits in monetary and non-monetary terms, so the value that is being referred to in this indicator is still not very clear.	The use of this indicator depends on the analysis and result of the work carried out by the group of technical experts on indicators for the post-2020 global biodiversity framework.	
		It depends on the methodology used.
Yes. It should be developed and be part of the indicator framework. SEEA EA should take the lead. Some provisioning services (e.g. timber production) could undermine (trade-offs) regulating and cultural services. This should be considered for defining better this indicator. Sustainability of use of ecosystem services would need to be taken into account.	This HI will probably only be operational for relatively few countries.	It is very important to have an indicator on ecosystem services. An alternative could be: Indicator name: "Changes over time of extent, condition, supply and use of ecosystem services". Organization: SEEA-EA framework of United Nations Statistical Division. It could be interesting to account for the value of all regulating and cultural services in contrast with provisioning services.

See below.	See below.	Same issue as with B.0.1. We need a goal that does not put benefits at center and use that as a measuring stick, because that is an incentive to increase production, which ultimately creates more pressure in biodiversity. We need a target that looks at % of use that is sustainable – which also would be the indicator.
Needs the inclusion of other values not only economic ones (aesthetic, intrinsic, option values).		This indicator has the significant gap of not linking the NCP with biodiversity, and ignoring the NCP 18 on the maintenance of options for future generations. The inclusion of an indicator for NCP 18 is a major step towards linking biodiversity conservation and intergenerational justice. The indicator of Expected loss of Phylogenetic Diversity provided by the IUCN SSC Phylogenetic Diversity Task Force, with the partner institutions Zoological Society of London, On the Edge Conservation, Australian Museum and Muséum National d'Histoire naturelle, Paris bridges this gap. This Expected Loss of Phylogenetic Diversity indicator is the full development of the IPBES Phylogenetic Diversity indicator, with detailed methods for regional and national disaggregation.
This indicator is not available for most countries yet, it measures the total value of final ecosystem goods and services supplied to human well-being in a region annually, and can be measured in terms of biophysical and monetary value. Unclear definition of "Value". Needs documentation and explanation in order to assess its usefulness. It is questionable that this indicator is operational. The wording "all final" is difficult – it is suggested to define and present a specific set of services. "All final" would allow countries to decide on the set individually with the result, that values (1) differ tremendously and (2) are not comparable. For a comparison and a more practical implementation, more specification would be necessary. Much recent progress has been made on this: - Changes over time of extent, condition, supply and use of ecosystem services according to SEEA-EEA framework of United Nations Statistical Division. - The IPBES Values assessment may provide recommendations that should be considered for the further development of an indicator for that goal component.	To note, it is currently being piloted with partners of the developer- IUCN, to date, a national expert panel, standardization expert panel, and thematic project group have been established, and several pilot studies have been conducted.	Changes over time of extent, condition, supply and use of ecosystem services according to SEEA-EEA framework of United Nations Statistical Division.
	Needs capacity building support to track	

Needs further clarification	It is going to be unbalanced valuation between megadiversity vs developed country	
When referring to Nature's contributions to be valued, Italy thinks it is necessary to make clear that values of nature and nature's contributions to people are associated with the three broad types of values: intrinsic, instrumental and relational values, not only to instrumental ones. The latter must be made explicit and listed in the title of the indicator, which will read as follows: "Intrinsic, instrumental and relational values of all final ecosystem services (Gross Ecosystem Product)*"		
Malaysia request clarification on the use of final. Instead, the indicator should look at all the flows that lead to the final product.		Malaysia suggests to use "Total value of all ecosystem services".
		This indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative. The indicator to be develop should give focus on sustainable use. We do not think that this indicator is within the scope of CBD.
Provide clear methodology to apply across countries and/or regions.	Least developed countries and SIDS may require training and financial assistance to build in-house capacity for measuring their gross ecosystem product.	
		Have no suggestion for an alternative to this "complicated" indicator
La valeur est très vague et large. Il faut définir les services économiques quantifiables.	Nécessite la précision et le renforcement des capacités	
		Norway is strongly against the introduction of the term Gross Ecosystem Product in the Monitoring Framework. We refer to the upcoming assessment by IPBES on values of nature and its benefits, where also indigenous knowledge and perspectives on nature is taken into account
	Capacity building is required for developing countries.	
Terms need to be clearly defined (which ecosystem services do we take into consideration?) and the methodology of measuring monetary value of ecosystem services needs to be presented as soon as possible.	How should it be calculated at national level? What data should be used, how and by whom should it be collected?	

The meaning of "value" is not clear. A selection of ecosystem services (instead of "all final ecosystem services") could be specified. Indeed, it is not clear whether there is a scientific consensus that allows to define "final ES". Some papers argue that there are inconsistencies across concepts, terminology and definitions and much work ahead: https://www.tandfonline.com/doi/full/10.1080/21513732.2018.1524399 , https://www.sciencedirect.com/science/article/pii/S1470160X16306677	This indicator is not available for most countries yet. Defining a set of ecosystem services would facilitate assessment and reporting. However, it should be noted that we are far away from having a thorough valuation of ecosystems services provided by the marine environment and this gap should be overcome if such an indicator is to be developed.	Changes in extent, condition, supply and use of ecosystem services, according to SEEA-EEA framework of United Nations Statistical Division.
	For using this indicator, the role of IPBES will be very important. IPBES needs to develop a program for supporting countries with no appropriate data and knowledge.	
	- to develope and establish indicator on ecosystem services; development of value is needed	
Since the indicator is under development it cannot be evaluated.	Since the indicator is under development it cannot be evaluated.	
It is unclear what methodologies and data sources are proposed for this indicator. Is the indicator expected to be a monetary value? If so, how would it be obtained? Is it linked with any ongoing or existing indicators? See also alternatives below.		Changes over time of extent, condition, supply and use of ecosystem services according to SEEA-EEA framework of United Nations Statistical Division
It is very difficult to measure. we need simple criteria and tools to measure this indicator, Need more capacity building.	Capacity building is needed among all relevant stakeholders to use this indicator	no
According to INF / 16, this indicator is still under development and no further information is available in the SBSTTA document. SE is of the opinion that B.0.2. may be better suited under T13 for the target component "13.2" biodiversity [and ecosystem services] are integrated into national and other accounts ".		
We would prefer to have it as: Value of all final ecosystem services (Gross Ecosystem Product)* in US dollars.		It is not clear if the indicator covers only monetary value or also non-monetary value.
This is very useful in theory. However, assessment methodologies need to be standardised across countries as different valuation methodologies will yield vastly different values. It is also a challenging task for developing countries due to the lack of resources and expertise in this area.	Capacity building and financial resources are certainly required if this indicator is to be successfully used and applied. The need for standardisation of methodologies also needs to be underscored again.	

We consider that there is currently no way to measure this. We believe that value would need to be defined first. Does this mean market value or value to society broadly? In our view, it would be helpful to develop a metric that measures change, like what is used for the indicators in the IPBES Global Assessment. We wonder if it would be possible to create something like the Dow index, e.g., something that monitors change.		

Goal C: The benefits, from the utilization of genetic resources are shared fairly and equitably

C.0.1 Amount of monetary benefits (in United States dollars) received by countries from utilization of genetic resources as a result of an ABS agreement, including traditional knowledge

C.0.1 If you selected "yes, however requires further work", please describe:	C.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	C.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
	capacity building through trainings for both the government structures and academia	
This indicator looks to measure the monetary benefits derived through Access and Benefit Sharing (ABS) arrangement, yet no equivalent indicator exists for non-monetary benefits such as research and information exchange, capacity building and technology transfer which are understood to be substantial. This skews the goal to have a disproportionate focus on the generation of monetary returns from ABS arrangements	Monetary benefits derived from ABS arrangements is not a good proxy for effective ABS arrangements.	
suggestion: % of countries with operational ABS regulations that are implemented		
The third objective of the Convention can only be considered in relation to the first and second objectives. The Indicator for Goal C should reflect how ABS supports the 2 first objectives.		
		The relation between total amount of of monetary benefits (in United States dollars) and monetary benefits received by countries from utilization of genetic resources as a result of an ABS agreement, including traditional knowledge
Canada has concerns about how benefit sharing can be quantified - amount of monetary benefits is likely concealed in confidential agreements, and this indicator could only be measured by countries that require ABS	What would be the baseline for this %? 2020? 2016-2020? There would need to be a clear number here. Also, quantification in this way would be unrealistic.	N/A

agreements. Canada also wonders if this proposed indicator would take into account the cost of non-monetary benefit-sharing. Countries will likely have challenges in being able to report on this information at the moment.		
		no monetary benefits
We believe there could be an inclusion and quantification of not monetary benefits.		
Most developing countries do not have substantial studies on this topic.		
It would be interesting to monetize some non-monetary benefits. That means, give a value (in US dollars) to important non-monetary benefits that are not included in indicator C.0.2, for example, donation of equipment, materials, laboratory reagents, infrastructure, among others. It is relevant to mention that benefits sharing resulting of access to traditional knowledge must be received by IPLCs and not by countries	It is important to take into account that this information (monetary benefits) is confidential in most ABS agreements and it could affect reporting. It will be necessary for many Parties to develop informatic tools to monitor benefits sharing and systematize information about monetary benefits	
We agree on the importance of knowing the value of genetic resources, however, in mega-diverse countries the implementation of the Nagoya Protocol is still at initial phases, and tools such as those proposed in Article 10 of the protocol are not yet operational.	We need more investigations, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	
It only focuses on monetary benefits, but doesn't capture the important volume of non-monetary benefits (capacity building, research results, sharing of info, etc…) which need to be "counted" in. It should be clarified whether this indicator include the possibility of accounting for the volume of non-monetary benefits. If so, how to count the value of "non-monetary" benefits remains an issue.		The information of monetary benefits is not available.
		This HI is not implementable and raises serious concerns in terms of measurability of Goal C. There is very scare information about benefits shared, which are often subject to private terms and confidentiality clauses (such as under the NP framework). It puts emphasis on monetary benefits, but the same emphasis is not given to non-monetary benefits (only partially and narrowly addressed in the next HI). Ways to report in an aggregated manner information

		about the type, form and (to the extent possible) quantity of benefits received by a Party, while respecting confidentiality clauses (where applicable) should be further discussed and identified.
To measure increase with a % value is not feasible while we lack proper baseline. In addition, it is not suitable for measuring non-monetary benefits. Furthermore, to evaluate increase in benefits shared, Parties need to report on the volume and nature of monetary and non-monetary benefits received. Indicator should be disaggregated by age, sex, and indigenous peoples status to ensure the fair access and sharing of benefits from genetic resources for women, girls, youth and indigenous peoples and local communities IPLCs).	To measure increase with a % value is not feasible while we lack proper baseline. In addition, it is not suitable for measuring non-monetary benefits. Furthermore, to evaluate increase in benefits shared, Parties need to report on the volume and nature of monetary and non-monetary benefits received.	
		Appropriate HI need to be developed for different "components": - better implementation of CBD/NP ABS system in order to ensure facilitated access and fair and equitable BS - contribution of benefits raised to conservation of biodiversity and sustainable use of its components - transparency regarding the many ways in which benefits are being shared, including so-called "non-monetary" benefits These components could probably be developed into HI which would then need to be further specified through a set of component indicators.
	Needs capacity building support to track at national/sub national level	
se debe incluir los beneficios no monetarios.		
Indonesia has not fully implemented ABS scheme		No all parties have the level of ABS so this indicator needs to be considered further as the indicators
	As an alternative we would suggest the number of ABS agreements signed in each country multiplied the number of species involved	
Benefit-sharing should be based on MAT individually and the amount of benefits shared is confidential information. Hence, it is not possible to collect and monitor this information legally. As an alternative, we suggest monitoring the proportion of the benefits that were	Only if our proposal for amendment as described above is reflected in the text of this indicator.	

actually allocated for the conservation and sustainable use of biodiversity among all the shared benefits. Such data could be gathered, upon consent of the parties to the contract, regardless of the substance of the MAT. As such, we propose to revise this indicator as follows: "C.0.1 Proportion of benefits allocated for conservation and sustainable use of biodiversity in the overall benefits received by countries from utilization of genetic resources as a result of an ABS agreement, including associated traditional knowledge"		
		they need to consider all different kinds of benefit sharing
		Malaysia suggests to use the number of ABS Agreements since each agreement is unique (monetary and non-monetary benefits) between resource sharer and producer. Many ABS agreements do not involve monetary value.
		There is no scientific or technical information or baselines on benefit sharing. How monetary and non-monetary benefits can be considered for reporting? Traditional knowledge and free, prior and informed consent are missing. The indicator is not feasible for Mexico.
It is unclear the final part of this indicator and how traditional knowledge fits in it. Need clarify if this means: "Amount/Number of monetary benefits (in United States dollars) received by countries from utilization of genetic resources as a result of an ABS agreement and/or traditional knowledge".		
The indicator as such would be relevant, but amount of monetary benefits is difficult, if not impossible, to assess due to confidentiality issues (e.g. of information in IRCCs).		The number of benefit-sharing agreements concluded (IRCCs in the framework of the Nagoya Protocol, SMTAs in the framework of the specialized instruments ITPGRFA and PIP Framework). The numbers of IRCCs per country is available on the ABS Clearing House website of the CBD. The numbers of SMTAs can be obtained from the secretariats of the ITPGRFA and PIP Framework
		There should be a headline indicator on access and access agreements. It will be relevant to have information on how many of the access agreements that returns benefits to those who manage the genetic resources.

	It is an approximation, or a part of the subject. Not all ABS permits refer to access to genetic resources for commercial purposes.	
Capacity building		
This indicator could be relevant if the beneficiaries of ABS agreements were obliged to disclose the data on monetary benefits. However, it seems that this will be rather difficult because information on monetary benefits is confidential. At present it is impossible to calculate this indicator because necessary data is not available.	It would be relevant but since the data is not available, it cannot be calculated.	
		% of countries with established, operational ABS regulations that are being fully, fairly and equitably implemented including FPIC, MAT and the right to say "no".
	Monetary benefits are only a fraction of the benefits acquired by use of GR.	
The indicator currently implies that the monetary benefits will be arriving from sources outside of the particular countries, whereas much could arise from within those same countries. The indicator may be better expressed as ''Amount of monetary benefits (in United States dollars) received by relevant stakeholders within particular countries, from utilization of genetic resources and/or traditional knowledge, as a result of an ABS agreement''. This indicator focuses on monetary benefits, although it does not speak to the quality of the ABS agreement and whether it is fair and equitable, including that it provides for the conservation and the sustainable use of biodiversity.	It should work with an amended indicator, and in countries with functioning ABS NFPs	
		The indicator does not adequately cover all the relevant aspects that this target should consider. It does not take into account how relevant factors (such as the State's sovereignty to decide on whether or not to regulate access to their genetic resources) can influence in the result of the indicator.
not for measure to overall progress but some extent.	we need to use other indicators in parallelly	no
This indicator does not identify who within a population benefits from the monetary benefits derived from the use of genetic resources. This should be clarified.	The indicator will allow for comparisons between countries, but needs refinement in order to identify whether benefit sharing among each population is equitable.	

		Suggested indicator: Number of benefit sharing agreement from utilization of genetic resources as a result of an ABS agreement, including traditional knowledge by country
The indicator shall indicate other ways of colleting benefits other than monetary which will not measure the overall progress of the goal		
		We do not believe that governments will be in a position to report on this accurately and it is not clear to us how this could be measured. Also, we are not certain in this context what is meant by "including traditional knowledge." We note that sharing of traditional knowledge can be sensitive for indigenous peoples and that it is important that sensitive information is protected, and consultations with indigenous peoples protect sensitive information and data sovereignty, respecting a decision not to share. In addition, in our view, using monetary benefits as the metric "siloes" the total benefits received by a country (e.g., general environmental benefits from climate change research, in-kind contributions in training, capacity building, and knowledge transfer, etc.). We consider that focusing on money as the key to benefits is not a true indicator of progress.

C.0.2 Amount of monetary benefits (in United States dollars) received by countries from utilization of genetic resources as a result of an ABS agreement, including traditional knowledge

C.0.2 If you selected "yes, however requires further work", please describe:	C.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	C.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
There is need to establish an information systems with subnational governments and agreements with institutions and other organisms	There is need of adoption of legislative, administrative and policy measures	
		It is assumed this has been included as a proxy for non-monetary benefits, but includes only one aspect of a very broad list of possible benefits. A more suitable indicator would be the number of parties with effective ABS legislation and/or regulation in place.
This is only but a fraction of what non-monetary benefits are. Too limited.		
	The indicator requires the development of binding legislation and monitoring capacity at the national level	
		Number of regional genetic resources banks.

Canada has concerns. This would only be measured by countries that require ABS agreements, and 'research and development results or publications' constitute a fraction of non-monetary benefits. Without ABS agreements where the Mutually Agreed Terms are known, countries cannot measure those things 'shared as a result of an ABS agreement'. Also, what type of publications would be included here? Is this just referring to peer-reviewed publications?	N/A	N/A
In this regard, it is important that this indicator focuses more on non-monetary benefits derived from the utilization of genetic resources, their derivatives and its associated traditional knowledge that have a direct and positive impact on the compliance of those objectives, and that highlights the importance of those benefits for IPLCs.	Number of research and development results, publications, intellectual property rights (licensed and not) shared as a result of an ABS agreement". However, even with this modification we believe that this indicator fails in accounting possible non-monetary benefits that have a direct positive impact on the compliance of the objectives of the Convention.	
It is important to include capacity building and technology transfer as non-monetary benefits in this indicator. It is not clear if "research and development results" would include reports on technology transfer, workshops, training, or other capacity building activities.	It will be necessary for many Parties to develop informatic tools to monitor benefits sharing and systematize information about results and publications	
The measurement system of this indicator is confusing, knowledge continues in a process of democratization and globalization, it is not clear how the number of people that have benefited from this knowledge will be measured in numerical terms	We need more capacity for the calculation of the indicator, this indicator will be included in the national reports in a standardized form that allows for international comparability	
This captures a very limited and specific portion of potential non-monetary benefit sharing; in addition, we lack (harmonized) methodology to count the n. of publications shared as a result of an ABS agreement as well as without such agreement		
		This HI should tackle non-monetary benefits but it only addresses a very limited portion of non-monetary benefits, which takes place in various and multiple forms and types. In addition, a methodology to harmonize reporting on this would most likely be needed, hence such HI would require further work before it can be used. In all cases, it does not seem to be adequate to tackle the vast variety of non-monetary benefits. More and adequate consideration to non-monetary benefit sharing should be reflected also in the HI for goal C.

		While the goal and milestone C.1 is acceptable, Milestone C.2 is problematic. It is not the objective to necessarily increase production and benefits under the CBD's third objective, but to make sure any use of genetic resources respects the agreed regulations. We suggest to look at the % of countries with established operational ABS regulations that are being fully, fairly and equitably implemented including FPIC, MAT.
	Needs to be disaggregated at the national level and needs capacity building support to track	
Further work is needed in order to clearly define what types of «research development results» and categories of «publications shared», as well as appropriate metrics and accountability systems. they should be better measured. As it is now they are too vague.		
	While the indicator is relevant, not all Parties have the required framework related to ABS and will not have the capacity to report.	
Benefit-sharing should be based on MAT individually; hence it seems to be difficult to count the number of research and development results shared as a result of an ABS agreement. More precise guidance on how to measure this metrics is needed.		
Based on our experience, not all ABS agreements result in R&D results or publications. Further, in some cases the R&D and publications come before the ABS agreements. Hence, this is not a good indicator.		Publication can be defined as non-monetary benefit and covered by Indicator C01.
		There is no scientific or technical information or baselines on benefit sharing. How monetary and non-monetary benefits can be considered for reporting? Traditional knowledge and free, prior and informed consent are missing. The indicator is not feasible for Mexico.
Headline indicator C.0.2 covers only a specific category of non-monetary benefits. Other non-monetary benefits should also be included in this Headline indicator. For a complete list of non-monetary benefits we refer to the Annex of the Nagoya Protocol.	see above (not comprehensive)	If the suggested Headline indicator C.01 () would be used, monetary as well as non-monetary benefits are covered, and one Headline Indicator would be enough to cover both types of benefits.
Probably most realistic for larger publishing platforms that have good agreements on reporting with ABS Clearing House.	Many publications will probably use material from several countries, how will this be addressed?	

It would be necessary to introduce an obligation to inform about linkages between particular publications and ABS agreements that made it possible to conduct research and development resulting with this publication. It might be worthwhile to consider similar indicator on number of patents developed as a result of ABS agreements.	See above – how should we identify those publications? In addition, it would be a substantial burden for the administrations to find and count all publications that fulfill the criteria for this indicator.	
		No suitable HI identified.
	The two indicators currently do not reflect the benefits shared well, since they only cover monetary benefits and research publications.	
The indicator deals with some non-monetary benefits, but not all, which nonetheless represents a monitoring start. The notion of 'research and development results' is very vague and accordingly will be hard to measure and compare between Parties, or within a Party across time. One asks, what constitutes a R&D result, or a publication for that matter? An R&D result could be a patent, or a trade secret, or technological development for example, or even an outcome that precludes further commercial interest. What constitutes a 'sharing' event? The simple lodging of a patent? Does formal correspondence or even a telephonic communication constitute the sharing of R&D results? The diversity of 'R&D results' is such that their monitoring and reporting under this heading could prove nonsensical or trite.		
It is not totally measure the target.	We need some mathematical calibration to report progress	
This indicator does not identify who within a population receives benefits.	It is relevant but does not give information on how benefits are shared within a population.	
		We do not believe it will be feasible for countries to report on this. It is unclear to us how we would measure sharing in this context, e.g. how are the research results shared and with whom? We note that access is the envisioned benefit of sharing resources. Therefore, we suggest a measurement of how many genetic resources are shared as a result of the agreement.

Goal D: Means of implementation are available to achieve all goals and targets in the framework

D.0.1 Index of coverage of national biodiversity strategies and action plans with formal processes for ensuring that women, indigenous peoples and local communities and youth are engaged and which capture means of implementation*

D.0.1 If you selected "yes, however requires further work", please describe:	D.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	D.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		i) By 2022, all means to implement the framework for the period 2020 to 2030 are fully identified or committed. ii) By 2025, all financial means to implement the framework are fully identified or committed. iii) By 2030, all means to implement the framework for the period 2030 to 2040 are fully identified or committed - CMS.
Need to strengthen coordination with subnational governments to report this information		
Difficulties to understand what this HI "Index of coverage" should capture?		
		This indicator is too limited, other HI need to be developed for this goal. We need an indicator on the extent to which public and private financial flows align with biodiversity objectives. This indicator could reflect the extent to which private and public financial institutions, but also companies, report on biodiversity related risks and impacts
	support for defining the index, implementing the index at the national level	
		Index of coverage of NBSAPs adopted as policy instruments which capture national and international means of implementation
		Total amount of approved funding for developing countries to promote the development, transfer, dissemination and diffusion of environmentally sound technologies, in line with SDG 17.7.1. UN.
Despite the fact that this would be a new indicator and is not yet operational, Canada strongly supports the intent of proposed headline indicator D.0.1. Canada believes that	Some countries will likely need support to implement this as it would be a new indicator.	N/A

the information sought in this indicator should be available for Parties to report against. However, as it would be a new indicator, Parties would need additional guidance on how the index would be built. Also, Canada would suggest that it be divided into two separate indicators in order to ensure clear information is being captured on both key elements identified, with D.0.1 focusing on the inclusion of women, IPLCs and youth in NBSAPS and D.0.1 bis focusing on the inclusion of cost assessments in NBSAPS. So the new formulation could be as follows: D.0.1 Index of coverage of national biodiversity strategies and action plans with formal processes for ensuring that women, Indigenous and local communities and youth are engaged. D.0.1 bis Index of coverage of national biodiversity strategies and action plans that include an assessment of means of implementation.		
	Indicator should also include references to capacity-building to allow for its applicability. On the other hand, the participation processes and engagement of these groups should be well determined.	
		SDG indicators 17.7.1 and 17.9.1 Efficiency and effectiveness index in the execution of resources for biodiversity.
The sectors mentioned are important and it would also be important to observe mainstreaming in this measurement process. The countries need to understand the methodology to obtain this index, which are the variables and how collect it?. In goal D (i), we suggest including at the end of the sentence "for each goal", so that the identification and commitment of means of implementation is duly focused.	The use of this indicator depends on the analysis and result of the work carried out by the group of technical experts on indicators for the post-2020 global biodiversity framework.	
Needs better wording.	Needs rewording, not clear what is meant by that	
Yes, but to be developed	Yes, but to be developed	
Index should only apply to NBSAPs in line with the GBF and the CBD. Engaged should be replaced with a stronger word like "that have full ownership and participation". Need to clarify that the Index applies only to NBSAPs that are fully in line with the Global Biodiversity Framework	See above.	See above : Need to clarify that the Index applies only to NBSAPs that are fully in line with the Global Biodiversity Framework and the CBD, as well as the decisions on implementation on harmonizing the format of NBSAPs. We need to track if the NBSAPs are in full compliance with the decisions, as comparability and add-up ability are key elements of

and the CBD, as well as the decisions on implementation on harmonizing the format of NBSAPs. We need to track if the NBSAPs are in full compliance with the decisions, as comparability and add-up to the key elements of enhanced implementation.		enhanced implementation. Replace "engaged" by a stronger word that sounds less top down – maybe "that have full ownership and participation".
As formulated this way, the indicator seems to focus on integration of peoples, which is a good thing, but deals mainly with target 20, and it is not sure what it would measure. The second part referring to means of complementation which seems to be also covered in D.0.2 and so, redundant with it.	See comments on previous question	
I don't fully get what this indicator means		
• need to clarify that the Index applies only to NBSAPs that are in line with the Global Biodiversity Framework and the CBD, as well as the decisions on implementation on harmonizing the format of NBSAPs. We need to track if the NBSAPs are in full compliance with the decisions, as comparability and add-upability are key elements of enhanced implementation. • replace " are engaged" by a stronger word that sounds less top down – suggested alternative wording "have full ownership and participation".	• need to clarify that the Index applies only to NBSAPs that are in line with the Global Biodiversity Framework and the CBD, as well as the decisions on implementation on harmonizing the format of NBSAPs. We need to track if the NBSAPs are in full compliance with the decisions, as comparability and add-upability are key elements of enhanced implementation. • replace "are engaged" by a stronger word that sounds less top down – suggested alternative wording "have full ownership and participation".	Options could be: 1) The number of countries hosting a funded BON (Biodiversity Observation Network) and 2) Number of countries where the knowledge management process is documented, based on FAIR & CARE data principles and the implementation funded.
	Needs s capacity building support to track	
Indonesia is one of the most diverse nations in the world in terms of terrestrial and marine species. Lays within the ring of fire, Indonesia's archipelago comprises approximately 17,000 islands, of which around 990 are permanently inhabited. Wallacea, Weber, and Lydekker lines divided Indonesian biodiversity into three main biogeographies: Sunda Shelf, Wallacea Area, Sahul Shelf. Under such conditions, to achieve national targets and indicators, Indonesia not only needs an equal capacity building for its people who are spread across 990 inhabited islands. It also needs the right communication strategy to raise awareness about the importance of biodiversity at all levels. But first of all and most importantly, Indonesia needs the support from all development partners and all stakeholders at all level to explore and study what and where are the priority locations in this 17000 islands country that are rich in biodiversity and which currently		

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need attention due to degradation or threat of extinction. We believe this requires a lot of resources.		
In our opinion the section "plans with formal processes for ensuring that women, indigenous peoples and local communities and youth are engaged and which capture means of implementation" is subject to national circumstances and should not be part of the headline indicator. It is better suited as a component indicator	Please see our earlier remark on relevance to national circumstances	
Use gender inclusive language and include vulnerable groups.	Indicator should be more inclusive.	
		Malaysia believed there is a need to develop a suitable indicators for this.
		As it is phrased, most NBSAP already considers these precepts. Additionally, how is this "Index of coverage" constructed?

This indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative. |
		Have no suggestion
The listing of stakeholders does not include the key sectors which are causing the global loss of biodiversity: the primary and natural resource extraction sectors, infrastructure planning and construction, manufacturing, business and farming. It also does not include the key parties/sectors responsible for mobilizing means of implementation from all sources.	Refer above comment	Suggest 'Index of coverage of national biodiversity strategies and action plans which identify means of implementation needed for and available to implement the framework.'
Capacity building		
Replace "are engaged" with "have full and effective participation".	This indicator is not available for most countries yet.	
Not entirely clear if this is completely relevant for the goal.		We would be in favour of a goal on closing the biodiversity finance gap.
This indicator should include explicitly costed strategies in order to measure progress towards Goal D. A baseline would thus also need to be established.	Creating parity across baselines and costing approaches will need capacity development. Commensurate resources will be needed to create strategies that also address the needs for means	

	of implementation of operationalisation of costed strategies.	
Need to get other indicators collectively.		
SE sees a need to clarify what the indicator D.0.1 would measure, and it is not obvious that the indicator is relevant for this goal (probably more relevant for action goal 18 instead).		
We suggest to remove "with formal processes for ensuring that women, indigenous and local communities and youth are engaged and". While we welcome the reference to Women we don't understand the specific reference to «women indigenous and local communities here and suggest deleting it.		
		Suggested indicator: Percentage of achieved goals and targets in the national biodiversity strategy
	In our view, measuring this indicator will depend on input from the relevant communities, and capacity-building will be important to ensure these communities can meaningfully engage and contribute to the effort to measure progress on this indicator.	We are unsure what this proposed target is measuring. We consider that it may be useful to engage community elders as key stakeholders and knowledge-holders, especially in vulnerable and indigenous communities. We suggest that consideration be given to how these important segments of societies can benefit from implementation of NBSAPs, and how that can be measured. We suggest that a more useful indicator would be percent of NBSAPS that describe a formal process for women, indigenous peoples, and youth to play a role in implementation.

D.0.2 National funding for implementation of the global biodiversity framework*

D.0.2 If you selected "yes, however requires further work", please describe:	**D.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**D.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
There is need to strengthen coordination with subnational governments to report on this indicator		
Australia supports the intent of this indicator, however notes that Parties may face difficulties in consistently and accurately attributing domestic funding to the		

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implementation of the GBF. For example, a carefully designed disaster recovery scheme, such as a Bushfire Recovery Fund, may implement aspects of the GBF.		
There should an indicator on the extent to which the funding gap is bridged based on domestic estimations of the needs.		
		Funding for implementation of GBF (not restricted to national funding, should include all sources). The distribution of funding should also be taken in to account based on regions, groups and people/ecosystems
		Index of coverage of NBSAPs adopted as policy instruments which capture national and international means of implementation
		Funds provided by developed country Parties to developing country Parties, in line with Article 20 of the Convention on Biological Diversity.
Indicator D.0.2 is not an existing indicator so it is unclear what mechanism will be used to capture this information.	Further work is needed to clarify how this indicator will be measured and countries will likely need support to implement it as this would be a new indicator.	Canada could support this indicator if tied to the submission of resource mobilization reports by Parties and changes to the indicator wording would see this specified.
	Indicator should also include references to funding and capacity-building to allow for its applicability.	
This indicator should be formulated in a more balanced way according to art. 20 of the Convention.	Further capacity needs to be developed in order to track biodiversity finance mobilized from the private and financial sectors.	
It's necessary to adapt this indicator to each country's situation. Depending on its per capita income, the funds received from cooperation should also be included.		
According the annex I, this indicator should be reviewed for by a group of technical experts on indicators for the global framework of biodiversity post 2020. The header indicator D.0.2 should appear as the first indicator of this goal, as it is the most holistic. In the complementary indicators d.2 and d.4, the word "mobilize" should be replaced or complemented with the word "provide and" before the word "mobilize", to better quantify and predict financial resources. We suggest a new proposal for this item, as follows: D.0.2 National and International funding for implementation of the global biodiversity framework*	The use of this indicator depends on the analysis and result of the work carried out by the group of technical experts on indicators for the post-2020 global biodiversity framework.	

Yes, but should be standardized by country & population size and, eventually, by the biodiversity to be protected.		
Needs to be in absolute terms, as well as in relation to needs (%)	Needs to be in absolute terms, as well as in relation to needs (%)	
Probably it should be something like amount of national funding for implementation ..... also, it's not clear what the national funding means, is that only public funding or private as well?		
There could be an indicator on the extent to which the funding gap is bridged based on domestic estimations of the needs.	Should be standardized by country & population size and biodiversity to be protected.	
Inclusion of in kind contributions and co-financing at a national level should also be included	Needs to be disaggregated at the national level and needs capacity building support to track	
Incluir también la financiación internacional disponible.		
The work required for this framework establishment mostly on the mainstreaming of the biodiversity in national in one consolidated instrument. Biodiversity mainstreaming work is currently still scattered in various platforms, measures, and policies.	The strategic indicators that need to be taken into account are, and not limited to, national fiscal capacity, national priority, and factual social-economic condition. These factors may considered as a certain limitation in developing a comparative standard on funding among member states.	
It should be clarified that indicator should include not only governmental funding but all other sources inc. from the private sector	Requires work on sources of funding, see above	
It must be clearly specified that the indicator must contain both public and private funding. Distinguishing the two components is important since there is growing recognition that public funds are insufficient to reverse biodiversity loss. With this in mind, and as fiscal space in countries, especially in developing ones, shrinks in the coming years, it will be critical (i) for government to use public resources wisely and (ii) for the private sector to play a much larger role in 'financing green' 'and transitioning away from activities creating threats to biodiversity and environment, and by' greening finance. ' The headline indicator should account for the two approaches to mobilizing private finance for biodiversity: 1. Green financing, which encompasses financing of projects that contribute to the protection, restoration, and sustainable use of biodiversity and ecosystem services and the equitable distribution of resources deriving from biodiversity.		

The development of payment for ecosystem services (PES) markets is particularly important for the scaling up investment in Nature protection and restoration. Governments are asked to develop and provide adequate indicators for PES programs to create mechanisms for co-financing by private sector and other users. 2. Greening finance, an approach that directs financial flows away from projects with a negative impact on biodiversity and ecosystems. Under this approach, the financial sector plays a critical role in driving the transition to improved biodiversity risk management.		
Indicator needs to be comparative		
Malaysia believes that the word national needs to be deleted to take into account all other sources of funding.		Delete national to reflect other sources of funding.
		It is not only a matter of national funding implementation, also international funding should be include. This indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative.
		This indicator still unclear on what is required to be measured. National funding [allocated] for implementation of the GBF?
Would need to capture the cross-sectoral picture and a whole-of-government perspective to account for work on transformational change.		
Capacity building and increase investment biodiversity		
We would have to define in a detailed way which spendings are to be included and how do we differentiate the means allocated to the implementation of GBF post-2020 from the means spent on other biodiversity needs. In addition we would need to guarantee that resources allocated to implementation of GBF post-2020 are spent in an effective way, leading to concrete results.	See above.	
It should be standardized by country area, population size, biodiversity to be protected (criteria to be determined) and economic dimension (GDP).	See above.	

This indicator must include the international funding sources as well as national funding.		
All funding is imporant (not just national) in implemening this goal, as well is the reduction of harmful subsidies and efficiency of use of resources. This could be improved also considering T17/T18, making goal D outcome oriented and targets action oriented.		
		It is crucial that if this indicator is included, an additional indicator is also included about international funding made available for the Global Biodiversity Framework, with a clear baseline and a target that reflects the full cost of implementation. This should involve reporting on ODAs from developed countries.
		An alternative or complementary indicator that could be explored is the number of countries that have adopted and implemented national biodiversity finance plans (or similar instruments).
We suggest the alternative formulation:; National and international public and private financial flows for the implementation of the goals and targets of the Global Biodiversity Framework* We believe this wording is too narrow and does not allow measuring the means of implementation to achieve ALL goals and targets of the Biodiversity Framework*		
There are many ways to achieve the goals and targets of biodiversity framework where funding is not the only way. It is suggested to amend this indicator		Suggest indicator: Number of indicator adopted nationally to achieve the goals and targets of the global biodiversity framework
The indicator needs to support consistency in national reporting on what constitutes spending to implement the framework. It is critical that national funding for implementation of the GBF is not the only indicator considered here. There should also be indicators to track all spend that delivers the GBF, particularly by private sector, including businesses and philanthropic organisations. Additional indicators need to be considered under Goal D as Means of Implementation should cover a broad range of activities, not only the provision of financial resources,	The data can be aggregated from national to global, and helpful in showing willingness to engage, but consideration is needed that we are actually achieving useful outcomes rather than just mobilising money.	

		We believe that this number will be difficult to estimate and might require guidance on what types of funding would be included. For example, would this include biodiversity research funding, or only management funds?
The indicator needs to support consistency in national reporting on what constitutes spending to implement the framework. It is critical that national funding for implementation of the GBF is not the only indicator considered here. There should also be indicators to track all spend that delivers the GBF, particularly by private sector, including businesses and philanthropic organisations. Additional indicators need to be considered under Goal D as Means of Implementation should cover a broad range of activities, not only the provision of financial resources, but also other means, for example technology transfer or wider aspects of capability and capacity building.	The data can be aggregated from national to global, and helpful in showing willingness to engage, but consideration is needed that we are actually achieving useful outcomes rather than just mobilising money.	

Target 1. By 2030, [50%] of land and sea areas globally are under spatial planning addressing land/sea use change, retaining most of the existing intact and wilderness areas, and allow to restore [X%] of degraded freshwater, marine and terrestrial natural ecosystems and connectivity among them

1.0.1 Percentage of land covered by landscape scale land-use plans for terrestrial, freshwater and marine ecosystems*

1.0.1 If you selected "yes, however requires further work", please describe:	1.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	1.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
there is a need for support in identifying the values of the areas to be designated as protected ones, together with technical assistance for the preparation of the management plans for the "protected areas to be"		"Percentage of land covered by landscape scale land-use plans for restoring terrestrial, freshwater and marine ecosystems and connectivity between them". It would also help measure the element of connectivity of the target. Additionally, the following indicators are also proposed to help measure the management, restoration and improvement of ecological connectivity in spatial planning: • "Number of National Biodiversity Strategies and Action Plans (NBSAPs) including provisions for improving ecological connectivity in spatial planning"; • "Number of national laws, regulations, and policies promoting ecological connectivity in spatial planning";

		• "Number of international projects promoting ecological connectivity in spatial planning". National governments could simply be identified as the "organisation" concerned with operating these indicators - CMS.
This indicator does not make sense as drafted – For example land covered by land-use plans for marine ecosystems is nonsensical. We believe the text changes submitted below address this issue. We also question how this metric in of itself addresses pressures created by land use change. Our view is that it is simply not sufficient to just have areas under spatial planning, as spatial plans can be used for a variety of objective. For this reason, the indicator should explicitly measure spatial plans delivering conservation outcomes, such as increased connectivity or protection of natural ecosystems. 1.0.1 Percentage of all ecosystems covered by conservation based spatial plans Consideration should also be given to the inclusion of an additional indicator to capture the 'restoration' element of the target.		
100% of area needs to be under spatial planning!		
		Spatial planning is not the only tool to address the 2 issues of 1/ LUC and 2/retaining wilderness areas. Land and sea use plans don't necessarily include biodiversity provisions; there is a need to integrate biodiversity considerations into land use planning. Thus, this indicator (and its related target) is not adequate to assess biodiversity actions. This indicator should assess land and sea use changes and the retaining of all intact and wilderness areas, semi natural and natural habitats. Headline indicator on Restoration itself is also missing. We need to monitor the [X%] of land that is asked to be restored in this target. Restoration cannot be limited to natural areas. HI proposals: 1.0.1 Area covered by land and sea use changes 1.0.2: Trends in area of wilderness areas 1.0.3 [X%] of land that is restored

		Proportion of land that is degraded over total land area (15.3.1)
		We have restrictions not only against the indicator properly, but mainly about the Target itself that must be revised, given the lack of clarity for the concept of "spatial planning".
Canada notes that this indicator is not yet operational. Measuring % area covered by spatial use plans is relevant in the sense that target 1 focuses on increasing area under spatial planning but the outcome cannot just be number of spatial plans – the spatial plans would need to have biodiversity outcomes to contribute to the Global Biodiversity Framework. The indicator and target also needs to address the marine realm. Thus, the wording of the indicator should be revised to say something like 'Percentage of land and marine areas covered by spatial use plans that achieve biodiversity and ecosystem health outcomes'. There is no specific headline indicator suggested for retaining or restoring 'intact' (high ecological integrity) areas, which is a major gap as this text is also a part of target 1. Likely the same headline indicator to measure increase / net gain of areas with high ecological integrity could be chosen for target 1 as for Goal A, which also focuses on maintaining and restoring (increasing) areas of high ecological integrity. Spatial use plans that manage for biodiversity and ecosystem health outcomes can directly contribute to the outcome of increased areas of high ecological integrity. This would be similar to target 3 on species plans contributing to the element of Goal A that addresses species and biodiversity conservation. However, land use / marine use plans are often not just biodiversity conservation focused – usually they are broader plans that also consider use across a landscape / seascape, so this could be an opportunity to link with targets on mainstreaming biodiversity. Also, the notion of landscapes is less common in some areas, which can be problematic for the indicator's wording. In some cases, planning may need to be beyond the landscape level.	This would be a new indicator and spatial plans are not defined so countries would need support to determine which kinds of plans would be eligible to report to ensure some degree of common outcome and comparability. A more thorough evaluation of how many governments (including sub-national and local) and others (e.g. IPLCs, stakeholders) are undertaking spatial planning that manage for ecological integrity restoration and connectivity as well as other types of development and management planning would be a helpful start. It would also be important to evaluate access to data would be a good start to identify a strategy going forward, capacity building gaps and support in this regard. Also a baseline for restoration will need to be carefully considered.	While headline indicator 1.0.1 on spatial plans can facilitate both maintenance / retaining of areas of high ecological integrity (e.g. through designating zones with low use or selective logging for example) as well as restoration to increase areas with high ecological integrity, Canada feels as other countries have expressed that a specific indicator to monitor and measure restoration is needed. This is because restoration activities will be a crucial element to achieve Goal A, but also restoration activities do not only take place as a part of spatial land use plans (e.g. they are often part of management plans, which can be a finer – more local - level of detail than spatial land / marine use plans). Thus we would like to see restoration as a separate target with its own indicators, perhaps using SDG indicator 15.3.1. 'Proportion of land that is degraded over total land area' as a starting point or element of this, but likely encompassing something like '% area land / sea restored'.
Current wording of indicator does not cover all the aspect of the target (particularly restoration).		
-Protected area downgrading, downsizing, and degazettement (PADDD) events, as an indicator of the trends in area under spatial land-use plans.	Status of Marine Spatial Planning (MSP) by phase within countries with MSP initiatives Spatial planning should be appropriately defined	

Protection Equality - SDG 15.3.1 Trends in land cover change.	and correspond to the term "landscape scale land-use plans" used in the indicator.	
It is imperative to include a header indicator relative to monitoring the restored area. Costa Rica wants Parties to recall the importance of the conclusions of the Restoration Workshop. Costa Rica underlines the importance to include an specific target relative to restoration.	It is necessary to be sure about spatial planning meaning and further work on capacity building is also necessary. It is necessary that these plans contain measures to assess impacts on biodiversity and measures to mitigate them (assessment of species before, during and after the implementation of the plan)	It is important to recall some of restoration workshop- Post -2019-2020 (CBD/WG2020/1/5): Regarding to useful indicators the specialist proposed: · nature (indicators: soil quality, biodiversity indices…) · culture (indicators: inclusion of traditional knowledge, engagement of local people, gender equality…) · society (indicators: ecosystem services, climate change adaptation and mitigation…) The group considered it important to consider tele-coupling; how one country impacts on the biodiversity/environment of another country. The group listed possible outcomes of a restoration target and associated indicators under the following headings: · Improve the conditions and functions of land/ecosystem in a holistic perspective · Representation of different habitat/ecosystems · Achieving a sustainable society/sustainable use of restored ecosystem (e.g. reduced natural disasters, increased ecosystem services) · Biodiversity status Finally, it is important to take into account the follow recommendation: · There is a need to have joint, transparent long-term monitoring and reporting between conventions, with an established methodology that aligns the same inputs of data for producing the information needed for multiple assessments
Missing indicators for: restoration of carbon-rich habitats and climate-friendly habitats and restoration in general Areas covered by marine and land spatial planning with a biodiversity component Environmental Impact Assessment assessment EBSAs connectivity Definition of intact and wilderness areas needed	se above	
This target needs to take into account the restoration information. Increase the information in marine ecosystems in the component indicators. Is important take into account the land degradation data, in order to	The use of this indicator depends on the analysis and result of the work carried out by the group of technical experts on indicators for the post-2020 global biodiversity framework.	

avoid replicate efforts at national level with other conventions		
More specific indicator would be needed, e.g. to monitor protection of wilderness areas.	Second part of the target (restoration) is not covered and connectivity is not covered. Comparability is difficult.	
	Yes, but it will be very difficult to measure this consistently between countries. Spatial planning is not well defined. If used, criteria would need to defined.	A key component of this target is restoration, which needs to be covered by an indicator: - Potentially, HI A.0.1 appears to be suitable to assess progress on restoration of these natural ecosystems (according to IPBES). - A potential HI could be on km2 committed to restoration/km2 restored or under restoration. The ecosystem functioning component could help in setting prioritisation for protecting the existing intact and wildness areas to secure their functioning
We would suggest to split the indicator in two indicators a) Area covered by Spatial Planning (with designated priority areas for biodiversity) and b) a part concerning the trends in the extent of valuable natural habitats in good conservation status, as foreseen in Aichi Target 5 – here we hope the target will be changed to be able to take the habitats/ecosystems on board. Securing the full legal recognition of Indigenous peoples' rights to lands, territories, and waters, and local community rights to lands should be reflected in this indicator, given their significance to addressing land/sea-use change.	See above.	- CBD indicator: Trends in land-use change and land tenure in the traditional territories of IPLCs (COP decision X.43) - SDG indicator 1.4.2 land tenure: Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure.
A clear definition of the term "landscape scale land-use plans" would be needed. Spatial planning must address all lands and seas surfaces to build a spatially consistent strategy for conservation and sustainable use.	See previous comment.	
		§ Possible alternative indicators include: § Indicator on intactness, e.g. A.1.2. Ecosystem Intactness Index (potentially also for goal A). § % of land covered by protection, restoration and sustainable use measures under landscape scale, biodiversity including, spatially-explicit land-use plans for terrestrial, freshwater and marine ecosystems. § SDG 15.3.1 Indicator on Percentage of degraded land on total land which include land use, land productivity and SOC status and trends. § HI should assess land and sea use changes and

		the retaining of all intact and wilderness areas, semi natural and natural habitats.
INDEX of 50% is too high under current condition. Must be really specified for biodiversity effort.		
		The headline indicator does not address the most important part of the target "retaining most of the existing intact and wilderness areas, and allow to restore [X%] of degraded freshwater, marine and terrestrial natural ecosystems and connectivity among them." This part of the target is is the measure of the adequacy of the spatial plans. Otherwise, landscape-scale spatial plans can be made e.g. for changing 100% percent of the current intact and wilderness areas to built areas. Hence , there should be a headline indicator of the % of intact and wilderness areas remaining, X% of degraded freshwater, marine and terrestrial natural ecosystems set aside for restoration and a separate headline indicator for connectivity .One possible indicator is BIP protected areas connectiveness indicator: https://www.bipindicators.net/indicators/protected-area-connectedness-index-parc-connectedness
Though spatial planning is not directly intended at biodiversity protection, the percentage of a country's area under landscape level spatial planning is a relevant metric, as it provide a legislative framework for conservation, sustainable use and restoration of biodiversity. It shifts the focus of biodiversity conservation from properties such as species and habitats to more ecologically sensible and functional objectives which include ecosystem processes, besides species and habitats. It may influence local land-use decisions or the distribution of activities. To be effective such spatial planning should be applied to all kinds of ecosystems, not just natural ecosystems. Obviously, the set up of plans is not sufficient per se, as it has to be implemented with management, monitoring and assessment programs. The indicator can hardly be applied to sea-scapes.	The indicator needs clear standardisation of procedures to avoid different assessment among countries. Capacity building is key, as few countries have a developed legislative framework for spatial planning	
	For Jamaica, spatial planning is currently restricted to terrestrial areas which includes our freshwater systems. Additional capacity will be required for spatial planning for marine and freshwater areas.	
	Mexico believes that we need a target focused on conservation areas, but we are not sure about the current wording. It seems to be a mix of elements.	Wording suggestion Target 1 By 2030, [50%] of land and sea areas globally are

	For example, spatial planning is important but it does not ensure conservation and it is very prescriptive. Spatial planning might be managed in different scales and depending on what scale is applied, you would have different results. In our case, Mexico has general planning at the national level. Some subnational authorities already have state level planning and some municipalities have also their planning. There are also two types of planning ecological and territorial and there sometimes contradict each other. Mexico thinks there should be a stand-alone target for restoration.	under effective spatial planning addressing land/sea use change, retaining most of the existing intact and wilderness areas, and allow to restore [X%] of degraded freshwater, marine and terrestrial natural ecosystems and connectivity among them. Considering that one of the milestones mentioned above refers to an increase in natural surfaces in good condition, it could be 5%, proposing that 50% of the global territory is under some type of spatial planning, which is far from being an achievable challenge. It avoids the use of "most of "leaving more general or in any case looking for the specific goals to clarify that it is important to maintain those with biodiversity and ecosystem integrity, to use scarce resources strategically. It should say: "retaining the existing intact and wilderness areas." With regards to "wilderness areas," it is not a common expression of CBD, perhaps we should look for another expression?
This draft indicator doesn't provide any way to assess retention of intact and wilderness areas. Spatial planning is a means, not an end.. Additionally m we recommend measuring the "Increase in percentage...", otherwise, would still qualify toward meeting this goal.	We recommend that in terms of global reporting.	
In Headline Indicator "1.0.1 Percentage of land covered by landscape scale land-use plans for terrestrial, freshwater and marine ecosystems", "sea area" is missing, and should be added. New Zealand also considers that spatial planning on its own may not be sufficient to halt the loss of further natural habitat. Instead, any headline indicator for spatial planning needs to be directly linked to ensuring biodiversity outcomes. Such spatial planning will need to explicitly address land-use and sea-use change, prioritise the retention of existing intact and wilderness areas and other high value ecosystems, and can also play a role in informing landscape-scale planning of restoration.		We suggest the following indicators should also be explored, as either Headline or Component Indicators, to reflect the wide breadth of this target: • "Percentage of degraded or converted ecosystems that are under restoration plans that are being implemented."

	Fails to address content/quality/intention of land-use plans and to capture the decisively important elements of retaining exisiting intact wilderness areas and restoration of natural ecosystems.	There is a need for a headline indicator that takes into account that integrity and connectivity of ecosystems traverses national boundaries
Much support, scientific, technical, and financing is required for the application of this indicator in developing countries.		
We would need to change the wording of this indicator by adding after „land-use plans": „that take into consideration biodiversity aspects ». In addition it seems that calculating this indicator would impose huge burden on the parties. We would also need to agree on common definitions to make sure that this indicator is calculated in a standardized way in different countries. Also: note that available indicators from INF16 do not really correspond with this indicator	See above.	
The existence of "land-use plans" alone does not imply that the plans will aim at retaining existing intact and wilderness areas or at restoring degraded ecosystems and connectivity among them. The HI should be reworded to: "Percentage of land covered by landscape-scale, biodiversity-inclusive, spatially-explicit plans for terrestrial, freshwater and marine ecosystems", to ensure the focus is on biodiversity and results in biodiversity positive outcomes. HI A.0.1. – Extent of selected natural ecosystems - could be useful to assess maintenance of intact ecosystems and restoration of degraded ones.	Land/sea-use plans have different approaches at national levels. It would be necessary to harmonize criteria for spatial planning, at least in what concerns the inclusion of protection/conservation and restoration aspects.	
Landscape scale land-use plans must be related to biodiversity and habitat conservation. Therefore, the words, conservation-related, should be located before landscape scale land-use plans.		
The indicator first needs to be fully developed.	The indicator first needs to be fully developed also at a global level.	
This indicator needs to be adjusted to cover land and sea. The acceptable "landuse and seause" plans need to be specified. Such as: 'Percentage of terrestrial, freshwater and marine ecosystems covered by landscape scale land-use plans that integrate biodiversity information and place appropriate restrictions in biodiversity priority areas.' 'Percentage of terrestrial, freshwater and marine ecosystems covered by landscape scale land-use plans that ensure risk averse management for biodiversity priority areas'	Given the wide range of land and sea use planning processes globally, capacity building and clear metadata are essential to ensure this is a globally standardised indicator.	

An indicator on ecological restoration is needed and it is a major gap in the framework.

Information from this indicator overlaps with indicator A.0.1 Extent of selected natural ecosystems (forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats) and 3.0.1 Protected areas management effectiveness. These indicators could be used instead.

Other possible indicator could be: "Percentage of land covered by landscape scale land-use plans for restoring terrestrial, freshwater and marine ecosystems and connectivity between them". It would also help measure the element of ecological connectivity of the target.

Additionally, the following indicators are also proposed to help measure the management, restoration and improvement of ecological connectivity in spatial planning:
• "Number of National Biodiversity Strategies and Action Plans (NBSAPs) including provisions for improving ecological connectivity in spatial planning";
• "Number of national laws, regulations, and policies promoting ecological connectivity in spatial planning";
• "Number of international projects promoting ecological connectivity in spatial planning".

National governments could simply be identified as the "organisation" concerned with operating these indicators.

SE considers that the indicator indicator 1.0.1 is inappropriate, as it is not specific about the purpose of spatial planning. The purpose of the planning instrument must be to preserve natural habitats/ecosystems, and to support restoration and increased connectivity. Only the coverage of areas by plans that meet these criteria should be measured.

SE is advocating for a headline indicator on restoration, aligned with the UN decade for restoration. Such an indicator should also be subdivided by category of restoration aim, i.e. into natural ecosystems and into productive managed ecosystems, respectively. A combined indicator for both aims cannot be used to monitor a goal to increase the area and integrity of natural ecosystems.

We would like to see freshwater clearly defined as a terrestrial ecosystem: "Percentage of land covered by landscape scale landuse plans for terrestrial (including freshwater) and marine ecosystems*"		
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels.
It is unclear how this would be assessed and we consider that there needs to be a clear definition of landscape planning. We would recommend against using "landscape scale" in this indicator (Percentage of land covered by landscape scale land-use plans for terrestrial, freshwater and marine ecosystems) because it would suggest that land (and perhaps water) covered by local land use plans would not be counted. In our view, locally managed management plans can be very effective in conserving areas and we recommend that they be equally included.	Since this indicator has not yet been developed, we anticipate that capacity building will be required.	
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels.

Target 2. By 2030, protect and conserve through well connected and effective system of protected areas and other effective area-based conservation measures at least 30 per cent of the planet with the focus on areas particularly important for biodiversity

2.0.1 Protected area coverage of important biodiversity areas

2.0.1 If you selected "yes, however requires further work", please describe:	2.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	2.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
	The current indicator exclusively focuses on the coverage of protected areas, and would need to be improved (a) to address other effective area-based conservation measures, (b) to address connectivity, and (c) to address effectiveness. All of those elements are the subject of the target.	The "Coverage of Key Biodiversity Areas for migratory species by protected areas and other effective area-based conservation measures (OECMs) including ICCAs". It would measure the adequacy of the coverage and connectivity of protected and conserved areas by reference to defined "sufficiency" or "coherence" standards, such as Key Biodiversity Areas for migratory species. Several thousand of these sites. have been identified for migratory species that are either threatened, or concentrate in significant aggregations (when breeding, on migration, or in the non-breeding

		season). As key sites for migratory species are better protected and connected, the index goes up. Over the next few years, this indicator can be complemented by a metric for "Proportion of KBAs for migratory species in favourable condition", based on standardised monitoring of KBAs derived from in situ and remote sensing data (building from existing monitoring and datasets for IBAs). See Butchart et al 2012, 2015, Brooks et al 2016. The organization that maintains it is the KBA Partnership - CMS.
There is need to keep the information updated and processed to obtain data required by this indicator		
Australia is supportive of a headline indicator for measuring the extent of important biodiversity areas under protection, as per headline indicator 2.0.1, but would like to see this indicator amended to explicitly include areas under other effective area-based conservation measures (or OECMs), as per the text changes below: 2.0.1 Protected area and other effective area-based conservation measures coverage of important biodiversity areas Additionally, we view it as critical for this target to include a headline indicator measuring overall extent of land and sea conserved through protected areas and other effective area based conservation measures. This will be key to determining whether the 30% component (or 30by30) has been achieved at a global level.		
qualification criteria are needed		
Area of PA as such should also be a HI, not just only for important biodiversity areas. Add OECMs in HI. Proposed HI: 'Protected area and OECM area coverage' Additional potential indicator on the degree of prohibition of harmful industrial and non-industrial activities in protected area		
		Protected areas and areas under other effective conservation measures coverage
		Percentage of public and private protected areas, including fully protected conservation areas.

Canada notes that this indicator 'protected area coverage of important biodiversity areas' fulfils many criteria for being a headline indicator such as being an existing global indicator that is both nationally and globally aggregated (SDG indicator 15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type). The indicator is already being used to report annually on PA and OECM coverage of important sites for biodiversity, specifically Key Biodiversity Areas. We do note that KBAs are not the only important sites for biodiversity and marine would need to be further considered, such as areas designated as EBSAs. This means that further work would be needed on how to incorporate other important sites in the headline indicator such as EBSAs (i.e., not only focusing on KBAs). Extensive information on this indicator was provided in Add2 for example outlining % conservation coverage of KBAs to date. There are some challenges in terms of the investment needed to further identify and verify KBAs across countries and also confirm that the elements that make them areas important for biodiversity are maintained over time, though this could be done for example through PA and OECM effectiveness monitoring. There is some concern about these areas changing over time (e.g. with climate change) so there would be a need as well for broader ecological approaches (e.g. via target 2 or target 1).	Capacity building would be needed for countries to implement increased KBA / EBSA monitoring and report on protected areas and OECM coverage of KBAs / EBSAs, though KBAs / EBSAs could be helpful guidance for determining priorities for biodiversity conservation.	Canada believes that the headline indicator(s) for Target 2 should include both the overall coverage and the quality of Protected Areas and Other Effective Conservation Measures. This could include qualitative elements such as representivity, management effectiveness, connectivity, involvement of Indigenous peoples, and coverage of areas that are key for biodiversity. We understand though that we need a limited set of headline indicators in the post-2020 global biodiversity framework to keep the monitoring framework manageable, and, as a result, cannot incorporate all of these elements into headline indicators. We feel that the % coverage element should be the WDPA and OECM database. For the quality element, PA / OECM coverage of areas important for biodiversity may be a possibility or the UK's suggested PAME / OSPAR effectiveness indicator (more on this under 2.0.2). Also, Canada feels strongly that as a part of the % overall coverage indicator (the WDPA and OECM database) there should be a further spatial measure to ensure that we continue to build the PA and OECM estate in all types of biomes. Canada would thus suggest incorporating 'ecological representativeness' in the % coverage indicator and as a part of target 2 wording, as it was for Aichi Target 11. Canada feels that this is a very important element to ensure that, especially with an increase to 30% conserved terrestrial and marine global areas, there is representative coverage across all major biomes. This would ensure that all types of biodiversity and ecosystems can be conserved through protected areas and OECMs and that we don't end up with disproportionally more PAs and OECMs in some ecosystems over others (e.g. areas of rock and ice for example vs other varied and important ecosystems). We feel that ecological representativeness could be incorporated into the % coverage indicator (for both terrestrial and marine PAs and OECMs) at the headline level. Proposed component indicator 2.1.1. 'Protected area coverage by type (marine, freshwater, mountain, and terrestrial)' could thus be expanded also to OECMs and be promoted to a headline indicator to serve in this regard. We understand that this information would be available either nationally, or also globally via the WDPA and OECM database to be disaggregated to the national level.

We believe that headline indicators for this target should include coverage as well as quality of Protected Areas and Other Effective Conservation Measures.	The current proposed indicator is not tied to national reporting processes.	A new headline indicator could refer to coverage as well as effectiveness of protected areas and OECMs.
First, OMEC should be included in HI "2.0.1 Coverage". Second, "Coverage" should be complemented with Representativeness to guide the coverage towards important areas for biodiversity, ecosystem services and climate change. Avoiding overrepresentation is a paramount task.		
		Costa Rica believes the headline indicator[s] for Target 2 should cover both the overall coverage and the quality of Protected Areas and Other Effective Conservation Measures. The '2.0.1 Protected area coverage of important biodiversity areas' indicator is not fully developed and is not tied into official/national reporting processes. Key Biodiversity Areas represent one option for measuring coverage of 'important biodiversity areas' but are not the only option, and do not have good representation in the marine environment. An indicator for Target 2 which captures the overall coverage of protected areas and OECMs would be more applicable at the headline level, for effectively communicating progress on this target. We believe that quality could also be captured within this headline indicator, which could be underpinned by more detailed assessment of quality elements at the component level. The headline indicator could refer to 'Coverage and effectiveness of protected areas and OECMs'. We also believe that the headline indicator should include connectivity, effective governance, successful conservation outcomes. Lastly, for Costa Rica it is important to highlight even if it is not at a headline indicator but as complementary indicator the following elements : The importance of the financial sustainability of protected areas and OECMS as a component that should also be included in the indicators of target 2. Even if it is not suitable at the headline indicators level, it could be at a component or complementary indicators level. The importance of ensuring that Indigenous people and Local Communities' rights are safeguarded with respect to their lands and engage Indigenous Peoples as full partners and leaders, ensuring that the formation and management of protected areas for

		biodiversity conservation is based on a collaborative work that harmonize the conservation objectives of both IPLCs and environmental authorities towards the protection of both natural and cultural heritage, including the respect of self-identification, and with IPLCs' where applicable ; free, prior and informed consent.
For protected areas with clearly defined conservation objectives and measures and an indicator on OECMs is needed. As well as an indicator if management plans are in place. Process led by regional sea conventions for the marine target. Will areas sustainably managed and protecting by IPLCS be included? Perhaps as OECMs? Equity in management should be included also.	see above	
Yes, in addition, an HI should also cover all PA and OECMs. Protected area and OECMs coverage (Component indicator 2.1.1: Protected area coverage by type (marine, freshwater, mountain and terrestrial, expanded with OECMs)		In addition, quality elements for 1) effective management, 2) connectivity and 3) representation should be covered by HIs 1) "Effective management": 3.0.1 Protected areas management effectiveness (move from target 3). Organisation: UNEP-WCMC 2) "Connectivity": Similarly, a HI on connectivity of PAs should/could also be included (terrestrial, marine, freshwater). See also comments for A.0.1. Both functional and structural connectivity should be considered. Organisation: EC/JRC 3) Representation of protected areas is also an important gap. Here this Hi could be used: "Average percentage of targets achieved for terrestrial biogeographic units covered by protected area can also be provided." See Jantke et al. https://doi.org/10.1111/ ddi.12853 Organisation: EC/JRC Indicators providing a prioritisation based on rarity of important natural and functional ecosystems to be protected as well as on pressures could be considered.
To strengthen quality considerations, if an area is to be designated as a PA or recognized as an OECM, it should fulfil relevant qualitative criteria as agreed upon in order to be counted towards the quantitative target. It is important to have reference to effective and equitable governance. Target 2 has a gap regarding other effective area-based conservation measures OECMs; Indicator "Protected area and OECM coverage" would cover this gap. It should separate areas of particular importance for biodiversity when calculating Protected Area and OECM coverage	See above.	See above

and Protected Area and OECM coverage as a whole. The indicator should include all the qualifiers already contained in Aichi target 11. It should only include conserved areas (including all types of governance, such as ICCAs) that are representative and valuable for biodiversity (such as KBAs), and have a management that is equitable and effective, i.e. are proven to give the conservation outcomes that have been planned. Securing the full legal recognition of Indigenous peoples' rights to lands, territories, and waters, and local community rights to lands should be reflected in this indicator. The rights of IPLCs have been fully respected and with their full and effective participation (FPIC), and that UNDRIPs is fully applied.		
		This indicator should also include OECMs and better reflect the issue of protecting 30% of land and 30% of seas. France believes the headline indicator for Target 2 should cover both the overall coverage and the quality of Protected Areas and Other Effective Conservation Measures. The '2.0.1 Protected area coverage of important biodiversity areas' indicator is not fully developed and is not currently tied into official/national reporting processes. While 'Key Biodiversity Areas' could represent one option for measuring coverage of 'important biodiversity areas' they are not the only option, and they are proportionally under-used in the marine environment. An indicator for Target 2 which captures the overall coverage of protected areas and OECMs would be more applicable at the headline level, for effectively communicating progress on this target. We believe that quality could also be captured within this headline indicator, which could be underpinned by more detailed assessment of quality elements at the component level. The headline indicator could refer to 'Coverage and effectiveness of protected areas and OECMs'. Quality aspects such as representativity, effective management and connectivity are key.
it should be something like Protected area and OECM coverage		
The headline indicator[s] for Target 2 should cover both the overall coverage and the quality of Protected Areas and Other Effective Conservation Measures as well as connectivity. The '2.0.1 Protected area coverage of important		Connectivity is relevant and important for this target and indicator, also re climate change > range changes (see also: CMS index, Fragmentation indices (see ADD.1). Effectiveness & equitable management should be captured (Ensure tenure

biodiversity areas' indicator is not fully developed and is not currently tied into official/national reporting processes. While 'Key Biodiversity Areas' could represent one option for measuring coverage of 'important biodiversity areas' they are not the only option, and they are proportionally under-used in the marine environment. An indicator for Target 2 which captures the overall coverage of protected areas and OECMs would be more applicable at the headline level, for effectively communicating progress on this target. We believe that quality could also be captured within this headline indicator, which could be underpinned by more detailed assessment of quality elements at the component level. The headline indicator could refer to 'Coverage and effectiveness of protected areas and OECMs'. Germany is interested to hear more about the UK's proposal for a headline indicator covering both quality and coverage of protected areas and OECMs.		rights and indigenous land-management). Disaggregation should be done considering sea and terrestrial, so it should be not 30% of the planet, but [30%] for sea and [30%] for land. "Number of protected areas that have completed a site-level assessment of governance and equity (SAGE)" in the current version suggested as complementary indicator for target 2 could be used as additional headline indicator or "Number of protected areas that have completed a site-level assessment of governance and equity (based on methods such as Site-level Assessment of Governance and Equity (SAGE), Governance Assessment for Protected and Conserved Areas (GAPA), IUCN Green List of Protected and Conserved Areas and management effectiveness (e.g. METT, IMET, RAPPAM, IUCN Green List)"
Solo dejarlo en porcentaje de área terrestre y marina cubierta por áreas protegidas y otras medidas de conservación eficaces basadas en áreas. Eliminando la parte de "áreas importantes" para la biodiversidad, que es muy ambigua, todas las áreas son importantes para la biodiversidad, incluso las degradadas, ya que pueden recuperarse con acciones de restauración, por ejemplo.		
1) Other effective area-based conservation measures are missing and can cause underestimation. 2) An indicator for total protected area is missing - the target is straight forward in this regard: "at least 30 per cent of the planet" 3) The connectivity component is missing and should be captured here or in Target 1 headline indicator, see our suggestions there	In the national context, "important biodiversity areas" may be defined differently than on the global level and there should be therefore some flexibility in defining important biodiversity areas.	
More work is needed to fill some gaps: connectivity, OECMS coverage, management effectiveness.		
Japan believes the headline indicators for Target 2 should cover both the aspects of the overall coverage and quality of Protected Areas and Other Effective Conservation Measures. In this regard, the '2.0.1 Protected area coverage of important biodiversity areas' indicator is meaningful, if we add OECMs, to capture the effectiveness of such measures on important biodiversity areas, as the result of the efforts to cover 30 by 30. Yet, it is not fully developed and is not currently tied into official/national reporting processes. While 'Key Biodiversity Areas' could represent one option for measuring coverage of 'important biodiversity areas', they		

are not the only option. KBAs are proportionally under-used in the marine environment globally and some countries, for instance. Therefore, the denominator of the proposed indicator should be flexible.		
There is no agreed upon definition for important biodiversity area. The CBD needs to classify the type of measurements (KBA, EBSA, Green List etc.) that would come under this definition.		Malaysia suggests to properly define important biodiversity areas (which has to include existing classifications of PAs like Green lists, EAAFP, RAMSAR etc.) and add 'where appropriate based on national circumstances' to the indicator.
Mexico agrees with the 2.0.1 headline indicator. It is feasible at the national level; however, the efforts of the Strategic Plan 2011-2020 were directed towards effective management, which is important to consider to be resumed. In this particular case, it might be important to consider these other elements where there is already so much experience to report on. Additional indicators: "protected area coverage" + "protected area coverage under and effective management" + "other effective area-based conservation measures" + "protected areas and/or other effective area-based conservation measures with and important biodiversity component identified" This would be the equivalent of Aichi Target 11 but some elements are missing that might be important to consider, such as terrestrial and inland water; equitably managed, ecologically representative, and well-connected systems; and integrated into the wider landscapes and seascapes.		Mexico prefers simple targets that are easy to measure, but in this case, we do believe that we would be lowering the bar in one of the Aichi's targets that were very successful and contributed to building up a lot of experience in. We do think it would be important to include the long-term management of these areas as part of this target. Wording suggestion Target 2 By 2030, protect and conserve through well connected and effective system of protected areas and other effective area-based conservation and management measures at least 30 per cent of the planet and landscapes and seascapes with the focus on areas particularly important for biodiversity.
Biodiversity Area (KBA) identification, a bottom-up process led by national coordination groups with the support of governments, requires additional resources and capacity to ensure that all marine KBAs are identified across geographies and taxonomic groups.		
At the national level, what is considered an "Important biodiversity area" needs to remain nationally determined. It will be important that headline or other indicators reflect the qualitative as well as quantitative dimensions of protected areas and OECMs, and in particular the inclusion of management effectiveness, ecological representativeness and ecological connectivity, which are important for ensuring effective biodiversity outcomes. Other key criteria include adequacy and viability.		

<table>
<tr>
<td>In addition, in relation to the role of IPLCs in the effective management of protected areas and OECMS, we think further consideration could be given to indicators which reflect giving effect to indigenous peoples' rights, as appropriate, and recognising and protecting the contribution of traditional knowledge, innovations and practices of indigenous peoples and local communities to the conservation and sustainable use of biodiversity in these areas.

Accordingly, in Headline Indicator "2.0.1 Protected area coverage of important biodiversity areas", further consideration could be given to including an indicator such as:
• "Protected area coverage of important biodiversity areas which give effect to indigenous peoples' rights, as appropriate".</td>
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<td>The proposed indicator will not cover what the target specifically addresses, which is a proportion of the planet, with its areas and major ecosystems. The headline indicator for Target 2 should measure both the overall coverage and the quality of PAs and OECMS. It is also not developed and used in national processes.

Rather, there is a need for two headline indicators for this target:

1. Overall coverage of PAs and OECMs
2. Proportion of PAs and OECMs that are well-managed.

Target 2 requires a headline indicator focusing on management effectiveness, thereby ensuring that protection and OECMs deliver on their conservation objectives. "Percentage of PAs and OECMs that are considered to be well-managed". Methodology for assessing whether areas are well-managed could be developed based on approach used by OSPAR Regional Sea Convention, as has been proposed by the UK in this process.</td>
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<tr>
<td>It is unclear what important biodiversity areas are relevant for achieving the goal. The goal should be more precise to be measurable.</td>
<td>This indicator is too general and leaves a lot of space for interpretation.
An indicator measuring the surface of protected areas is missing and it would be very relevant bot for measuring progress of the target and for enhancing comparability in national reporting.</td>
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This HI focus only on Protected Areas (and not on OECMs) and lacks the effectiveness element. It should be "Coverage and effectiveness of protected areas and OECMs on land and at sea".	See above.	IUCN Green List of Protected and Conserved Areas UK's proposal for a headline indicator covering both quality and coverage of protected areas and OECMs seems promising
This headline indicator does not cover all components. Component indicator 2.1.1 represents 'protected area coverage', and component indicator 2.2.1 represents 'protected area coverage of important biodiversity areas'. This headline indicator only indicates important areas where biodiversity matters the most, so this headline indicator needs to be revised. We suggest the deletion of 'of important biodiversity areas' of the headline indicator (2.0.1). In addition, component indicator 2.3.1, 2.4.1 and 2.5.1 address protected areas and other effective area-based conservation measures (OECMs), but the headline indicator only represents protect areas, so the headline indicator needs to be more specific. Therefore, we suggest the following revision. (Revision) Protected area coverage including other effective area-based conservation measures		
Biodiversity Area (KBA) identification, a bottom-up process led by national coordination groups with the support of governments, requires additional resources and capacity to ensure that all marine KBAs are identified across geographies and taxonomic groups.		
	Methodology of including OECMs must be developed. E.g. is the whaling sanctuary (e.g. Southern ocean whaling sanctuary) fulfilling or partly contributing to the target.	
This is a relevant indicator but it should ideally be a component of a more general headline indicator which focuses on PA and OECM extent, and representativeness of ecosystem diversity.	This indicator is better suited to component level: at this level it needs to have clear metadata that resolves what important biodiversity areas can be included in the computation. The EBSA, KBA potential overlap in the marine realm needs to be addressed in methodology to ensure consistency across nations.	As mentioned above the current indicator is better suited to component level. The Headline indicator should be a simple computation of extent of PA and OECM, with a measure of representativeness of ecoregion or functional ecosystem type diversity included. Unfortunately, we do not know of a globally used indicator that does this. There are simple ways to avoid the undesirable outcome of all PA expansion occurring in a particular region. The 30% target can be computed for each ecoregion, and hectares that contribute to the target are included in the metric, but those in excess of the target do not.
Protected areas and other areas with conservation measures are just tools. While 'Key Biodiversity Areas' could represent one option for measuring coverage of 'important biodiversity areas' they are not the only option,		To monitor biodiversity outcomes and management effectiveness could be used indicator 3.0.1 Protected areas management effectiveness (which may be

and they are proportionally under-used in the marine environment. An indicator for Target 2 which captures the overall coverage of protected areas and OECMs would be more fit for purpose. The most important elements of this action target are the biodiversity outcomes on these areas, as a result of management effectiveness. The headline indicator should therefore refer to both 'Coverage and effectiveness of protected areas and OECMs'. Ecological connectivity could also be of relevance. Protected area coverage could be complemented by protected areas with management plans.		rather considered under target 2, in combination with this indicator).
SE supports HI 2.0.1, which simply measures how much land and sea is covered by area protection, which is a basic indicator of this target. Therefore, it would be helpful to add "on land and in the sea", to clarify and separate the different metrics. However, it is unclear how well current indicators handle OECMs and areas owned or managed by IPLCs. Supportive indicators that would better reflect IPLC's contribution to and or share of OECMs should be discussed in this context. One example is the indicator "Trends in land-use change and land tenure in the traditional territories of indigenous and local communities", as discussed in Decision X/43.	Same uncertainties as described above.	
We propose an alternative formulation: Protected area and other effective area-based conservation measures coverage (the coverage is be reported according to IUCN Protected Area Categories) Rationale: - The headline indicator for this target should measure protected area and OECM coverage by using an established methodology such as the IUCN protected area categories. - The coverage of PAs and OECMs should be reported according to IUCN Protected Area Categories. An example of reporting by a Party could be the following: Total= 26% ; PA=17% (Categories IUCN 1-2=2%, 3-4=15%), OECM=9% (following IUCN guidelines)		
The statement "important biodiversity areas" needs to be further defined.	Suitable with improved definitions	

		The proposed Key Biodiversity Areas indicator is not fully developed and the global uptake of KBAs is much lower in the marine environment. While KBAs could represent one option for measuring coverage of 'important biodiversity areas' they are not the only option and they are proportionally under-used in the marine environment. This element should be assessed based on existing country-level practices and then aggregated together for global reporting, perhaps at component level. Overall coverage and quality should be captured at the headline level, underpinned by more detailed assessment of quality elements at the component level. We propose the following alternative headline indicator: "Coverage and effectiveness of protected areas and OECMs". This headline indicator is at concept stage and would be an integration of information from the existing component indicators of spatial coverage of protected areas and OECMs and a new component indicator of protected area management effectiveness, which is currently under development by the UK. Integrating these elements into a single overall headline indicator will support a smaller number of headline indicators and enable effective and clear communication of progress towards this target. The existing PAME indicator (reported in the WDPA) is a useful starting point; but infers only whether a suitable mechanism for assessing protected areas management effectiveness is in place or not. This new protected area management effectiveness indicator will build on PAME, by assessing how effective protected areas are in practice, whilst being uncomplicated, easy to use and applicable at a global level.
It is not clear to us how important areas for biodiversity will be defined, e.g., does each country decide for itself? In our view, the lack of a clear baseline would complicate measurement. We believe it is important to reflect indigenous land use management practices and efforts to ensure against displacement of indigenous peoples from their land in defining and assessing protected area coverage and other effective area-based conservation measures.	We consider that defining what constitutes an important area for biodiversity will be necessary to ensure that this indicator is standardized. Since the main part of the goal is protection of 30% of the planet, we suggest a headline indicator looking at overall area of land protection, not just important biodiversity areas. In addition, it is proposed that complementary indicator t2.4 (% coral reef protected) could be incorporated to help deliver this headline indicator for coral reef ecosystems as a key biodiversity area.	
		The proposed Key Biodiversity Areas indicator is not fully developed and the global uptake of KBAs is much lower in the marine environment. While KBAs

| | | could represent one option for measuring coverage of 'important biodiversity areas' they are not the only option and they are proportionally under-used in the marine environment. This element should be assessed based on existing country-level practices and then aggregated together for global reporting, perhaps at component level.

Overall coverage and quality should be captured at the headline level, underpinned by more detailed assessment of quality elements at the component level. We propose the following alternative headline indicator: "Coverage and effectiveness of protected areas and OECMs". This headline indicator is at concept stage and would be an integration of information from the existing component indicators of spatial coverage of protected areas and OECMs and a new component indicator of protected area management effectiveness, which is currently under development by the UK. Integrating these elements into a single overall headline indicator will support a smaller number of headline indicators and enable effective and clear communication of progress towards this target. The existing PAME indicator (reported in the WDPA) is a useful starting point; but infers only whether a suitable mechanism for assessing protected areas management effectiveness is in place or not. This new protected area management

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effectiveness indicator will build on PAME, by assessing how effective protected areas are in practice, whilst being uncomplicated, easy to use and applicable at a global level. |
|---|---|---|

2.0.2 Species Protection Index

2.0.2 If you selected "yes, however requires further work", please describe:	2.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	2.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
There is need to keep information updated and processed to obtain data needed for this indicator		
the indicator should also include aquatic species	The indicator requires capacity building to provide accurate data from the national level	

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		We suggest the deletion of this indicator.
This indicator does not seem as relevant for target 2 as other indicators. It seems to have a terrestrial focus (not being used / suitable for marine) and we understand is not a robust measure of the degree to which protected areas contribute to species conservation. As a result, Canada does not agree with Species Protection Index as a headline indicator.	Canada does not think that Species Protection Index is suitable as a headline indicator.	Canada feels strongly that in addition to a headline indicator on coverage / ecological representativeness of protected areas and OECMs, that a quality indicator is needed. This could be areas important for biodiversity but if it is not maintained, an option could be the UK's PAME / OSPAR proposal. Our understanding is that current options for PA and OECM effectiveness indicators are limited, for example since PAME currently is vastly underused and only tracks whether a management effectiveness assessment is done and not what the outcome is – whether management is effective. However, we have studied the proposal from the UK to merge the PAME assessment with 4 qualitative questions from OSPAR for a stronger effectiveness indicator and are interested in it. It seems that it would be easy to understand and implement (to answer most of the OSPAR questions, which are simply worded), which would help with reporting. One thing to highlight is that many of the questions do not directly measure the effectiveness of conserving biodiversity in PAs and OECMs but are proxies in measuring actions relating to governance. However, we recognize that answering the questions would be a start or 'trigger' for determining effectiveness and further strengthens the PAME indicator which only records whether an effectiveness assessment has been conducted. A suggestion could be for question d, to be slightly reworded to say: "Using the information supplied in response to questions a)-c), as well as any other suitable information sources (e.g. on ecological condition) to (delete "consider" and replace with "confirm") if the site is achieving its stated conservation objectives."
	We believe there is a lack of information on the available data and methodology for the monitoring of this indicator.	We propose to consider and analyze the option of incorporating of the IUCN Green List as an alternative indicator.
		The '2.0.2 Species Protection Index' indicator does not use data from national reporting and does not capture the marine aspect of the target. It would be more appropriate as a complementary indicator.
We recommend deleting 2.0.2 "Species Protection Index" but to retain it as a component indicator. As a headline	Add following two headline indicators: 1) stage of establishment and degree to which protected areas and OECMs prohibit	

indicator it is too repetitive and less relevant for marine species.	environmentally damaging activities (i.e. level of protection) [data on this indicator can be collected in accordance with the MPA Guide and reported to the WDPA Protected Planet website] 2) Area of Protected areas and other effective area-based conservation measures meeting their documented ecological objectives	
Needs to take into account the marine data because the species protection index is focusing in the terrestrial protected areas. For that reason, the indicator have a big gap.	We need to know how we can enhance standardization and comparability also requires need to taking into account the marine data and work on this issue with stakeholders.	
A terrestrial index, not being used/ suitable for marine environment Lacks sensitivity to changes in species distribution and status.		
Yes, but the need for replicability/independence from Map of Life needs to be addressed.	See other comments.	Use of KBAs is also an option but it also suffers from a lack of transparency regarding the underlying data and lack of open access of KBAs is an issue as well.
		The '2.0.2 Species Protection Index' indicator is for terrestrial areas and does not cover the marine realm. It would be more appropriate as a complementary indicator? A similar indicator for marine areas would be needed. The species protection index could inform on how well the habitats of threatened species are represented in protected areas. It therefore only addresses one aspect of protected areas: representativity. It is not clear whether the indicator also takes OECMs into account, and none of the other qualifiers contained in Aichi target 11 are monitored though this. It is therefore not suited as a headline indicator, but could be a component indicator for representativity.
		There is lack of information on the available data and methodology for this indicator. The '2.0.2 Species Protection Index' indicator does not use data from national reporting and does not capture the marine aspect of the target. It would be more appropriate as a complementary indicator.
	Methodology should be available at the national level. also, it may be really expensive	

This is a poor measure of the degree to which protected areas contribute to species conservation, given that it is based on a overlap between species distributions and protected areas ignoring the fact that individual species will be absent from many of the overlapping protected areas, and doesn't take account of the fact that species differ in the degree to which they can be conserved through site-scale conservation.	The '2.0.2 Species Protection Index' indicator does not use data from national reporting and does not capture the marine aspect of the target. It would be more appropriate as a complementary indicator.	Headline indicator 2.0.1 - focusing on protected/conserved area coverage of Key Biodiversity Areas including those identified for species provides a more useful metric of the contribution of protected areas to species and wider biodiversity conservation than this one focused on the protected area coverage of species ranges. Indicator 2.0.1 is compiled by BirdLife International, IUCN and UNEP-WCMC based on national data submitted by countries to the WDPA and WDKBA. Instead of the Species Protection Index, indicator 3.0.1. "Protected area management effectiveness" could be moved to report under T2 (here), noting that no such indicator is available for all countries or at a global scale yet, but should be a priority to develop.
Cap building support needed for data collection and maintaining database	Needs to be disaggregated at the national level and needs capacity building support to track	
Needs further clarification of the SPI index and the overlap with the Threatened status and similar "status" to reflect their under pressure.	Need further clarification elements that matters	
The relevance of the index to the target is somewhat unclear. Is it proposed as a measure of the representativeness of the protected areas ?	The methodology for calculating this index is not easily available hence the relevance to national scale reporting is unclear	
The index measures, for each species, the amount of suitable habitat within protected areas, but not whether the species is actually effectively protected or its conservation status.		It provides for connectivity of protected areas and has the advantage to be in continuity with the Aichi Target 11. it is a more suitable and practicable indicator for terrestrial protected areas rather than marine ones. However, it requires a lot of specifications and improvements
Needs to better define what the species protection index is. Seems focused on terrestrial protected areas.	Unable to see the how this is measured and the resources required.	
		There are some inconsistencies between proposed 2.0.2 and the target, hence, it should be removed from the list. Moreover, if protected areas management effectiveness proposed as a headline indicator 3.0.1 of T3 can be evaluated, it should be used as an indicator for T2.
		Mexico agrees with the 2.0.2 headline indicator. Is feasible at the national level. However. this indicator should be changed to T2
		Difficult to be achieved

We recommend deleting 2.0.2 "Species Protection Index" but to retain it as a component indicator. As a headline indicator it is too repetitive and less relevant for marine species.	e recommend deleting 2.0.2 "Species Protection Index" but to retain it as a component indicator. As a headline indicator it is too repetitive and less relevant for marine species.	We propose the addition of the following two headline indicators: 1) stage of establishment and degree to which protected areas and OECMs prohibit environmentally damaging activities (i.e. level of protection) [data on this indicator can be collected in accordance with the MPA Guide and reported to the WDPA Protected Planet website] 2) Area of Protected areas and other effective area-based conservation measures meeting their documented ecological objectives [the IUCN Green List is one example of ways to track progress toward this indicator]
		We should ensure indicators also reflect the important qualitative components needed ensure effective biodiversity protection and conservation at a global level. Ecological representativeness is particularly vital. We propose the following additional indicator be included as headline or Component indicator: • "Protected areas management effectiveness".
		The '2.0.2 Species Protection Index' indicator does not capture the qualitative element of the target. Also, the marine aspect of the target is lacking. SPI would be more appropriate as a complementary indicator.
		While the index measures how well country's terrestrial protected areas overlap with the ranges of its vertebrate, invertebrate, and plant species it tells nothing about the connectivity or effectiveness of protected areas system. It estimates the regional or global biodiversity representativeness of terrestrial protected areas but has nothing to do with conservation measures. It is also focused on species habitat only. Also the term areas particularly important for biodiversity should be defined – as areas under protection for instance.
The index measures, for each species, the amount of suitable habitat within protected areas, but not whether the species is effectively protected or its conservation status. It does not use data from national reporting and does not include the marine environment.	The index determined in each country depends on the set of species included, and this set of species can vary between countries therefore making the index not necessarily comparable between countries if no suitable criteria for the inclusion of species are given/followed.	

We are concerned that this indicator has not been developed. It seems that the theoretical background needs to be supplemented.		
We recommend deleting 2.0.2 "Species Protection Index" but to retain it as a component indicator. As a headline indicator it is too repetitive and less relevant for marine species.	We recommend deleting 2.0.2 "Species Protection Index" but to retain it as a component indicator. As a headline indicator it is too repetitive and less relevant for marine species.	We propose the addition of the following two headline indicators: 1) stage of establishment and degree to which protected areas and OECMs prohibit environmentally damaging activities (i.e. level of protection) [data on this indicator can be collected in accordance with the MPA Guide and reported to the WDPA Protected Planet website] 2) Area of Protected areas and other effective area-based conservation measures meeting their documented ecological objectives [the IUCN Green List is one example of ways to track progress toward this indicator]
This indicator is an index and requires further refining of species that comprise this index at national level in each country and are relevant as indicators.	This indicator is an index and requires further refining of species that comprise this index at global level and are relevant as indicators. The number of such species probably won't be large enough.	
		There is no peer reviewed published literature on the computation of this indicator, it is therefore not transparent or reproducible. It is based on globally modelled information and does not utilise national data. Currently the Species Protection Index doesn't measure anything useful other than protected area expansion. The way the index is structured, literally ANY protected area expansion would "benefit" species. This is because the indicator only measures the % of species' habitat that is in PAs, it doesn't have protection targets for species. So a country could keep on expanding habitat protection for the same subset of species and the Index will still show a positive trend. You need to have an index that measures species protection against protection targets. They can be simple, but there must be targets.An alternate indicator needs to be developed where a species persistence target is set and then protection is measured against achieving this target, effectiveness of protection is also critical as protected areas must mitigate against threats to species for them to be effective. South Africa has developed a

		species protection level indicator developed by the South African National Biodiversity Institute that includes both species persistence targets and a factor to determine effectiveness, this indicator is new and has not yet been published but we would be happy to share this with the BIP if it would be helpful.
		An indicator on ecological connectivity is an important gap to monitor this target. Indicator 2.0.3. Connectivity of protected areas, could be used.
SE supports HI 2.0.2, but also for this indicator it is unclear how well the databases employed in the calculation of this Index covers OECMs and areas owned or managed by IPLC.	It is not clear how this indicator could be used in national reporting. It is now calculated at the global level directly.	There is a need for indicators that measure to what degree protected areas actually contribute to the conservation of biodiversity, how representative and well connected they are, and how efficiently they are managed. Headline indicator 3.0.1 may fill at least some of these purposes and should be moved to target 2.
		This indicator should be replaced by the indicator 3.0.1 Protected areas management effectiveness
		Given that this indicator is used to provide an annually updated, remote-sensing informed, spatially explicit, and global metric of how well terrestrial species are represented in terrestrial protected areas, it would be extremely difficult for a large proportion if not all countries to provide. Unable to determine an alternative.
We think this indicator could usefully include a reference to biodiversity cataloguing and environmental assessments as a prerequisite to identify important biodiversity areas, perhaps as a complementary indicator.		

Target 3. By 2030, ensure active management actions to enable wild species of fauna and flora recovery and conservation, and reduce human-wildlife conflict by [X%].

3.0.1 Protected areas management effectiveness

3.0.1 If you selected "yes, however requires further work", please describe:	3.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	3.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
Monitoring and reporting should be in place in order to measure the effectiveness of the management plans	there is a need for financial support to prepare the management plans for the newly designated protected areas	By 2030, ensure active management actions to enable wild species of fauna and flora recovery and conservation, and reduce human-wildlife conflict by [X%], while respecting rights to customary sustainable use - AVAAZ.

How will efficacy be defined?		
		This indicator appears to be somewhat subjective and isn't clear how it will be measured – and it isn't necessarily indicative of progress towards Target 3, given it is not specific to protected areas. If it is to be included we suggest it would be more suitable under Target 2.
needs criteria for effectiveness		
		Not a good indicator for this target; See component indicator 3.1.2 which would be a better Headline indicator: 'Proportion of conservation dependent species (IUCN Green Status of Species Index)' Other HI on: - red list index (is already used for goal A, but ok to have it at both places), - % of threatened species that are improving or regressing in status.
		Species conservation and management plan effectiveness; we would also suggest adding another indicator, such as "Total of payments for solving human-wildlife conflicts".
Canada is confused by this suggested headline indicator because species are not conserved only in protected areas but through many different methodologies (e.g. also sustainable management / use outside of PAs and OECMs). Protected area management effectiveness is very important but more relevant for Target 2 on PAs and OECMs.	N/A	Canada would suggest instead adding headline indicators to mirror Goal A – e.g. the Red List, Red List Index and Living Planet Index to capture the status of species conservation (linking to recovery and conservation in the target wording) in addition to species management actions. We also note that indicators to measure genetic diversity are currently only reflected under Goal A and are not represented in a target yet – we feel that either this should be the case or that genetic diversity should be captured under target 3.
It is not enough to measure only the effectiveness of management but also which general components allow to properly measure this management.		
		Costa Rica considers this indicator is not suitable for target 3, since it is not focused only in active species management, but includes many other aspects of protected areas management.

Effective and equitable management is essential for a successful Post2020-GBF. Difficult to encompass all element in one HLI. HLI should also include managemtn outside MPA/Pas. Proxy indicators could include: - red list indexwith all categories, - % of threatened species that are improving or regressing in status. - Trends in by-catch - Level of exploitation of commercial fisheries - Species replacement as a consequence of capture fisheries - number of endangered species Could there be an indicator linking with CITES, CMS?	see comments above	
The protected areas management effectiveness are not necessary a good indicator because this indicator not measure the wild life out of protected areas where can be happen this interaction. The data about human-wildlife could be an important time to obtain the baseline, for that reason is complex to propose a percentage.	In mega diverse countries have a special conditions about wild life species for that reason we need strengthen our capacities constantly.	
it indicates whether a protected area has been assessed but not whether management is actually effective.		
Yes, but move to target 2		Lack of standards although various tools exist. See also green status of species assessment IUCN Red List
See below.	See below.	This indicator would be better to measure Target 2. The Protected area management effectiveness is important per se. For instance PAME indicator is more aligned with Target 2 than Target 3 and is not sufficient as a headline indicator. Assessing and monitoring the effective implementation and management of protected areas is particularly important to achieve successful conservation outcomes.
		The '3.0.1 Protected area management effectiveness' or PAME indicator is more aligned with Target 2 than Target 3 and is not sufficient as a headline indicator. Assessing and monitoring the effective implementation and management of protected areas is particularly important to achieve successful conservation outcomes. PAME is based on whether a management plan is in place for a PA and if it has been assessed, it does not measure actual effectiveness of that management. We have proposed the headline indicator for target 2 could

		refer to 'Coverage and effectiveness of protected areas and OECMs'.
The '3.0.1 Protected area management effectiveness' or PAME indicator is more aligned with Target 2 than Target 3 and is not sufficient as a headline indicator. Assessing and monitoring the effective implementation and management of protected areas is particularly important to achieve successful conservation outcomes. PAME is based on whether a management plan is in place for a PA and if it has been assessed, it does not measure actual effectiveness of that management.	Unlikely to encompass as such all aspects of effectiveness (e.g., having a management plan in a PA does not mean it is operating effectively).	Could be replaced with § 3.1.2. Proportion of conservation dependent species (IUCN Green Status of Species Index) § Red list index § countries with national pollinator strategies § % of threatened species that are improving or regressing in status. Gap on human-wildlife conflicts, thus include: PA management effectiveness addressing and reporting human-wildlife conflict
THis indicator requires capacity building to support countries to identify in a stepwise manner the clear definitions that will are used to report.	Needs to be disaggregated at the national level and needs capacity building support to track	
El indicador está más enfocado para el Target 2.		
	This indicator requires substantial capacity building and may pose heavy reportng load on the parties.	
It is necessary to clearly define the data to be acquired and elaborate the indicator at national level according to the CBD guidelines In the concept of "management effectiveness in an ecological key", it is necessary to include the whole territory, not only that already protected. By way of example, the presence of linear infrastructures in the territory, causing the fragmentation of the habitat, interrupts the functionality of the ecological network, leading to loss of biodiversity.		
These indicators do not address all aspects of the target. In addition, we recommend the aspect of the target related to human-wildlife conflict be removed as it is not clear that this can be measured.		
		The '3.0.1 Protected area management effectiveness' or PAME indicator is more aligned with Target 2 than Target 3 and is not sufficient as a headline indicator. Assessing and monitoring the effective implementation and management of protected areas is particularly important to achieve successful conservation outcomes. PAME is based on whether a management plan is in place for a PA and if it has been assessed, it does not measure

		actual effectiveness of that management. In this regard, the currently proposed headline indicator 2.0.1 is more relevant to measure effectiveness of such measures.
This indicator is suitable for Target 2 (Protected Area).		Malaysia believes this indicator is more suited to be in Target 2 and suggests using Species Conservation Plans as an indicator. Also there needs to be a focus on ex-situ conservation supporting wild populations.
		General comment: Taking into account that there are other objectives related to sustainable use and management, the wording of the first time of the target is fine, however, the second part is not considered appropriate as the conservation/ recovery of species is achieved in a very different way than reducing human-wildlife conflict. Wording suggestion 3.0.1: Protected areas management effectiveness and other effective area-based conservation measures
Yes, but needs to specify the meaning/definition of management effectiveness and provide guidelines/methodologies to measure it.		
		Difficult for achievement
No. This indicator belongs under Target 2.		
Capacity Building and investment on habitat Protection.		
The indicator, although of high importance, is vague. It is not clear how the effectiveness will be counted. It seems extremely difficult. We should rather focus on species recovery/protection effectiveness (although in some areas activities will most likely by focused on the improvement of the condition of the population) – both within the protected areas and outside those areas (vide the example of birds – restitution of peregrines, vultures etc. or migratory species), eg. % of species that improved their status according to IUCN as a result of national / global programs of protection / restitution of species.		
		Percentage of endangered species at national/global level (Red Lists) with effective species management plans.

Cost-effective process of defining PAs management effectiveness needs to be developed.	Globally implementable cost-effective process of defining PAs management effectiveness needs to be developed. There is a big gap on establishing effectiveness of active management actions at oceans	
	This indicator requires metadata to clarify how it will be used to track improved management effectiveness of PAs, not just focus on whether parties have undertaken the monitoring of effectiveness in all PAs.	
we need more details on this indicator. What are the attributes needed for collection of information,	As above	
It is not clear to us exactly how this indicator measures effectiveness. There is a need for indicators that measure to what degree protected areas actually contribute to the conservation of biodiversity, how representative and well connected they are, and how efficiently they are managed. All these aspects are relevant, but they fit better under target 2. We propose to move this indicator to target 2.		
		We suggest to use the indicator: Number of endangered species that are benefitting from conservation action (+over the number of threatened species) Rationale: The proposed indicator is not meaningful towards the target and should be moved to target 2. As an alternative, we suggest to use the number of endangered species that are benefitting from conservation action (+over the number of threatened species). The Appendices such as the ones of CMS and AEWA should serve as a basis.
A clear definition of "effectiveness" is required. How is this measured? How is the methodology standardised?	Suitable with clear definition and standardised methodology for assessment	
		We do not consider this sufficient as a headline indicator. PAME is based on whether a management plan is in place for a PA and if it has been assessed, it does not measure actual effectiveness of that management. This indicator is more aligned with Target 2 and should not be used for Target 3. We have proposed alternatives for a new component indicator for protected area management effectiveness and a new headline indicator for

		coverage and effectiveness of protected areas and OECMs. Details are provided in the response for Target 2.
We think this concept is good, but we are not clear how would this be tracked or measured in a meaningful and accurate way. In our view this goal is vaguely written and provides no key performance indicators by which to judge effectiveness.		
		We do not consider this sufficient as a headline indicator. PAME is based on whether a management plan is in place for a PA and if it has been assessed, it does not measure actual effectiveness of that management. This indicator is more aligned with Target 2 and should not be used for Target 3. We have proposed alternatives for a new component indicator for protected area management effectiveness and a new headline indicator for coverage and effectiveness of protected areas and OECMs. Details are provided in the response for Target 2.
3.0.2 Species recovery programmes*		
3.0.2 If you selected "yes, however requires further work", please describe:	**3.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**3.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
Australia supports the indicator in principle but notes that further detail is required on how it would be measured. For example: - What is the measure here? – Number of programmes? quantum of funds? - Do pressure management projects (e.g. invasive alien species management) contribute towards this species recovery indicator?		
		Do we mean 'number of…"? Even though these programs are fully relevant, not sure this is a relevant indicator as it does not mean that if the number of such programs increases that the number of endangered species decreases.
Species most in need of recovery plans should be prioritized		
		Species recovery plans and other instruments implemented.

Canada notes that this proposed headline indicator is not operational yet. We assume that 'active management actions' in the target wording is linked to the suggested headline indicator 'species recovery programmes' so suggest this could be further elaborated upon to be more specific and say for example 'Number / proportion of threatened species for which global, national or subnational recovery plans are (i) up to date, and (ii) being effectively implemented'. There is a question of whether only threatened species should be included or all species, though threatened species should be a priority.	As this would be a new indicator, capacity building would be required for countries to know what kind of species action plans they would be reporting on. This is a similar situation to proposed headline indicator 1.0.1 to measure land and marine spatial plans in terms of needing some kind of a definition of which plans would be reported upon, though rather than entering into lengthy discussions about definitions, some simple criteria could be established – e.g. the plan would need to specify species recovery. Some countries would likely require capacity building and resources to develop and implement species recovery plans as well prior to being able to report on them.	As per above, we think that Target 3 will also need to focus on the outcomes of species extinctions, risk of extinction and species abundance linking with Goal A to fully address species conservation and thus biodiversity recovery, along with genetic diversity.
HI "3.0.2 Species recovery programmes" is not clear about measuring the state, the quality, implementation of recovery programs, nor its outcomes, and for this reason does not speak about desired outcomes of the recovery of species nor the quality of those actions. Finally, HIs could go beyond fauna and flora species.		
According the annex I, this indicator should be reviewed for a group of technical experts on indicators for the global framework of biodiversity post 2020	The use of this indicator depends on the analysis and result of the work carried out by the group of technical experts on indicators for the post-2020 global biodiversity framework.	
Yes, but it is not clear what the HI measures, also effectiveness not taken into account.	see other comments	An alternative suitable Hi might be found among the options below: - Indicator: Proportion of conservation dependent species (IUCN Green Status of Species Index). Organisation: IUCN - Indicator: IUCN Green Status of Species Index by sub-indicators. Organisation: IUCN - Indicator: Number of species and populations in which genetic diversity is being monitored using DNA-based methods
Rather than the target focusing on actions to support certain species, the target should focus on achieving a good or favorable conservation status for species, and this would be measured, as indicator, in relation to the overall number of species, as %. If the target remains as suggested, we strongly recommend to monitor the number of effective management actions in relation to the overall number of species (%).	See above.	
It is still unclear what indicator 3.0.2 expresses. If the indicator only measures the number of species for which national action programs have been initiated, the relevance is limited. It would be hard to judge whether a	See previous comment	

low number is good or bad. If there are many threatened species, but few programs, it would be bad. If there are few programs because there are no threatened species that need them, it would be good. Furthermore, existence of an action program is not sufficient and we must be able to assess the effectiveness of species recovery. The proportion of threatened species for which there are action programs with positive outcomes would be a better indicator.		
This indicator could be reworded as follows: "Proportion of species requiring intensive recovery actions to avoid extinction that are under active recovery management"		Potentially not relevant to measure the situation of species. "Recovery" is about population trends indicator is about species. It could be an option to use the recovery progress of species of the CMS, Appendix 1 and 2.
	Needs to be disaggregated at the national level and needs capacity building support uniform data collection methods and reporting	
Hace falta construir un indicador que aborde la Meta. El tema de conflictos no esta abordado.		
Further work needs to be done to clarify what is being measured: number of recovery programs with positive outcomes? Unfortunately, the indicator does not consider the effectiveness of conservation programs		
Needs to be quantified.		
In the first part, the strategy consists of focused conservation/ sustainable management actions, e.g. On habitat restoration, reintroduction efforts, collection, regulations, etc., and to reduce conflict between humans and wildlife, it is through awareness campaigns, capacity building for communities related to these species, implementation of sustainable use programs, etc. measuring the target would be contradictory, as an increase in wildlife populations would mean recovery/ conservation success, and could mean an increase in human-wildlife conflict; and an increase in this could be due to decrease in population of species.		This indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative. One option could be the proportion of threatened species with recovery plans by country
		Perhaps this is not applicable at this time. Needs more information to determine applicability compared to ongoing programs in country.
		Difficult for achievement

		specific attantion should be payed to pollinators, the establishment of a nationl pollinator strategy (as recommended in the IPBES pollinator assessment) would be a suitable indicator.
The indicator should refer to "native" species.		The proposed headline indicators for Target 3 also do not adequately capture outcomes. We propose the addition of the following: • "Conservation status of native species", and • "Proportion of threatened and rare native species covered by national species recovery plans or actions seeking to improve their conservation status."
Promising indicator, as it would measure a key component of target that connects with Target 1, but needs to be developed, delineated and defined, preferably before COP15.		
Capacity Building		
		Programmes themselves, even well written, accepted and legally binding will not guarantee achieving the species recovery. Additionally, human-wildlife conflict probably will increase in line with successfull recovery programmes for large carnivores... Suggested alternative indicator: changes in population of selected wild species
It should be "Species recovery programmes with positive outcome" (a positive change in the status of the concerned species). The indicator must be crossed with other indicators about the % of declining species.	Standardized methodologies and targets for definition of recovery programmes need to be established.	
		We believe we need other headline indicators for the measurement of reduce human-wildlife conflict by [X%], one of the target elements.
This indicator need to be fully developed. In the development number or proportion of conservation dependent species (species, that in red-listing exercise get note of being conservation dependent) could be taken into account.	This indicator need to be fully developed at a global level too. In the development number or proportion of conservation dependent species (species, that in red-listing exercise get note of being conservation dependent) could be taken into account.	
As this indicator is still under development it is difficult to evaluate, however as currently worded it appears to track how many recovery programmes are underway but should rather be worded to track how many have been successfully implemented. It would also be important that	Not possible to evaluate as this indicator has not been developed.	

this indicator tracks the proportion of species needing recovery programmes that are receiving interventions		
Clarification would be needed as to whether this indicator would reflect the number of recovery programmes or the number of species covered under recovery programmes. Multi-species recovery or conservation programmes (such as, for example, national pollinators' strategies and plans) should be included or, otherwise, a specific indicator on national pollinators' strategies and plans could be considered.		
need to work with collectively with other indicators	same as above	
HI 3.0.2 on Action Programs for Endangered Species is potentially a useful indicator, but it is still unclear what this indicator expresses. If the indicator only measures the number of species for which national action programs have been initiated, the relevance is limited. It would be hard to judge whether a low number is good or bad. If there are many threatened species, but few programs, it would be bad. If there are few programs because there are no threatened species that need them, it would be good. The proportion of threatened species for which there are action programs would be a better indicator.		SE is of the opinion that additional indicators are needed for species conservation, e.g. also measuring progress in conservation action, and action for genetic diversity. For the former the proposed complementary indicator t3.2 could work. For the latter a new indicator on the number of species for which genetic diversity is monitored using DNA-based methods is advocated.
		An alternative could be the Species Protection index as calculated by Map of life
This indicator is lacking information. What about the species recovery programmes? Does this consider existing/implemented/planned programmes? Does it consider effectiveness? If so, how is effectiveness assessed/reported?	Suitable once refined	
In our view this could be improved by specifying the key performance indicators to measure, such as adding "establish data-collection protocols" (perhaps as a complementary indicator).		We are not certain whether the proposed indicator is meant to capture the number of species recovery programs in place? If so, we believe that it would probably be easier and more useful to measure the outcome here, i.e. reduction in threatened species. We suggest that the red list index indicator from Goal A might usefully be deployed here.

Target 4. By 2030, ensure that the harvesting, trade and use of wild species of fauna and flora is legal, at sustainable levels and safe.

4.0.1 Proportion of traded wildlife that is legal and safe (not poached, illicitly trafficked or unsustainable)

4.0.1 If you selected "yes, however requires further work", please describe:	4.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	4.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		- Area of forest under sustainable management certification - Progress towards sustainable forest management (indicator for SDG target 15.2) - WWF
More monitoring and information processing		
Australia supports this indicator in principle but notes that 'Safe' is difficult to define and interpret. Additionally, we consider that 'not poached, illicitly trafficked' is covered by 'legal'. On this basis we proposed the insertion of 'sustainable' or 'ecologically sustainable' to replace 'safe (not poached, illicitly trafficked or unsustainable)'. In addition, it isn't clear whether 'wildlife' is intended to encompass just fauna, or both flora and fauna, and we therefore propose lining up the terminology with the target. , so the indicator would read: 4.0.1 Proportion of traded flora and fauna that is legal and ecologically sustainable.		
		Don't use proportions. The HI should be on the flux of wildlife trafficking. If the headline indicator is on the legally traded wildlife, the amount of illegally traded wildlife can still increase and not being measured. Use tonnage or numbers of individuals of wildlife. Very important to have one HI on illegal activities and a second one on unsustainable ones. Should be for all species, not only fauna and flora. HI proposal: 4.0.1 : Tonnage (or number of individuals) of illegally and unsafely traded wildlife
Target mentions both fauna and flora but indicator is focused only on wildlife		

	The indicator requires the development of monitoring capacity at the national level	
		Proportion of trade of national species: Number of national species traded legally and safely in comparison to the number of the national species traded illegally and unsafely.
Canada thinks that different headline indicators should be selected. They do not encompass the scope of the target. If indicator 4.0.1 is maintained, Canada could support it if it was modified. Our primary concern with this headline indicator is that it has a very narrow scope. As a first step, we suggest replacing the term "wildlife" with "wild species". Secondly, we could broaden the scope by also measuring "harvest" and "use" as per the target language. So the indicator could be reworded to say 'Proportion of traded, harvested and used wild species that are legal and safe (not poached, illicitly trafficked or unsustainable)'. Alternatively, if it is not possible to bundle these three activities we could add a headline indicator specific to the harvesting and use of wild species, should one be available and functional.	Countries would need support and capacity building to interpret and implement the monitoring for this indicator – there may be some synergies with the CITES convention.	Canada thinks that different headline indicators should be selected. The current proposed headline indicator does not encompass the scope of the target. In our view, the headline indicators should address two things: 1. Addressing illegal, unsustainable activities related to the harvesting, trade and use of wild species. 2. Ensuring that all legal activities related to the harvesting, trade and use of wild species is sustainable. Additionally, we think that we should promote indicators, which are worded to encompass all wild species not just wildlife. Finally, we note that the indicators fail to address harvesting and use of wild species. Further work should be done to find indicators that address these elements, since they are key elements of the target.
We believe the wording can be improved, given that monitoring of legal trade does not reflect how much of it is done illicitly or unsustainably.		
There is a need to define safe	Further effort is needed in the capacity development of technologies on the call for evidence and monitoring standardization attempting to reduce the number of animals inadvertently trapped in fishing nets	
-HI on the flux of wildlife trafficking + assessment of legal frameworks -IUU fishing is monitored separately and should be kept separate. -The HI indicators should focus on amount & number of wild species harvested, traded and used above established harvest limits/quotas. -Sustainable use through Customary Sustainable Use. - red list index for subset of species where their trends are driven by fisheries/overexploitation Level of exploitation of commercial fisheries - Species replacement as a consequence of capture fisheries - number of endangered species Could there be an indicator linking with CITES ?	see above	

Fish harvested within safe ecological Recovery in the population abundance of sensitive fish species Extent of Physical Damage to Predominant and Special Habitats Recovery in the population abundance of sensitive fish species Number of drowned mammals and waterbirds in fishing gear		
It is necessary to have a proper alliance with CITES to see the feasibility of application.	We need more investigations, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	
"Proportion" is not adequate – the amount would be important to capture. Proposed indicator does not fully cover the notion of "sustainability".		
Yes, but the HI should not use proportion. Also, this HI should be for all species, not only fauna and flora.		The HI indicators should focus on amount & number of wild species harvested, traded and used above established harvest limits/quotas. Indicator: Red list index for subset of species where their trends are driven by fisheries/ overexploitation. Organisation: IUCN
	See above.	Safe is not clear. The target should measure wildlife trade to tackle current overexploitation as driver of biodiversity loss. This target and its wording needs to be clearer and no regression to the Aichi target. The current target is too limited to bring about the necessary protection and sustainability of use for species. The precautionary principle should be imbedded in Target 4, eliminating all commercial exploitation and trade. The actions should be legal, well-managed and no risks to human or animal health, and support/enhance the livelihoods of Indigenous Peoples and local communities.
What is legal may not be safe. If we have to keep "legal" we must add an evaluation of compatibility of existing or future laws with sustainable use of species. Furthermore, "Proportion" is not adequate; the proportion of legal trade can increase but if the whole amount of trade increases, illicit wildlife trafficking could also be increasing. This HI should be for all species, not only fauna and flora. This indicator does not exist, and it is difficult to see how it would be feasible to produce it within the next decade.		What is legal may differ between countries, making it hard to aggregate. This indicator should focus on safety and sustainable levels only, based on mutually agreed definitions that allow aggregation from different sources.

headline indicator should also cover flora, since substantial legal trade in plants takes place, while the effective mechanisms for ensuring the sustainable trade exists only for the species listed in the CITES appendices. What we call sustainable harvest and trade is when the harvest and trade volumes are defined based on the scientific assessment. Therefore, as an indicator we would consider proportion of species where the decision on trade volumes is made based on a scientific evidence.		
This indicator does not exist, and it is difficult to see how it would be feasible to produce such an indicator within the next decade. As the indicator is currently worded, the proportion (illegal versus legal) can decrease but if the whole amount of trade increases, wildlife trafficking could be increasing without it being assessed. Don't use proportion but use trends/no. of individuals/weight. This HI should be for all used species, not only fauna and flora. So far the indicator only focusses on trade but leaves out unsustainable or illegal harvest and use.		
Tracking for small islands is difficult as you must be aware of the total traded based on stock estimates that in some cases have not been done due to capacity constraints	Needs to be disaggregated at the national level and needs capacity building support to track	
Un vacío es que no se está midiendo las tendencias de trafico ilegal. Se podría complementar el indicador con este punto. Se reduce en un "xx%" las especies de flora y fauna incautadas como producto del trafico ilegal de vida silvestre. Existencia de estrategias, políticas y leyes sobre el trafico ilegal de especies silvestres. Mejora en los procedimientos de impartir justicia para abordar delitos vinculados al trafico ilegal de vida silvestre, son vacíos que no están contemplándose en el indicador pero si en la meta.		
The value of this indicator heavily depends on the detection of poaching illicit trafficking which in turn depends on enforcement efforts - otherwise it may go on unrecorded and the indicator could be biased towards a more favorable value than the real value.	Requires substantial capacity building, could be easily biased otherwise, see above	
The proposed Target 4, as it reads now in the draft of the GBF monitoring framework ("By 2030, ensure that the harvesting, trade and use of wild species of fauna and flora is legal, at sustainable levels and safe"), is rather narrow in scope. Yet, the text of the target needs some improvement, in order to clearly explicit that it is not limited to (or it does not address only) international trade.	Needs clear standardization of procedures for estimates to avoid inconsistent assessment among countries	

Furthermore, the indicator should include illegal harversting and trade In contrast, the proposed Headline Indicator for this target focuses exclusively on traded wildlife. A better and consistent indicator could be along the following lines: "Proportion of wildlife which is exploited, used or traded domestically or internationally that is legal, sustainable, and/or poses no risk of zoonotic spillover". The indicator 4.0.1 expressed as a percentage of traded wildlife does not captures appropriately the trend and could be misleading. Italy proposes to use other metric able to capture the trend, such a as the absolute value;		
		Conservation of endangered species, which is indicated in the CBD/SBSTTA/24/3Add.2, cannot be measured by the proposed headline indicator 4.0.1 "proportion of legal trade". Therefore it should be revised as "proportion of wildlife trade management effectiveness".
		they need to consider more informations to achieve this indicators
Malaysia believes that there is difficulty in measuring the proportion of traded wildlife (international and domestic) given that illicit trade is not fully captured in national statistics.	Need further capacity building in determining difference in wild and culture species (e.g. for rare orchids).	Could this indicator be replaced with 'Increase in enforcement measures', data for this is more readily available. The current indicator could be more useful as a component indicator.
Mexico agrees that this target would address overexploitation, and we are in general agree with the wording, but we wonder if the target as is phrased now is sufficiently addressing illegal activities. On the other hand, if we agree that it could also be phrased with a positive focus, increasing sustainable and legal use of species it could be very similar to T8.		Wording suggestion: 4.0.1 Proportion of traded. wildlife species that is legal, sustainable and safe (not poached, illicitly trafficked, or unsustainable) and under appropriate sanitary measures. Although including "sustainable" is difficult to monitor; below they refer to "unsustainable". This is the reason that we add "sustainable" to be congruent. Finally, T4 and T8 contain similar items that need to be clarified
		More than irrelevant there are concerns regarding the capacity of countries to monitor the 'legal' trade and enforce controls to avoid that this type of trade may become the back door to slip out of the country also poached or illicitly trafficked wildlife, Also the

		indicator does not clearly explain what is a sustainable and/or unsustainable level of wildlife trade, how this will be quantified and the relation of this indicator with CITES.
In relation to the word 'sustainable', in the context of regulating the harvest of wildlife from within ecosystems, it would be preferable to refer to "ecologically sustainable". We remain unclear about possible interpretations of the word "safe". We also note that the fish trade and wildlife trade are being addressed together under this indicator, however it is not clear what a sustainable and safe trade of fish species means (eg, in this context, 'safe' could be understood as a food safety issue, or an SPS issue). It is New Zealand's view that it is very important that when selecting indicators which apply to international trade, we need to ensure consistency with existing international trade rules and obligations.		
Will depend on how illegal/unsafe trade of wildlife is measured/estimated and not least on an agreed approach to sustainable trade		
Capacity building		
		It is unclear if we are referring here to the international or domestic trade. It seems impossible to collect reliable data. It is unclear what is understood as "safe".
"Proportion" is not adequate; the proportion of legal trade can increase but if the whole amount of trade increases, illicit wildlife trafficking could also be increasing. This HI should be for all species, not only fauna and flora. This indicator does not exist, and it is difficult to see how it would be feasible to produce it within the next decade. The HI could focus directly on poaching and IUU rather than share of legal harvest. IUU fishing is monitored separately and should be kept separate.	See above.	
		International wildlife trades subject to CITES convention are quite closely related to the indicator. And CITES have well managed these trade data, besides they have measures and data to deal with illegal trades. So, we highly recommend CBD need to

		develop other component indicators to minimize gaps of the indicator in cooperation with CITES.
Target 4 in combination with targets on levels of use, would better be measures by amount of traded wildlife that is not poached, illicitly trafficked or unsustainable.	Same comment as above	
While 'not ...unsustainable' may suggest the maintenance of genetic diversity, it is not explicitly understood, and may only be perceived as population (census) sizes. The maintenance of genetic diversity is critical to ensure the health of any traded species. Genetic erosion may be detectable before populations show demographic signs of decline and collapse. As such, it is recommended that the following statement be included at the end of the indicator, " and does not erode their genetic diversity'.		
It is very difficult to have data on wildlife poached illicitly trafficked or unsustainable.		
		SE is of the opinion that no indicator that uses "proportion" should be used for this target component since it could give the wrong signals when e.g. the total trade increases. We don't consider 4.0.1 is appropriate to reflect the scope of the target. SE supports indicators that cover all harvested wild species (within safe ecological limits).
		Another supplementary indicator that could be used under target 4 (if not merged with target 8) could be HI 8.0.1 Number of people using / sustainably managing wild resources for energy, food or culture (including firewood collection, hunting and fishing, gathering, medicinal use, craft making, etc) according to customary practices.
We propose the following changes: "Proportion of traded wildlife [wild species of fauna and flora?] that is legal and safe under national sustainable management and monitoring schemes" Rationale: The proposed indicator is not suitable. In order to use it sensibly, each country would have to be able to reliably estimate how high the illegal share of use is. However, this is notoriously difficult and associated with a		

great deal of uncertainty. It would be much better to look at how much of the trade in wild animals and plants is covered by national sustainability and monitoring programmes that monitor this sustainable use.		
Trade expressed as a 'proportion' will be difficult to measure because this would require levels of illegal trade are known - which is rarely the case, and therefore difficult to express that as a proportion of equivalent legal trade. CITES Trade Reports can be used as a source - these might indicate volumes of legal international trade (but not domestic) but would not address whether all this is sustainable.		Alternative indicator: Trends in conservation status of species listed in the CITES Appendices [RLI internationally traded species']. The indicator is currently in the draft monitoring framework as a complementary indicator. It could be used alongside the RLI (international traded species) to give a comprehensive overview. Also, needs to be aligned with work done through UNODC and CITES task force.
In our view, "proportion of fish stocks within biologically sustainable levels (T4.0.2) by fish type" should be consistent with the SDG 14.4.1 indicator (Proportion of fish stocks within biologically sustainable levels) rather than creating yet another global indicator that is just different enough to create yet another data gathering exercise when it is not actually very different; however, we note that is then the same as t8.1. In addition, we recommend that the term "inland fisheries index" be defined.		
Trade expressed as a 'proportion' will be difficult to measure because this would require levels of illegal trade are known - which is rarely the case, and therefore difficult to express that as a proportion of equivalent legal trade. CITES Trade Reports can be used as a source - these might indicate volumes of legal international trade (but not domestic) but would not address whether all this is sustainable.		Alternative indicator: Trends in conservation status of species listed in the CITES Appendices [RLI internationally traded species']. The indicator is currently in the draft monitoring framework as a complementary indicator. It could be used alongside the RLI (international traded species) to give a comprehensive overview. Also, needs to be aligned with work done through UNODC and CITES task force.

4.0.2 Proportion of fish stocks within biologically sustainable level

4.0.2 If you selected "yes, however requires further work", please describe:	4.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	4.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		- Area of forest under sustainable management certification - Progress towards sustainable forest management (indicator for SDG target 15.2) - WWF

		- By 2030, ensure that the harvesting, trade and use of wild species of fauna and flora is legal, at sustainable level and safe, while protecting and encouraging indigenous and local communities' customary sustainable practices in relation to biodiversity - AVAAZ.
Australia supports this indicator in principle but suggests the inclusion of 'ecologically' sustainable levels, as per the changes below, so the indicator take into consideration of the ecological role of species and habitats relevant to fishing activities. 4.0.2 Proportion of fish stocks within biologically and ecologically sustainable level		
We should enlarge this indicator to all species, not just fish. Trends in harvested species within biologically sustainable levels HI proposal: 4.0.2 Amount of species harvested within biologically sustainable levels Other proposal: Trends in harvested species within biologically sustainable levels		
	The indicator requires the development of monitoring capacity at the national level	
Given that this headline indicator pertains to one specific taxonomic group, fish, we would suggest labelling it as a component indicator. Alternatively, we would replace "fish stocks" by "wild species". As such, this indicator would fill the current gap related to the component of this target that seeks to ensure that all legal activities related to the harvesting, trade and use of wild species is sustainable.	Regarding fish stocks in particular, we suggest clarifying the wording as it has led to confusion (SDG indicator 14.4.1 is also 'Proportion of fish stocks within biologically sustainable levels'). The title denotes the status of fish stocks but the definition for the same SDG indicator 14.4.1 in the United Nations Statistics Division E-Handbook on SDG Indicators is – "the proportion of fish stocks or species that are exploited within the level of Maximum Sustainable Yield (MSY)."	Given that this headline indicator pertains to one specific taxonomic group, fish, we would suggest labelling it as a component indicator.
The indicator should tkae into account fish stocks	The information needs to be compiled for each country for proper reporting.	
covers only fish stocks		
Is important to taking into account in the case of marine species is complicated to control the proportion of fish	We need more researches, information, standardization and comparability in national reporting and capacity building should be focused	

stocks because some populations moved to international waters.	on the private sector and public sector about the sustainable fishery ways in order achieve the targets.	
Yes, the HI is already being used for the SDG 14.1 goal indicator. See suggested additions.		The HI could also be complemented by environmental friendly fishing practices since sustainable fisheries is not only about avoiding overfishing as addressed in target 4, but also on minimising by-catch, using appropriate fishing gear, minimising disturbance of the seabed, etc. and avoiding dysfunction of trophic chains taking into account Climate change already occurring impact on them.
The HI could address all harvested species, e.g. "Trends in harvested species within biologically sustainable levels", and not only fish. This indicator assumes that references points (MSY) are defined for each stock. However, there are stocks with limited information for which alternative methods should be developed.		
	Simple methodology is required, requires substantial funding	
An indicator for target 4 needs to include all used species, not just fish. Suggest altering to: Trends in harvested species within biologically sustainable levels	Few standards. For instance, sustainable fisheries is not only about avoiding overfishing as addressed in target 4, but also about minimising by-catch, using appropriate fishing gear, minimising disturbance of the seabed, etc.	
Capacity building support to carry out fish stock assessments is needed	Needs to be disaggregated at the national level and needs capacity building support to track	
Need some work for standardized approach with data poor stocks; while the indicator is really relevant at global scale for fisheries, it does not allow to capture parallel aspects of sustainability being the fisheries sector and would need to be complemented by other indicators.	The indicator need possibly a bit of standardization for the approach in particular for data-poor stocks	
	Because of the high data demands of classical stock assessment methods, only a limited number of fish stocks have been assessed. Adding to it, most assessed fish stocks are caught by fisheries in developed countries.	
Suggest amending the indicator as follows to insure benefits to communities from other avenues besides harvesting such as tourism or recreation: "Proportion of fish stocks within biologically sustainable level, including ecosystem-based fisheries management."		

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In relation to Headline Indicator 4.0.2 ("Proportion of fish stocks within biologically sustainable levels"), this indicator is missing the concept of "achieving or maintaining biologically sustainable levels. So we propose that this be revised to: "4.0. Proportion of fish stocks under management regimes aiming to achieve or maintain biologically sustainable levels."		
	Capacity building and financial resources to support developing countries are required.	
Capacity Building		
		This indicator is limited to one animal group and does not refer to the flora. Maybe we should consider broadening it to all groups on wild animals that have been subject to the hunting pressure or that are being traded and in the case of plants – harvested.
The HI could address all harvested species, e.g. "Trends in harvested species within biologically sustainable levels". This indicator assumes that references points (MSY) are defined for each stock. However, there are stocks with limited information for which alternative methods should be developed. Also, this will have more applicability to species of commercial interest. Another indicator or the development of this should consider some vulnerable by-catch species. A threshold to define the number of stocks to include in the assessment should be defined. Additionally, it should be noted that sustainable fisheries is not only about avoiding overfishing as addressed in target 4, but also on minimising by-catch, using appropriate fishing gear, minimising disturbance of the seabed, etc.	Work is needed to assess sustainability of harvested populations of other species.	
We believe the indicator should be complemented so that the level of sustainable use not only of fish, but also of all economically used wildlife group is measured.	Estimating biologically sustainable level needs long-term data and advanced scientific methodologies. So, CBD needs a program to help countries, especially developing countries, with no such data and methodologies.	
Suggest amending the indicator as follows to insure benefits to communities from other avenues besides harvesting such as tourism or recreation: "Proportion of fish stocks within biologically sustainable level, including ecosystem-based fisheries management."		

Indicator, if limited only to fish stocks, is mainly relevant on higher than national levels. Other stocks/populations used could be added.	Other stocks/populations used could be added.	
This indicator should be expanded to include targets for the improvement of fish stocks through implementation of stock recovery strategies. Another option would be to use the Red List Index (impacts of fisheries) which shows changes in extinction risk of marine species driven by fisheries impacts (including positive trends resulting from more sustainable practices; note that trends driven by non-fisheries factors are excluded) and, ii. Living Planet Index (trends in target and bycatch species), which shows trends in population abundance of target and bycatch species (though these may be driven by factors other than fisheries).	This may require resources for many developing countries, especially where capacity and resources do not exist to monitor and patrol their marine exclusive economic zone.	
Need to identify the required information to measure this prepare this indicator	Same as above	
SE supports an indicator in line with 4.0.2. It should be considered to merge target 4 and 8 and use one set of indicators to cover all relevant components of that merged target. SE supports the division of marine and terrestrial "wild species", so that fish is covered by own indicators. Sweden is of the opinion that this indicator also should include an ecosystem approach to fisheries.		Sweden propose that the indicator is supported by an indicator that is able to provide a more comprehensive picture of ecosystem effects of fisheries, , such as a Marine trophic index, which is RSP CSI 13, please see Table 3.9. RSPs core set of indicators, page 49 (UNEP 2021). Reference: United Nations Environment Programme (2021). Regional Seas Biodiversity under the post-2020 Global Biodiversity Framework. Nairobi.
For many countries, particularly SIDS and the least developed ones, it will be extremely difficult to measure level of fish stocks harvested annually.		
The indicator is hard to measure and costly to implement periodically.		Suggested indicator: percentage of a country's total catch that comes from overexploited or collapsed stocks, considering all fish stocks within a country's exclusive economic zone (EEZs).
We recommend that this indicator be framed very specific to marine, since the stock concept is not relevant to freshwater. SDG 14 only focuses on marine, so we note that this does not apply to inland fish, which represent a substantial portion of fisheries harvest. We highlight that FAO is developing an inland fish threat index that may be useful here. (pg. 180; http://www.fao.org/3/ca9229en/ca9229en.pdf). In addition, we consider that it is important to recognize that indigenous communities may have traditional knowledge regarding practices to ensure sustainability of those		

stocks, and when such knowledge exists we recommend that it be taken into account.		
Target 5. By 2030, manage, and where possible control, pathways for the introduction of invasive alien species, achieving [50%] reduction in the rate of new introductions, and control or eradicate invasive alien species to eliminate or reduce their impacts, including in at least [50%] of priority sites		
5.0.1 Rate of invasive alien species spread		
5.0.1 If you selected "yes, however requires further work", please describe:	**5.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**5.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
We are starting our work on monitoring invasive alien species		
Australia supports this indicator in principle provided it is intended to include introduction, otherwise it will need to be rephrased to explicitly specify coverage of introduction to a country.		
how to measures? do data exist?		
Indicator 5.0.1 relating to the 'spread' criterion cannot be applied to the pathway scale, which covers species introductions within a territory of interest. As the aim is to prevent alien species from being introduced, measuring their spread is nonsense. HI proposals: 5.0.1 Numbers of new invasive alien species introduced		
	The indicator requires the development of monitoring capacity at the national level	
		Rate of implemented action plans to control invasive alien species; we would also suggest adding another Indicator, such as: "proportion of alien species already introduced in comparison to the national native species richness."
This would be an interesting indicator but would likely be difficult for countries to report on. Regarding '50% reduction in the rate of new introductions', which year or reference period (baseline) would this relate to? 2020? 2016-2020? A target of 50% reduction in pathways may	Terms like "introductions" and "priority places" could benefit from clarification – including via baselines. Considering that efforts to manage IAS and their introductions have been ongoing for some time, a baseline for this target and its indicators could be for before 2020 – possibly 1992	While not opposed to a quantitative target on invasive species and priority sites, priority sites have not been clearly determined. We would need to define priority sites and the methodology for their identification at different scales. Alternative wording could be: Alternative headline indicator could focus

be realistic depending on the definition of the terms of the target and the years or reference periods established.	(establishment of the Convention) and linked to Article 8(h) of the Convention.	on the '# of regulated species and regulations in place to prevent the establishment of invasive species'.
		# of countries that apply relevant international legal instruments for controlling pathways" or the BIP indicator for AICHI target 9 "Percentage of countries with national strategies for preventing and controlling IAS". complementary indicators 5.1.1.1 and 5.1.1.2
Proposed indicator for ratification of the Ballastwater Convention Trends in arrival of new non-native species in the marine environment Number of countries with national policies and action plans focusing on prevention of new introductions of AIS	see comments above	
IAS list from UICN needs an actualization. The IAS in continental scenarios are limited the high development are in the islands will take into account IPBES evaluation in 2022.	Needs capacity building programs to have effectiveness tools to manage integrally that species. Need to looking for the best way to capacity people of trade actors.	
Measuring is problematic. The two headline indicators for T5 will not provide sufficient data to measure progress on the target element to reduce the negative effect of IAS on native biodiversity.		
		HI(s) should monitor the actions to reach the target. It essential to work both on prevention of new introductions and on management of already established IAS and thus two HIs are needed: A HI on prevention could be "Coverage of all pathways": The number of pathways subcategories as listed in table 1 of UNEP/CBD/SBSTTA/18/9/Add.1 (https://www.cbd.int/doc/meetings/sbstta/sbstta-18/official/sbstta-18-09-add1-en.pdf) for which each party has comprehensive measures in place. A HI on management, should ideally follow both species and sites (e.g. number of IAS addressed and area of sites where action is undertaken).
The whole indicator needs to be detailed. For instance, are these rates about the extent of distribution (and how to access it - number of territories, number of ecosystems, areas, distances), or number of species?	The whole method needs to be developed.	A Headline Indicator on the adoption legislation and strategies defined as important to prevent spread is missing in this proposition. The SDG Indicator 15.8.1 – "Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species" represents a start point for the design of this Headline Indicator. It should however address all specific recommendations and include all aspects

		related to commerce, customs, alert, sharing databases identified as important in the IPBES assessment on IAS.
	Simple methodology is needed, otherwise too costly	
Indicator 5.0.1 relating to the 'spread' criterion cannot be applied to the pathway scale, which covers species introductions within a territory of interest. As the aim is to prevent alien species from being introduced, measuring their spread is nonsense. Possible solutions: Use red list of threatened species to assess species loss because of invasive species or change wording to "numbers of new invasive alien species introduced".		Options: Use red list of threatened species to assess species loss because of invasive species.
Definition of what constitutes spread (is it just presence/absence in a grid or is it density per unit area); will need training at a national level to carry out routine assessments	Needs to be disaggregated at the national level and needs capacity building support to track	
Los indicadores de cada componente son mucho más claros. Los indicadores de cabecera son ambiguos, las tasas de propagación e impacto es algo que al menos en Guatemala no se usa.		
Criteria of IAS is different across countries, generalization slightly difficulty for archipelaguic country, 50% target is a problematic.		
The most crucial and cost-effective way to treat invasive species is to prevent their introduction, This is captured in th info. doc : "Trends in the numbers of invasive alien species introduction events" however is missing here. It is suggested to substitute the current indicator with indicator for introduction events	See above	
The indicator 5.0.1 seems to be more suitable to measure the second part of the Target "…control or eradicate invasive alien species to eliminate or reduce their impacts". However to measure the progress of the first part of the Target "By 2030, manage, and where possible control, pathways for the introduction of invasive alien species, achieving [50%] reduction in the rate of new introductions", especially relevant for marine environment, the indicator should include "Rate of alien species newly introduced".	Further works is needed for standardizations of data collection, at Regional and National level	
To achieve the first half of Target 5, it is important to take measures at exporting countries. For this reason, when discussing "Components of the Target", "Component indicators", and "Complementary indicators", we suggest	Only if our proposal for amendment as described above is reflected in the text of this indicator.	

to add indicators which can cover measures at exporting countries and/or indicators that contribute to promoting international cooperation.		
Malaysia suggests to replace with number of IAS managed		A more realistic indicator would be 'number of alien species managed' or 'number of occurences of alien species'.
		Elimination or reducing impacts of IAS is a high resource (financial) demand activity. "Priority sites" included at T5 should be clearly defined: islands, NPA, sites for food Not sure what priority sites refer to, are we talking of protected areas? Are sites important for food productions? Important for ecosystem services? Mexico does not totally agree with the Headline indicators proposed when there is not a baseline. It could be implemented only for some species The exotic species are missing should be included
	Another indicator that require adaptation and new investments in the countries	
Can probably be partly reported on, but is too vague as is. Needs concretization.		
Capacity building, investment on alien species assessment		
		This indicator informs how fast do the IAS spread and not whether the rate of new introductions is decreasing. Alternative proposals: decrease of IAS population by X% or designation (in ha?) of the area where IAS will be eliminated (population approach or area approach).
		The HI should be "Rate of introduction of alien species", in order to better align with the target and because it is difficult to assess in advance if an alien species will become invasive. Agenda 2030 Ind. 15.8.1 - Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species – could also be useful (https://wesr.unep.org/media/docs/projects/metadata _14_01_01.pdf); metadata last updated 13 February 2018.

		Another alternative worthy of consideration is the OSPAR Indicator "Abundance and state characterisation of non-indigenous species, in particular invasive species" (https://oap.ospar.org/en/ospar-assessments/intermediate-assessment-2017/pressures-human-activities/non-indigenous/).
Supports are needed to develop species-specific and effective eradication/control methods against IAS. In addition, the agencies related to the ocean raised a serious concern regarding the possibility to measure this indicator.	Supports are needed that consider the economic capacity and the environment of each country.	
A common definition of rate of spread is needed for this indicator	Data is lacking in many parts of the world and terminology is not standardized.	A gap is that potentially invasiev species are not included. The indicator could instead focus more on measures taken against IAS.
The overall headline seems to conflate several issues and is unclear. Specifically component indicator 5.1.1. Number of invasive alien species introduction events, mixes rates of introduction; sampling processes; and how species transition from just alien to invasive alien. However, the intention, as per the target, is to focus on pathways. Therefore, there should ideally be headline indicators for all three components of the issue, i.e. pathways, species, and sites, and potentially one focusing specifically on interventions, e.g. see Essl et al. (2020) https://doi.org/10.3897/neobiota.62.53972 Similarly, it is unclear what the component indicator "5.1.2 An established an[sic] alert system for prevention and control of IAS" would involve, and whether this is post-border pathway-specific intervention, or pre- or at-border. It is unclear how a system would be evaluated in terms of efficacy.	Some of the component indicators are highly context-specific. Eradication is a feasible and suitable goal in some contexts (particularly islands) but not in other contexts (e.g. continental areas). Focusing a component on species eradication. An interesting analogue could be made with classical biological control, where there is potential for either complete or partial control to be achieved. While data is available for various taxonomic groups and regions, there are sampling biases that need to be addressed and some parties might need support to mobilise relevant data.	Recommend considering a few other sources for component indicators https://www.idiv.de/en/stwist.html • Trends in richness of invasive alien species – as a basis for estimating rates of invasive alien species spread • Trends and distribution of invasive alien species impacts – as a basis for estimating change in impacts Status of information on invasive alien species introduction, spread and impacts – as a basis for tracking growth in the information needed to inform policy effectiveness. https://doi.org/10.1111/1365-2664.13251 • Rate of introduction of new unregulated species • Trends in number of invasive species that have major impacts • Extent of area that suffers major impacts from invasions • Level of success in managing invasions
It is necessary to establish which invasive alien species are selected to calculate this indicator. Different IAS can have a different spread rate, depending on their biological strategies. It is needed to take into account these differences to have some comparability and not misunderstand the data obtained.		
Need to identify required information to calculate this indicator.	capacity building is essential to use this indicator.	
The indicator needs to be further developed before it can be used. For indicator 5.0.1 "Rate of invasive alien	Data and information are lacking in large parts of the world which makes a global coverage of the	A significant gap is that the Headline indicators and target only includes alien species that are already

spread" a common definition of "rate of spread" is needed. Do we mean introduction or establishment or changes in area affected by IAS? Measuring impact or spread in "priority sites" is not possible until a scientific definition of "priority sites" is developed. For clarity, it may also be useful to add "in terrestrial, freshwater and marine ecosystems"	indicator difficult. The indicator would need clarification on several aspects to deliver globally consistent assessments, in the first place the terminology needs to be defined and standardized, starting with the IAS definition and classification and quantification of spread. Not possible to provide information on all IAS. A subset of IAS that are especially harmful or potentially harmful in certain ecosystems is more realistic.	shown to be invasive (IAS) and does not include potentially invasive alien species. It would be more consistent with the precautionary principle to be aware and take practical measures against both known and potentially IAS when an alien species establishes in a new area, as it is not known what the impacts can be. Screening methods (horizon scanning methods) are available that assist in assessing potential risks.
The distinction between management and control of pathways is not clear and could be confusing. Using the field's standard terminology, species are controlled but not pathways. If the goal is to reach a verifiable reduction in the rate of introductions, then we consider that the use of "manage" should be fine by itself. Additionally, there is no specification as to whether the 50% reduction figure should apply to all pathways or even one single pathway. We note that a reference to "priority pathways" (similar to the focus on "priority sites" in the second part of the sentence) would help focus efforts and arguably ensure the greatest impact in reducing the risks associated with pathways of introduction. We recommend separate targets for eradicate vs. control. Once established and widespread, invasives can only be controlled, but if new and localized, species can be eradicated. We suggest that there should be goals, with different percentages perhaps, for each of these categories.	As with other indicators, in our view it is essential to have a baseline of known pathways that are prioritized and an understanding of their rates of introduction. We note that this is a significant undertaking and there are likely gaps in knowledge even for the most advanced countries. We believe that pathways and species types need to be acknowledged and looked at separately. There are different vectors: pallets introduce forest pests; ship ballast introduces aquatic pests; the pet trade can introduce higher animals, seed mixes can introduce weeds and unwanted plants of most any type, etc. We suggest that each of these vectors be listed and given realistic goals for reduction based on technology, monitoring and enforcement resources.	

5.0.2 Rate of invasive alien species impact

5.0.2 If you selected "yes, however requires further work", please describe:	5.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	5.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
it requires scientific studies to assess the impact (financial support)		
We are starting our work on monitoring invasive alien species		
Australia supports this indicator in principle however ""Rate" of … impact" is not meaningful. We suggest amending to just measure the impact, as per changes shown below:		

5.0.2 Impact of invasive alien species		
Regarding 5.0.2, unclear how to measure a 'rate of impact' in practice. To monitor impact of IAS on biodiversity, wouldn't it be more appropriate to have HI on area of ecosystems degraded by IAS and HI on number of indigenous protected species being threatened by IAS? HI proposals: 5.0.2 Costs of invasive alien species impact		
The indicator requires futher work on which environmental impact it is related to. We suggest that the indicator should measure the rate of invasive alien impacts on national ecosystems and biodiversity.	There is no specific definition of which environmental impacts the indicator refers to.	
An indicator on the rate of invasive alien species impact may be hard to evaluate. There is little information on the socio-economic impacts of IAS. There may be more information on the impacts of IAS on specific ecosystems.	N/A	Based on the proposed target, some potential headline indicators (they are part of the list of indicators without being headline indicators at the moment) could be: o The component indicator currently listed as 5.1.4 (Red List Index [impacts of invasive alien species]) could help to understand the impact of invasive alien species, thus helping better understand the outcomes of actions and efforts undertaken. o Additionally, two other indicators could be used as headline indicators: § Modification of the indicator currently listed as: '5.1.1.2: Proportion of countries adopting relevant (delete "national") legislation (add "and regulations to control pathways of introduction and to manage invasive alien species") and adequately resourcing the prevention or control of invasive alien species (based on SDG 15.8.1)'. The baseline may need to be established. § Current proposed component 5.1: Parties have identified, controlled, and managed pathways for introduction of invasive alien species. This indicator would help measure efforts to address pathways of introduction.
We believe it is difficult to measure the rate of invasive alien species impact.		
	We could accept the indicator if it is limited to KBA, we suggest the wording "Rate of invasive alien species impact in KBAs	

Besides the impact rate, there are three important variables that can also be measured, such as: presence of the species, abundance of the species, and risk analysis.	This indicator is relevant for global reporting, but to improve standardization, the guidance to estimate the impact rate should be standardized, if all countries use the same methodology, it can be standardized, if not, it would not be possible.	
see commets on 5.0.2		
Is important to develop a standard methodology that guide to evaluate and measure the impacts from IAS. As mentioned, we suggest some improvements in the text of the target: By 2030, manage, and where possible control, pathways for the introduction of invasive alien species, achieving reduction in the rate of new introductions, and mitigate or eradicate invasive alien species to reduce their impacts in biodiversity.	We need more researches, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	
The proposed indicator 5.0.2 cannot be disaggregated into pathways in a meaningful way. Indicators should focus on alien species, as this is easier for monitoring: often the invasive nature appears only after many years. Need for indicator on systems for early detection and rapid response.		
		See comments under 5.0.1 Difficult to measure a 'rate of impact' in practice. Alternatives: - Indicator: Use red list of threatened species to assess species loss because of invasive species. Organisation: IUCN. - Indicator: Number of countries with systems for early detection and rapid response in place (here important to define what qualifies as adequate system for early detection and rapid response for the purpose of an indicator).
This indicator might be partly challenging because you need to separate for certain the impacts of IAS compared to other impacts, like land use changes, climate change, etc.	See above.	
First, Why rates and what rates? The term impact is vague and needs clear definition. The biodiversity facet to be addressed in the impact assessments needs to be defined. As it stands it is impossible to know its links with goal A and B. It should also consider that the impacts often occur in a time-lag after invasion, and that there is a time between obtaining and treating data. So, although	The indicator needs to be reformulated and the methods are not yet developed. The IUCN-ISSG classification system for IAS impact (SBSTTA/20/INF/5) could be used to obtain comparable data. This requires further development and specific capacity- building.	

this HI is desired, it needs to be coupled with a HI focusing on prevention.		
	Methodology is needed, too costly	
How to measure a 'rate of impact' in practice?		Possible solutions: § area of ecosystems degraded by invasive alien species § number of indigenous protected species being threatened by invasive alien species
Cap building is needed as this is a complex indicator to unpack at a national level especially with separate islands making up the country	Needs to be disaggregated at the national level and needs capacity building support to track	
It seems that "extent" is more appropriate her than "rate", can be measured in area	See above	
Need to explore the use of EICAT to apply this indicator. The indicator 5.0.2 is relevant to measure only the second part of the target "….control or eradicate invasive alien species ………". To measure progress of first part of the target "…..achieving (50%) reduction in the rate of new introduction….." the indicator should be related to the "rate of alien species newly introduced".		
How will rate of impact be measured? Rate needs to be clarified.	The Indicator needs to clearly state what is being measured and how.	
What type of impact? (economic, social, environment, health etc.)		
		Elimination or reducing impacts of IAS is a high resource (financial) demand activity. "Priority sites" included at T5 should be clearly defined: islands, NPA, sites for food Not sure what priority sites refer to, are we talking of protected areas? Are sites important for food productions? Important for ecosystem services? Mexico does not totally agree with the Headline indicators proposed when there is not a baseline. It could be implemented only for some species

		The exotic species are missing should be included
	Countries may need technical capacity built and system put in place to monitor and report.	
Same as it is with many other indicators, adaptation and new investments in national monitoring and reporting systems shall be provided in most of the countries	Same as above	
	Nécessite du renforcement des capacités	
The proposed Headline Indicator 5.0.2, "Rate of invasive alien species impact", is missing the concept of "trend in" or "extent of" invasive species impacts". We suggest that "trend in" or "extent of" invasive species impacts" is added. We also suggest the addition, either as a Headline or Component Indicator, of: • "Eradication of invasive alien species from uninhabited offshore islands," and • "Number and proportion of uninhabited offshore islands from which invasive alien predator species have been eradicated."		
		Rate cannot be the correct term here. Furthermore, priority sites, given as a term in the target, while at this point lacking a definition, is an key focus of the target, and it would be appropriate to focus on it in a headline indicator as well. Therefore this headline indicator should be: Level of invasive alien species impact on priority sites.
	Capacity building and financial resources to support developing countries are required.	
Capacity building, investment on alien species assessment		
Reference to Red List Index (INF 16) doesn't make sense. This indicator should focus on estimating damages and costs caused by IAS (Christophe Diagne, Boris Leroy, Anne-Charlotte Vaissière, Rodolphe E. Gozlan, David Roiz, Ivan Jarić, Jean-Michel Salles, Corey J. A. Bradshaw, Franck Courchamp. High and rising economic	See above. It would need to be clear what are the countries supposed to count and where to take the data from.	

costs of biological invasions worldwide. Nature, 2021; DOI: 10.1038/s41586-021-03405-6). This would also require to define priority sites and to clarify whether the calculation should be done one by one.		
		("Rate of impact" does not make sense) SDG Indicator 15.8.1 - Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species. Number of native species that are threatened due to invasive alien species (Red Lists)
Efforts are needed to develop standardized tools (methods) to assess impacts of each IAS species of concern). In addition, the agencies related to the ocean raised a serious concern regarding the possibility to measure this indicator.	Supports are needed that consider the economic capacity and the environment of each country.	
	unclear what the definition of this indicator is. Possible indicators could be - Red list index on alien species (trends in extinction risk of species driven by IAS) - reducing impacts with focus on endemic species	
It will be useful, as per the target, to focus measurement of impact on priority sites. In this sense both component indicators "5.1.4. Red List Index (impacts of invasive alien species)" and "5.1.5. Proportion of key biodiversity areas threatened by invasive alien species" are valuable. However, 5.1.5 seems to suggest a simple yes/no, the degree of current impact and future threat would be useful to explore. Some of this is discussed in Shackelton et al. 2020 for World Heritage Sites https://doi.org/10.1007/s10531-020-02026-1. The Environmental Impact Classification for Alien Taxa (EICAT) provides a useful complement to the Red List Index (Van der Colff et al. 2020 https://10.3897/neobiota.62.52623), as the impacts are not just on threatened species. It is also important to note that impacts on biodiversity and socio-economic impacts will be useful (e.g. the Socio-Economic Impact Classification for Alien Taxa (SEICAT) Scheme). Finally impact assessments based on EICAT and SEICAT are not primarily intended to track change, this is an issue that will need some resolving.	A primary value of incorporating EICAT and SEICAT is about standardising measures of impact. Parties need support in mobilising relevant data and making it available on global information databases.	Recommend considering a few other sources for component indicators https://www.idiv.de/en/stwist.html • Trends in richness of invasive alien species – as a basis for estimating rates of invasive alien species spread • Trends and distribution of invasive alien species impacts – as a basis for estimating change in impacts • Status of information on invasive alien species introduction, spread and impacts – as a basis for tracking growth in the information needed to inform policy effectiveness. https://doi.org/10.1111/1365-2664.13251 • Rate of introduction of new unregulated species • Trends in number of invasive species that have major impacts • Extent of area that suffers major impacts from invasions • Level of success in managing invasions

Impacts are heterogeneous and difficult to measure. The same invasive alien species can have different impacts on different ecosystems and territories with different management practices applied to natural heritage. These circumstances make more difficult to compare and harmonise different data. For that reason, it is required to have some common criteria on impacts and methodology to apply.		
need more capacity building to use this indicator	Need to identify information required and capacity building is needed.	
		The terminology "rate of impacts" in the indicator 5.0.2 "Rate of invasive alien impact" is unclear and raises many questions about what it should entail. The indicator needs to be reformulated or removed. The method for using the indicator is not yet developed. Methods are being developed to measure impacts in a globally common way. The IUCN-ISSG classification system for IAS impact (SBSTTA/20/INF/5) could be used to obtain comparable data. However, this would require capacity-building and large resources to do. A baseline of impact is today not possible unless a subset of IAS that are especially harmful or potentially harmful in certain ecosystems is used. Indicators relevant for IAS effects on aquatic ecosystems are missing, in particular for the marine environment. For all biomes, an indicator on effects of IAS on ecosystem services and natures contributions to people is also missing. The ongoing IPBES work on a global assessment on IAS would be expected to contribute to the development of such an indicator.
		We suggest to use the indicator: SDG 15.8.1: Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species
How would the impact be measured? This is very ambiguous and needs to be clarified.		
		As noted in our comments on 5.0.1, we consider that baseline information on what sites are priorities and current levels of impact is critical for being able to

		make this evaluation. In our view, application of this indicator should be easier than the issue of pathways and spread since the quantitative element only relates to the number of sites, and the level of impact does not necessarily need to be quantified but only evaluated in terms of trends (decreasing, status quo, or increasing impacts).

Target 6. By 2030, reduce pollution from all sources, including reducing excess nutrients [by x%], biocides [by x%], plastic waste [by x%] to levels that are not harmful to biodiversity and ecosystem functions and human health

6.0.1 Proportion of water with good ambient water quality (freshwater and marine)

6.0.1 If you selected "yes, however requires further work", please describe:	6.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	6.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
One HI on levels of pollution from all sources is needed, then other HI for the main pollution sources, not only the 3 mentioned under this target (including nutrients, biocides, pesticides, plastics, light, noise…);		
How do we define good quality as different countries have different national standard		
	The indicator requires the development of monitoring capacity at the national level	
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
Canada disagrees with all proposed headline indicators for Target 6 and suggests that they be designated as component or complementary indicators. The proposed headline indicators do not tell use about the resilience of biodiversity to the threat of pollution. Also, the indicators should focus on key pollutants as per IPBES. The headline indicators should be outcome based and focused on the level of risk of pesticides and other pollutants on biodiversity, rather than simply e.g. the total use of a pesticide. Also, we understand that this indicator and all the indicators for target 6 are not currently available.	N/A	Canada proposes the following alternative (and already existing) headline indicators: · Red List Index (impacts of pollution) · Identification of levels of pollutants that are not detrimental (indicator adopted under Aichi Target 8) · The component indicators could be structured around each key pollutant identified and their levels (could be disaggregated by country or biomes), as well as their impact on main ecosystem services. · Canada would also propose an indicator that would assess the impacts of pollution on traditionally valued biodiversity/species.
		Water Quality Index for Biodiversity

Proposed indicator does not terrestrial ecosystem where e.g. eutrophication can be critical. The HLI should reflect all sources such as nutrients, pesticides, anthropogenic underwater noise, and chemicals much broader. For Chemicals SAICM beyond 2020 has developed a report with a useful compilation of indicators: http://www.saicm.org/Implementation/Reporting/tabid/5462/language/en-US/Default.aspx Since the work on SAICM beyond 2020 is ongoing, we propose the IOMC (Inter Organisation programme for the sound management of Chemicals) indicators for implementation of SAICM: https://partnership.who.int/iomc/iomc-indicators-of-progress-in-implementing-saicm In addition to water and municipal solid waste (and pesticides and plastic debris) – at least IOMC indicators 2 and 4 (Number of countries with legislation in place to manage industrial and consumer chemicals (OECD), Number of countries with a PRTR (pollution Release and transfer register) (UNITAR)) would add pollution prevention to the biodiversity agenda and stress the need for SMCW.	see above	
The information nowadays is generated by other conventions like FAOStat plataform. How was the process to determinate this pollutants?	We need more researches, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	
Generally there is a need to cover all sources of pollution with more indicators specifically (Missing anthropogenic underwater noise and marine litter). In target 6 there is 'biocides', but in indicator "pesticide use by area of crop land" – This needs to be clarified. Impact on land is missing (agriculture and forestry). E.g. mentioning of marine litter, air quality related to eutrophication, would improve/specify target/indicator		
Yes, including terrestrial ecosystems affected by eutrophication and acidification is important. To reflect this HI 6.0.1 should either be changed to include air or a new HI should be established (see comments). Also, ocean acidification should also be included measuring in particular Aragonite saturation, pH and Alkalinity. In fact these are collected by Regional Seas Conventions		Including terrestrial ecosystems affected by eutrophication and acidification is important, thus an overarching indicator would be most effective. Otherwise, the measures to achieve the objective in this regard might be different from those that would be optimal to mitigate the harmful effects on the affected ecosystems. HI: Terrestrial ecosystems area where nitrogen deposition exceeds the N-critical loads for

Add eutrophication status of marine and coastal waters and use, for example, locations and frequency of algal blooms reported as used by Regional Seas Conventions.		eutrophication. Critical loads are well developed in the UNECE region through the Air Convention and maps have also been developed for Asia. Water efficiency (water reuse) can could also be included, a circular economy measure relieving environmental pressure and subsequently biodiversity effects. Groundwater should also be taken into account.
	See below.	NOTE : Pollution needs to be brought to levels that are not harmful to biodiversity and ecosystem functions and human health. Also, there is so far no indicator on nutrients. This indicator should be split into two? Or to add an additional indicator 6.0.5 "Proportion of land at or below critical loads levels (N/P)".
As other indicators for this target deals with pressures, this only one focusing on state should encompass all environments prone to be threaten by pollution. France proposes to rephrase HI as "Proportion of air, land and water (freshwater and marine) with good overall quality (including physical, chemical and biological)	See previous comment	
		Headline indicator 6.0.1 as proposed at present refers exclusively to aquatic and marine ecosystems and is not currently available. We propose as an alternative a headline indicator for pollution which refers to aquatic and terrestrial ecosystems: Critical load of nutrient nitrogen and its exceedance by atmospheric nitrogen deposition (reduction of the ecosystem area with exceedance of critical loads of nutrient nitrogen (%) in a given period (e.g. 2005 – 2030)). Responsible organization: Coordination Centre for Effects under the CLRTAP of the United Nations Economic Commission for Europe, More information: CCE | Umweltbundesamt (Contact: cce@uba.de)
clear definition of what is "good" - is it WHO standards for specific ecoli or heavy metals? which ones will be used to measure health for reporting?	Needs to be disaggregated at the national level and needs capacity building support to track	
The indicator shall cover different levels of pollution from all sources and shall include terrestrial ecosystems		
	Additional information is required in terms of how the reporting of the indicator is to be done. What is the index that will be utilized?	

		We do not think that this indicator is within the scope of CBD. Mexico recommends that indicators should focus on assessing the impacts of pollution on water, soil, and air and not on pollutants because the pollutant is not important but the effects on biodiversity and ecosystems are what is important.
		Same as it is with many other indicators, adaptation and new investments in national monitoring and reporting systems shall be provided in most of the countries
Generally, Target 6 needs more work. As written, it is very difficult to set a percentage goal for plastic pollution as there are no scientifically established levels of plastic pollution at which it is "not harmful to biodiversity and ecosystem functions and human health". And there is no baseline for many countries, so it would be very difficult to measure Further, "good" is a very subjective term and can't be measured in and of itself. Very specific definitions will be needed and a more objective term is recommended. "Proportion of water" is very difficult to measure. What will be measured is also crucial, e.g., which nutrients will be included, will microplastics and nanoplastics be included.	As stated, there will be significant methodological challenges to actually report on this indicator. There are still no standardized sampling protocols or measurement methodologies for microplastics and nanoplastics in freshwater and marine environments. There will also be substantial requirement in equipment to sample in the marine environment in the open ocean, at depth and at different times of the year.	Ne reflète pas l'objectif
		We suggest the following additional Headline or Component Indicator: • "Pollution from coastal sediment." More generally, and depending on the final configuration of the target, there may be scope to consider an indicator which captures the presence (or otherwise) of 'national strategies' to reduce pollution, e.g., from all sources to levels that are not harmful to biodiversity, ecosystem functions and human health.
	Capacity building and financial resources to support developing countries are required.	
The term good ambient water quality would need to be clarified and defined in order to ensure comparability of data between different countries using different indicators describing water quality.	See above. Countries must know how they should calculate the indicator.	
The HI should also include land, e.g. "Proportion of land and water (freshwater and marine) below critical loads".	See above.	

Air pollution is missing from the target. Indicators from the Convention on Long-Range Transboundary Air Pollution could be used. Alternatively, the HI could be on levels of pollution from all sources, then subdivided in the different pollution sources (including nutrients, biocides, plant protection products, pharmaceuticals, air pollutants, plastics, light, noise…).		
It could be wise to measure (also) the actions taken and not the state of environment.		- minimize pollution to levels unharmful to BD - to include underwater noise pollution, light pollution - additional indicator needed to cover terrestrial ecosystems
Methodology - How "ambient water quality (freshwater and marine)" is to be measured or assessed to establish whether it is 'good' or not needs to be clarified and agreed.	As above, depending on the measurement and assessment methodology, capacity-building may very well be required to allow standardization and comparability in national reporting	
Such potential indication should not only concern marine and freshwater ecosystems, but also terrestrial ones. Nutrient pollution is a major driver of biodiversity loss in all types of ecosystems, including in terrestrial ones. Synergies should be explored with existing indicators under the Air Convention, particularly concerning critical charge of N nutrients and deposition from atmospheric compounds. The critical loads concept is a good concept to measure this, as it looks at the soil from its capacity to buffer/store/take up and use these pollutants (such as natural or artificial fertilizers).		
Sweden is of the opinion that headline indicators for action targets, also T6 should be formulated to measure actions taken, not just the resulting state. Sweden propose to rephrase the HI as "Proportion of water (freshwater and marine) with good overall quality (including physical, chemical and biological)" to be supported by component indicators that cover the physical aspect such as anthropogenic underwater noise (and turbidity).		A potential component indicator for underwater noise is under development under EU MSFD and Regional Sea Conventions (Helcom and Ospar). (The indicator will hopefully be up running next year).
		Target 6 is inherently problematic due to its substantial overlap with other conventions. This indicator should not fall under the remit of a biodiversity-related convention, but rather a chemicals and waste one.
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. Clarity is needed in terms of water bodies, surface

		water, or ground water and different types of assessments that are taken for different categories of water. One option could be to look at the underpinning metrics of the Water Framework Directive (WFD), which is common across the European Union.
It is not clear to us how a baseline will be established. We are also uncertain how it would be possible to ensure that progress at needed levels is being made and met since this would seem to vary a lot by country and region. In addition, we consider that it would be useful to clarify if the indicator covers surface and groundwater. In our view, freshwater and marine could usefully be separated, since both need great water quality but how that is achieved is different for both systems.		
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. Clarity is needed in terms of water bodies, surface water, or ground water and different types of assessments that are taken for different categories of water. One option could be to look at the underpinning metrics of the Water Framework Directive (WFD), which is common across the European Union.

6.0.2 Plastic debris density

6.0.2 If you selected "yes, however requires further work", please describe:	**6.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**6.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		Density is not a good indicator of the impacts of plastic pollution on biodiversity, ecosystem functions and human health. Other factors need to be considered such as location, plastic type, toxicity etc.
HI on plastic pollution HI should be both for marine and terrestrial ecosystems, and not be limited to marine areas; many agricultural soils are also highly contaminated by plastic pollution. Marine debris should include all kinds of marine litter, not only plastics. HI proposals: 6.0.2 Marine debris density ;		

6.0.2 (bis) Total plastic debris (both in terrestrial and marine ecosystems)		
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
Canada disagrees with all proposed headline indicators for Target 6 and suggests that they be designated as component or complementary indicators. This indicator is also not currently available as we understand.	N/A	N/A
		plastic waste debris density
This methodology should be further discussed.	There is a lack of data for this indicator. Capacity-building and financial resources are needed to establish a baseline.	
Waste density by location (bottom, beaches, floating, column)		
Indicator should report on marine litter and include Overall levels of marine litter, Quantification of beach litter items, Seabed litter, How many countries having developed national action plans to combat marine litter		
From International Marine Organization develop an initiative calls GioLitter where attempt the plastic waste issue together with FAO.	We need more researches, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	
It is essential to mention specifically the reduction and prevention of marine litter, incl. plastic litter and micro plastics in target 6 on pollution.		
Yes, standards to be defined for terrestrial/freshwater/marine ecosystems Note, Regional Seas Conventions use other indicators related to "Overall levels of marine litter" and "Quantification of beach litter items"	Yes, standards to be defined for terrestrial/freshwater/marine ecosystems	Such indicators should include circular economy and life cycle assessment indicators to assess recycling
This indicator is not currently available. Marine debris should include all kinds of marine litter, not only plastics. Suggestion: Marine debris density. However, HI on plastic pollution should be both for marine and terrestrial ecosystems, and not be limited to marine areas; many soils are also highly contaminated by plastic		

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pollution. Suggestion: Total plastic debris (both in terrestrial and marine ecosystems).		
	Needs to be disaggregated at the national level and needs capacity building support to track	
importante establecer el tipo de plásticos que se aborda en el indicador. Los indicadores de los componentes son mucho más explícitos, particularmente el 6.1.5.		
Mechanism and methodology for evaluating debris density.		
The indicator shall also cover non marine areas; many soils, incl. agricultural	The indicator shall be modified according to the comments above	
	Additional capacity will be required to report on this indicator.	
		We do not think that this indicator is within the scope of CBD.
	Least developed countries and SIDS may require capacity building to build in-country expertise to assist measuring this indicator.	
		Same as it is with many other indicators, adaptation and new investments in national monitoring and reporting systems shall be provided in most of the countries
There is currently no baseline of plastic debris density for any part of the world, so it would be extremely difficult to use this indicator to track progress. There are also many types and size classes of plastic, each with varying impacts on biodiversity, ecosystem functions, and human health.	The definition of plastic debris density is unclear. Plastic debris exists in a range of sizes (macro-, micro-, and nano-plastics) each with its own impact on the environment and solutions to prevent their leakage. Additionally, the indicator focuses on marine and coastal locations of marine litter and ignores riverine emissions to the ocean and the impacts of plastic pollution in terrestrial ecosystems. We would suggest adding component indicators under 6.3.1 of plastic debris density in (I) riverine. (ii) lacustrine (lake), and (iii) terrestrial ecosystems. We also recommend that monitoring and reporting specify the size range and type of plastic debris.	
Possibly a plastic debris emission indicator would be better, as with the current wording there is a risk of leaving out microplastics. As a component indicator it would be possible to add a Plastic policy indicator, which		

for instance looks a certain initiatives taken to ban single-use-plastics, plastic bags, etc.		
We note that one of the intentions of target 6 is in part to reduce pollution from plastic waste to levels that are not harmful to biodiversity, ecosystem functions, and human health. However, we note that it can be challenging to define what is a level that is not harmful, and what is an acceptable level of harm. We therefore suggest that including a more specific definition of harm in the indicator would help in enabling a reduction to be measured. Any relevant thresholds against which to measure harm would also be useful to include.		
Capacity building, investment assessment		
This indicator is relevant in relation to the marine environment. It is worth considering whether this indicator shouldn't measure content of microplastics/nanoplastics in human bodies (as having huge negative impact on human health and at the same time indicating how common this pollution is - https://www.technologynetworks.com/applied-sciences/news/microplastics-found-in-every-human-tissue-studied-338672)	This indicator is not universal, it is limited to the marine countries. In addition in case of plastic pollution of the coasts it is not known which country is the source of the waste.	
The HI should include microplastics and cover also non-marine areas. If kept, this indicator should be the one used in SDG Indicator 14.1.1. Index of coastal eutrophication and plastic debris density (metadata last updated on February 2021, available at https://unstats.un.org/sdgs/metadata/files/Metadata-14-01-01.pdf); this would guarantee already available data and increase the link of GBF with the SDGs.	See above.	
This indicator needs to include fine plastic waste.		
Microplastics should also be included in this target/indicator, cover also terrestrial ecosystems		
Scope – perhaps limit the focus to 'plastic debris density in rivers and the ocean'. Methodology - How "plastic debris density" is to be measured or assessed to establish whether it is 'acceptable' or not needs to be clarified and agreed. The methodology for measuring plastic debris density in the marine environment is clearly	As above, depending on the measurement and assessment methodology, capacity-building may very well be required to allow standardization and comparability in national reporting	

defined in SDG 14.1.1 for the marine environment. Can't find a clear methodology for rivers/wetlands. The SDG methodology for marine debris consists of 2 levels. Level 1: plastic patches greater than 10 meters. This means that it won't pick up microplastics or anything smaller in the water column. Level 2: beach litter. The methodology for level 2 requires the assistance of volunteers to perform beach surveys. Specific instructions on how to conduct citizen science beach surveys are included in the GESAMP Guidelines.		
More time and finance needed to collect information		
Sweden can support indicator 6.0.2, but the target component and headline indicator for plastic waste need to be formulated in a way that includes microplastics.		
		This indicator should not fall under the remit of a biodiversity-related convention, but rather a chemicals and waste one.
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. If clearly defined this indicator could work for coastal litter. We recommend that this indicator is linked to OSPAR to improve implementation. Earth Observation remote sensing techniques could support surface litter assessments, such as The Floating Debris Index. Thresholds for acceptable densities are not fully understood, and these will vary in coasts, sea surface aggregations, within water column and benthic habitats. There are significant difficulties in monitoring these substances (especially plastics which are not routinely monitored in surface water), and do not have established methodologies for monitoring.
We suggest clarifying that this indicator is for plastic debris in marine environments.		
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. If clearly defined this indicator could work for coastal

		litter. We recommend that this indicator is linked to OSPAR to improve implementation. Earth Observation remote sensing techniques could support surface litter assessments, such as The Floating Debris Index. Thresholds for acceptable densities are not fully understood, and these will vary in coasts, sea surface aggregations, within water column and benthic habitats. There are significant difficulties in monitoring these substances (especially plastics which are not routinely monitored in surface water), and do not have established methodologies for monitoring.

6.0.3 Pesticide use per area of cropland

6.0.3 If you selected "yes, however requires further work", please describe:	6.0.3 If you selected "yes, however requires further work on capacity-building or other work", please describe:	6.0.3 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
Australia is supportive of the intent of this indicator, but note that in its current formulation it is unlikely to be very informative, as it does not differentiate between soft chemistry, green chemistry, biological pesticides, synthetic pesticides, or highly hazardous pesticides. In our view Target 6 should look to shift Parties towards less hazardous forms of pest control, and therefore recommend that the indicator be amended to measure if there is a reduction of unsustainable chemical practices.		
Pesticide use in kg per area of cropland.		
	The indicator requires the development of monitoring capacity at the national level	
t is necessary to evaluate the use of agricultural inputs (pesticides and fertilizers) according to the amount of production and the area used. It is important to note that the consumption of pesticides in Brazil is not lower due to the peculiarity of occurrence of 2 or 3 harvests per year (winter and off-season crops). Therefore, there is a need to use pesticides to control pests even in winter crops or in off-season, since there is no break in pest reproduction cycle, due to tropical climatic conditions of Brazilian agriculture. So, we suggest changing the indicator for "Pesticide use per area or cropland, or per amount of production".	Change for "Pesticide use per area of cropland, or per amount of production". We also suggest an additional headline indicator "Number of countries with regulations in place to approve with scientifically-sound assessments and monitor the pesticide/herbicide use, considering proper application technology, safety instructions and requirements, such as using Personal Protective Equipment".	

Canada disagrees with all proposed headline indicators for Target 6 and suggests that they be designated as component or complementary indicators. This indicator is also not currently available as we understand.	N/A	Issues such as runoff may need to be considered. Further, the issue with pesticides may not be their use per se but how they are used.
		Some suggestions on indicators with regards to pesticides (not all suggested as headline indicators):
		1. Percentage of Parties that establish and implement risk management / mitigation measures that mitigate run-off to edge-of-field waterbodies and to terrestrial habitats.
		2. Percentage of Parties that conduct scientifically sound environmental risk assessments that support that mitigate run-off to edge-of-field waterbodies and to terrestrial habitats measures.
		3. Adoption rate to precision agriculture to reduce the footprint of pesticide applications.
		4. Reduction in the frequency of exceedance of regulatory acceptable concentrations for aquatic ecosystems (if baseline is available).
		Determining the frequency of exceedance of regulatory acceptable concentrations can be drawn from the environmental risk assessment section conducted for the registration of pesticides by relevant authorities, i.e. US EPA, EFSA; PRMA Canada, AVPMA Australia, MAFF Japan etc.
		Indicators could also be developed to assess trends in pesticide use training for farmers. Additionally, measures to assess trends in land use stewardship that have a positive impact on biodiversity such as crop rotation, use of cover crops, adoption of conservation tillage, and other measures supporting habitat for birds and insects such as hedges and flower strips. Other activities relevant for the stewardship life cycle are summarized here: https://croplife.org/wp-content/uploads/pdf_files/Crop-Protection-Stewardship-Vision-2020.pdf
		FAO maintains global data regarding the use of pesticides and herbicides. Despite of the existence of data, the rationale and appropriate use of inputs must be promoted.
		One indicator that should be considered is, therefore, the existence of regulations to approve and monitor the use of inputs considering safety instructions and requirements.
		Another indicator could be the implementation of programs to recycle inputs packages as a manner to control and avoid contamination of residues of the products.
		Another indicator could be promote the use of integrated pest management practices, according to

		climate and regional characteristics, aimed at achieving effective control practices. In terms of possible disaggregations, suggest total pesticides (and would possibly need to focus on measuring those purchased rather than used for the moment).
It should be further analyzed how this indicator can effectively measure the reduce of pollution. An indicator relating to safe use and management could be proposed.		
	The way in which the quantity/type of pesticides is recorded should be standardized to have a robust indicator with annual monitoring	
In addition to measure on pesticide load, the number of countries that have implemented pesticide regulation could be considered as indicator.		
Same comments of 6.0.1 indicator	Same comments of 6.0.1 indicator	
Yes, standards to be defined.		Possible alternatives are aggregated indicators as already used to propose risk maps. See F. Tang et al (2021), https://www.nature.com/articles/s41561-021-00712-5)
Concepts should be clarified: biocide/pesticide/herbicide/plant protection product. The target should also take into account the risk of different pesticides. There are huge differences in the toxicity of pesticides and the amounts needed to have certain effects. We propose to differentiate this indicator accordingly.	The target should include pesticide risk indicators, which predict the potential risk from the use of pesticides. Before there are viable alternative methods or products available, a pesticide user will not reduce the use and might end up using more effective and potentially more harmful pesticides if forced to reduce total amount. There are huge differences in the toxicity of pesticides and the amounts needed to have certain effects. We propose to differentiate this indicator accordingly.	
As impacts of pesticides are difficult to assess at global scales, an indicator on pressure could act as a proxy, but questions still remain about the quantification of the "use" : total quantities of product ? active substances only ? frequency of application ? etc. Also 6.0.3 should be extended to chemical fertilizers and other non "cides" chemical inputs as growth regulators.	See previous comment on "use" assessment	
This indicator is not currently available. Clarification of terms pesticides and biocides necessary. The HI is very much oversimplified. Should ideally be per plant protection product.		

Resources will be needed to track this for us as we are not a member of any of the chemical cluster of conventions	Needs to be disaggregated at the national level and needs capacity building support to track	
Pesticide use is very important, but also antibiotic and antiparasitic use in animal farming. There are no indicators related to that, although this is a crucial issue at global level for human health.	The indicator shall be modified according to the comments above	
While Japan strongly believes that the further consideration is required with a view of adequacy and consistency between the target and indicators, we consider it is unrealistic and inappropriate to include unified target of [X%] reduction in the Target 6, as various conditions (e.g. geographical, climate and crops grown in each country) should be carefully taken into account. Based on the recognition above, we propose the following amendment to the Headline Indicator 6.0.3, replacing the simple pesticide use with "highly-hazardous pesticides." As the impact of pesticides to environment and human health differs by the types of those, the indicator should aim at reducing the impact from the toxicity of pesticides, which is evaluated in each country. FAO-WHO list of "highly-hazardous pesticides" (HHPs) is well known, and it can be utilized by many countries.	As the list of HHPs is already exist, country data of pesticide use by active ingredients can be collected in line with the list.	With the abovementioned, we propose to amend the current indicator as; 6.0.3 Highly Hazardous Pesticides (HHPs) use per area of cropland
		6.0.3 is not reflecting the impact on biodiversity. Also, the indicator is unclear and incomplete. The level of toxicity is not integrated and it is not clear how it will be measured. Indicators for soils are missing, but these should be evaluated as a main indicator, according to the International Initiative for the Conservation and Sustainable Use of Soil and Updated Action Plan Mexico considers that GBF Post 2020 should focus on all the main direct drivers that pose a threat to biodiversity and ecosystem services as identified by IPBES, and is therefore supportive of having a target on biodiversity and pollution in the post-2020 GBF. However, Mexico believes that actual phrasing of Target 4 and its indicators gone beyond the scope of the CBD and, in many cases, relates to other MEAs' mandate.
	Same as it is with many other indicators, adaptation and new investments in national monitoring and reporting systems shall be provided in most of the countries	

Pesticide use per area of cropland does say something about the amount of input of pesticides, but nothing on the effects of pesticides (e.g. due to level of toxicity). Better would be to measure the amount of pesticides found in surface water, at least as a component indicator.		
We note that pesticide use per area of cropland is a difficult measure to describe and quantify. Different pesticides have differing application rates from one another, and some are more environmentally benign than others. There are also other UN Conventions that specifically address the adverse effects of hazardous substances of different types, including pesticides as well. Finally, we note that pesticides currently in development (and to be developed in the future) hold the potential to be harmful only to target organisms, and are more easily biodegraded than current pesticides. Thus, an indicator that takes such factors into account is needed.	As noted above, a broad brush indicator like this will mean different things for different pesticides, and could potentially result in perverse outcomes such as swapping a pesticide for another that is more harmful to biodiversity etc., but requiring a lower application rate, being used to report reduced pesticide usage. Therefore, the indicator requires refinement to more accurately ensure reduced adverse effects.	
Capacity Building, investment assessment of cropland		
Some countries do not collect data on the pesticide use but on the pesticide sales.	See above.	
Fertilizers are also a source of pollution. The HI could be: "Pesticides and fertilizers use per area of cropland".	See above.	
It would be an idea to measure the size of the area that is excluded or free from pesticide use. Avarage value of pecticide use is not very informative. - it should also be taken into account that geographical regions are differently exposed to pests and diseases (season duration.. etc)		
	Scope – Not all pesticides have the same impact on biodiversity, ecosystem function or human health, so perhaps limiting the focus to specific – high-impact chemical constituents would be more useful and practical	
Further clarity is needed on methodology and criteria for this indicator. Does it concern all types of pesticides / chemical pesticides only / those with higher risk?		
Indicator 6.0.3 on "Pesticide use per unit area" alone is not suitable as an indicator to monitor the impact on health and biodiversity, especially not in the form of an average value. It would be better to measure the size of the area that is excluded or free from pesticide use.		

		This indicator should not fall under the remit of a biodiversity-related convention, but rather a chemicals and waste one.
		We suggest using the same indicator to measure as 9.0.1, Proportion of agricultural area under productive and sustainable agriculture (measured in the same way as SDG Indicator 2.4.1). We believe this indicator could also address the need to reduce excessive pesticide use or incorporate IPM with a reduction in pesticide use.

6.0.4 Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal solid waste generated by cities		
6.0.4 If you selected "yes, however requires further work", please describe:	**6.0.4 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**6.0.4 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
	support to capacity building of local governance	
Australia supports this indicator in principle but note a clear definition for "managed" in this context is required. For example, it is not clear if 'managed' includes waste that is recycled, or disposed of in a way that minimises impacts of pollutants impacting on biodiversity and ecosystems.		
should focus on air pollution!!		
As waste quantity will probably grow, the proportion here is not the correct way to monitor pressure; it should be the gross quantity of waste. HI Proposal: 6.0.4 Total amount of waste generated (disaggregated by source such as by citizens, by industries…)		
	The indicator requires the development of monitoring capacity at the national level	
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
Canada disagrees with all proposed headline indicators for Target 6 and suggests that they be designated as component or complementary indicators. This indicator is also not currently available as we understand.		Waste that is not managed in controlled facilities essentially comes from two sources: illegal dumping and intentionally or unintentionally thrown in public places. No data exists on this subject. It would be

		much more realistic to evaluate a result indicator, which is already better monitored, such as a density of waste in certain natural environments or in wildlife species, which is the real problem. Current efforts in GMR (waste management) are already contributing to this indicator. Target
Number of countries with circular economy polices and action plans could be used		
The solid waste is not only the plastics, for that reason is important to show a text that consider this base because this redaction is wide general	Same comments of 6.0.1 indicator	
Yes, but use of proportion not recommended considering the difference in waste produced by person.		Such indicators should include circular economy and life cycle assessment indicators to assess recycling. All pollutants could be embedded within a single LCA indicator (% products in circular economy and in balance with nature). Gross reduction of waste generated by citizens, by industries, etc.
The target should cover also sewage sludge, for example proportion of adequately treated sewage sludge.	Untreated or inadequately treated sewage sludge can contaminate water and harm huge amounts of wildlife.	
This indicator is not currently available. As waste quantity will probably grow, the proportion here is not the correct way to monitor pressure; it should be the gross quantity of waste.		
en lugar de ciudades poner: ciudades y centros poblados. En países como Guatemala, casi el 50% de la población vive en zonas rurales (pueblos, aldeas, caseríos, etc..), por lo que dejarlo solo para las ciudades deja fuera estos lugares.		
We propose to delete "by cities" or replacing it with "by nation" in the headline indicator 6.0.4, since municipal solid waste would require a nationwide effort.		
		We do not think that this indicator is within the scope of CBD. Mexico concurs T4 and its indicators focus should remain on the adverse impacts pollution has on biodiversity and ecosystem services (water, soil, air).
To track progress towards plastic waste reduction goals, it will be necessary to measure both municipal solid waste and the proportion of the waste that constitutes plastics.	Understanding a city's waste management pathways and capacities will enhance standardization and comparability in national	

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Focusing on cities ignores the fact that globally rural (non-urban) areas also contribute significantly to plastic pollution and have different challenges than cities in addressing this issue. In addition, in many parts of the world, plastic waste is predominantly handled by the informal waste collection sector rather than managed in controlled facilities. This indicator would miss this pathway for reducing plastic pollution.	reporting. For example, data on waste collected relative to landfill capacity or incineration can be more indicative of a city's waste management challenges than the amount of waste alone and highlight shared needs across regions.	
		Consider merging target 7 and 10. Alternative indicators could be: X countries addressing NBS/EBA in their NDC's X countries addressing climate action in NBSAP
We note that Headline Indicator 6.0.4, "Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal solid waste generated by cities," is useful and measurable, but ignores rural solid waste, which is a serious issue in many places.		While solid waste is important, it may be more important to include indicators for underwater noise and artificial light pollution. We suggest the following additional Headline or Component Indicators: • "Artificial night sky brightness", which measures artificial light pollution and the visibility of night skies using the world atlas of artificial sky luminance. • "Pollution from underwater sound."
		Three-part indicator: a) Municipal waste generated per capita b) Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal solid waste generated by cities c) Proportion of waste recycled out of total municipal solid waste generated by cities
Capacity Building, investment to work local government		
Theoretically this indicator could be calculated but the data is not easily accessible, calculations would be very troublesome and in addition indicators' relevance to the target is not obvious.		
The HI could also include water waste. Another suggestion: Proportion of municipal solid waste collected to be reused and/or to be properly managed in controlled facilities out of total municipal solid waste generated by cities (this change promotes circular economy and is more in line with SAICM (Strategic Approach to International Chemicals Management).	Agenda 2030 Indicator 11.6.1 According to metadata last updated 15 September 2020 (https://unstats.un.org/sdgs/metadata/files/SDG-indicator-metadata.zip), efforts at UN level are needed to establish a global data reporting,	

		training and capacity development on data production and data quality improvement.	
This is only relevant in certain parts of the world and doesnt measure progress in developed countries well.			- gross reduction of waste generated by citizens, industries etc
Measuring "total municipal solid waste generated by cities" may be extremely difficult, if not impossible. Thus, perhaps something along the lines of "proportion of municipal solid waste collected that is diverted from landfill for composting, reuse, repurposing or recycling	Depending on the measurement and assessment methodology, capacity-building may very well be required to allow standardization and comparability in national reporting		
HI 6.0.4 on the proportion of household waste from cities treated in controlled facilities is not a good measure of the burden on nature and health as it does not take into account the absolute waste volume.			
			This indicator should not fall under the remit of a biodiversity-related convention, but rather a chemicals and waste one.
We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. We have questions over the methodology and how to separate cities from rural areas for accounting purposes. The scope of the indicator could also consider other types of waste.			The following indicator is technically feasible at the headline level and could be considered as an alternative: SDG Indicator 12.4.1 Number of parties to international multilateral environmental agreements on hazardous waste, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement. However, it might be more appropriate to assess the feasibility of this indicator at the component and complementary levels in order to ensure a balanced set of headline indicators across the goals and targets.
We recommend that recycling be incorporated into this target.			
			The following indicator is technically feasible at the headline level and could be considered as an alternative: SDG Indicator 12.4.1 Number of parties to international multilateral environmental agreements on hazardous waste, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement. However, it might be more appropriate to assess the feasibility of this indicator at the component and complementary levels in order to ensure a balanced set of headline indicators across the goals and targets.

Target 7. By 2030, increase contributions to climate change mitigation adaption and disaster risk reduction from nature-based solutions and ecosystems-based approaches, ensuring resilience and minimizing any negative impacts on biodiversity		
7.0.1 Total climate regulation services provided by ecosystems*		
7.0.1 If you selected "yes, however requires further work", please describe:	**7.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**7.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
Australia supports in principle but has concerns over the measurability of these services.		
		The HI and the target formulation should enable to tackle the pressure that CC itself has on biodiversity (all direct drivers need a HI). Monitor the Coverage of Ecosystems under pressure due to CC under this target. Have HI on trends in the area covered by Biodiversity friendly Nature Based Solutions for Climate Change adaptation, Mitigation and Disaster risk reduction together with indicator on other NCP under target 10. This HI comes with an * which means we are not calling for it before COP16. This is too late, for this crucial issue, we need such a HI at COP15. HI Proposal: 7.0.1 Coverage of Ecosystems under pressure due to CC
		A.0.1 Extent of selected natural ecosystems (forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
Canada does not support this indicator: As per the rationale for not going beyond the scope of the CBD for the target wording, the same goes for proposed headline indicators. We also understand that this indicator is not currently available. In addition, we should strive to have, as much as possible, headline indicators that already exist so that Parties can start assessing progress on them as soon as possible and avoid repeating the mistakes from Aichi. It is not clear that all Parties will be in a position to report on this proposed headline indicator and	N/A	Canada could propose the BERI index as an alternative headline indicator. This already existing index, which was proposed as a complementary indicator for Goal A (A.1.1.30), can be aggregated/disaggregated based on ecosystem types, countries or ecoregions: ALT 7.0.1 Bioclimatic Ecosystem Resilience Index (BERI): assesses the extent to which a given spatial configuration of natural habitat will promote or hinder climate-induced shifts in biological distributions.

what metrics should be used to do so? Canada is of the view that indicators, and mostly headline indicators, should look at biodiversity positive outcomes whenever possible. It is also not realistic to quantify the GHG fluxes of all ecosystems, this is not even provided for in national inventories which focus on managed ecosystems.		Results can be aggregated to report on status and trends for any desired set of reporting (ecoregions, countries or ecosystem types). However it is unclear whether this is only a terrestrial indicator and if it is marine would need to be addressed. Also, another alternative could be: ALT 7.0.2 Red List Index (impacts of climate change): This already existing indicator looks at the impact of climate change at the species level and the risk posed by climate change to their survival. In all target propositions (current 7 and alt. 1 and 2), a baseline could be established to limit confusion in reporting. 2020?
		synergies between the CBD and UNFCCC. BERI INDEX, Climate resilience indexes, PH
		We should try to build on existing indicators that are relevant to the CBD convention so parties can present the progress as soon as possible. In this sense, unfortunately the headline indicator is not the most relevant one for this target , another possible headline indicator could be the Red List Index (impact of climate change) or the bioclimatic Ecosystem resilience index.
Target component 7.2 on the reduction of negative impacts on biodiversity is not reflected in the current indicator and further indicator for biodiversity areas vulnerable to climate change should be taken into account		
Ecosystem-based approaches does not have an intergovernmental agreed definition. This indicator should supported UNCCC and IPCC indicators in order to overlapping this actions into the national level and avoid double efforts.	The use of this indicator depends on the result of the work carried out by technical experts on indicators for the post-2020 global biodiversity framework. CBD and UNCCC should be closer and try to work on the climate change like a biodiversity driver and not another sector.	
		Target and indicator do not fit. Very challenging to gather data for that indicator. Adaptation perspective is missing in the indicator. Wrong focus – focus should be on: Extent of intact wetlands, peatlands, marine and coastal ecosystems, old growth wood and other climate relevant ecosystems.
		The proposed HI is unclear and doesn't seem ready to use. Also, target overlaps with Target 10 and 11 (Consider merging Targets 7 and 10 addressing exclusively nature-based solutions).

		Alternative HI should focus on actions regarding nature-based solutions for adaptation and mitigation. For adaptation focus should be on all services and biodiversity. For mitigation focus should be on carbon storage and sequestration by ecosystems with safeguards. HI: Carbon removed or stored in vegetation and soil (per unit area per unit time) per ecosystem type. An assessment of indicators to measure NBS for climate resilience is published on https://ec.europa.eu/info/news/evaluating-impact-nature-based-solutions-handbook-practitioners-2021-may-06_en
		Note : Measuring the extent of climate relevant ecosystems is also an option for determining the contributions of biodiversity to mitigating climate change. The regulations services considered now do not take into account the contributions of these services for biodiversity, which leads to a risk of using this indicator as a way to promote monoculture solutions.
		7.0.1 raises questions about the quantification of climate regulation services. The issue here is the lack of ecosystem services due to biodiversity loss. The indicator should evaluate the lack of ecosystem services to recover to mitigate climate change
does this mean number of services or amount?	methodology should be available	
		Reject proposed HI. Unclear and target overlapping with Target 10 and 11. HI indicator does not address the threat from climate change on biodiversity. No methodology to measure "contributions to mitigation or to adaptation" (units? Timeframe?). CBD does not monitor climate change that clearly is UNFCCC responsibility. The HI and the target formulation should enable to tackle the pressure that CC itself has on biodiversity (all direct drivers need a HI). Suggestion on what the indicator could cover: Coverage of Ecosystems under pressure due to climate change. This target could also be merged with Target 10. HI on trends in the area covered by biodiversity friendly NbS for CC A, M and DRR should be developed together with indicator for target 10. This

		HI comes with an * which means we are not calling for it before COP16. This is too late, for this crucial issue, we need such a HI at COP15.
Will need some capacity building to report on this	Needs to be disaggregated at the national level and needs capacity building support to track	
Requires work on measures for different ecosystem types, e.g. marine. Needs disintegration into separate headline indicators are to measure adaptation and mitigation related services.	See above	
Target 7 refers to mitigation, adaptation and disaster risk reduction services, on a global and national scale, through nature-based solutions and ecosystems based approaches, which also goes in the direction of biodiversity conservation, but the only indicator proposed mentions a complex of "climate regulation" (to be clarified) services provided by ecosystems. An index should be developed to capture all the contributions that nature-based solutions and ecosystems based approaches can make. There is an overlap with other indicators relating to NBS (10 and 11). Indeed, a possible alternative could be to measure the extent of NbS used at national level, perhaps divided by land-use categories (urban, freshwater, etc.): this would also allow it to be used to monitor other targets as well, within the GBF but also for national purposes.		
It is not clear how this will be measured.		
Mexico thinks T7 and the indicator should aim to ensure resilience and negative impacts on biodiversity to contribute to climate change adaptation and mitigation and some impacts derived from it (disaster risk reduction).	There are different point of views related to Nature Based Solutions and ecosystem base approach that be clarify.	The relationship between climate change and the oceans is missing and it is necessary to include ocean acidification. This indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative.
Provide an agreed definition of NBS under the Convention.		
Noting the value of habitats such as mangroves, salt marshes, and seagrasses under UNFCCC, suggest amending the headline indicator as follows "Total climate regulation services provided by ecosystems and habitats"		

		This is impossible to measure, as it does not satisfy the SMART criteria. Furthermore, the ecosystem distinction is not valid, as climate regulation services are interconnected across ecosystems.
	Capacity building and financial resources to support developing countries are required.	
Capacity Building, investment on ecosystems services assessment		
Such an indicator needs definitions and criteria that allow setting the reference situation and future monitoring. Medium and long-term processes that are important for climate regulation, especially concerning the deep-sea environment, need to be considered.	It will be important to set concepts and criteria to allow reporting.	Extent of intact wetlands, peatlands, marine and coastal ecosystems, old growth wood and other climate relevant ecosystems (these determine the contribution of biodiversity to climate change mitigation and adaptation; if only the amount of services provided is considered, there is a huge risk that this may be done by monoculture plantations or other technical solutions that have little or no value for biodiversity, and even create pressure/competition with species-rich ecosystems) Implemented nature-based solutions (NBS) that contribute to adaptation and mitigation of Climate Change
This indicator does not have a clear method to calculate or a clear basis of calculation, so we need to improve it.		We need to consider using other indicators like Red list index (impacts of climate change; SDG 13.1) to improve this indicator.
The indicator is currently not available	- area of the most climate relevant ecosystems (intact wetlands and peatlands, mangroves, old forests - The target implies quantitative elements for mitigation and, it seems less SMART than Aichi T15 - measure the area that is under pressure due to Climate change - CC impact on BD (could go under Goal A , there is IMPACT LOOP (if CC reduce more BD we have more release the GHG) - under ecosystem services (Mitigation and Adaptation) - Proper accounting for emissions/sinks (NO)	
	This is largely dependent on capacity that includes the presence of competent institutions, data collection, analyses and packaging, especially for purposed of the science-policy interface for decision making. But more importantly this has to be a bottom up process informed by bottom up approach that is informed by locally generated	Climate regulation is the ecosystem service that regulates processes related to atmosphere plant relationship e.g. greenhouse effect, air quality, moderation of temperature including weather patterns at both global and local scales (Costanza et al., 1997). As a result the current phrasing is biased to mitigation and in this context highly likely for

	science relevant to that specific geographical location. Should also include capacitation of relevant people within authorities that would be expected to form part of the reporting, as well as local communities where necessary.	tracking carbon capture and storage and does not cater for adaptation and disaster risk reduction aspects. As indicated the current phrasing caters for mitigation aspects only and omits the adaptation and disaster risk reduction aspects. A proposal is to rephrase it as follows: "Total contribution by ecosystems to address climate change and its impacts"? The latter phrase caters for both mitigation, adaptation and disaster risk reduction aspects but more importantly fits in with the definition of Ecosystem based Adaptation.
Very difficult to measure and need to aware about information needed to calculate this indicator	Similar to above	
		SE considers that the proposed headline indicator 7.0.1 "Total climate regulation services provided by ecosystems" measures the capacity to deliver ecosystem services and therefore seems to fit better under goal B. A headline indicator to measure the scope of target 7 should instead be able to provide information on reduced threats to biodiversity from climate change.
		Target 7 includes (mixes?) two goals that, while not contradicting each other, may need separate considerations : - A contribution to climate change mitigation adaption and disaster risk reduction from nature-based solutions and ecosystems based approached - Resilience [of ecosystems] and minimizing any negative impacts [of climate change] on biodiversity. - We may ask what are the necessary indicators for each of both goals and their cross-cutting aspects
Specific services and assessment methodologies need to be identified. Also, what is the unit of measurement here?	Suitable with improved definitions	
The indicator does not measure the overall progress of the target, further clarification is required with a clearer definition. We suggest that the indicator should measure the mitigation and adaptation effort implemented by countries.		
We would suggest a focus on carbon sequestration and storage, which could be measured through the implementation of carbon standards & audits in relation to	It is unclear how it will be measured, particularly at the national scale (modelling work could be conducted at global scale).	

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NBS (i.e. protection, conservation and restoration measures).		
		In our view, total regulating services is too broad and would be difficult to measure (unless focusing on reducing GHG emissions in CO2eq). We believe it would be better to select specific mitigation and adaptation services to measure, perhaps something more closely linked to biological sequestration. For example, the amount of land/water managed to increase biological carbon sequestration, or total carbon stored in forest ecosystems (e.g. from the FAO Global Forest Resources Assessment; http://www.fao.org/3/CA8753EN/CA8753EN.pdf) In another example, a restored wetland might be different than a constructed wetland or a new planted forest vs. increasing soil organic matter.
We would suggest a focus on carbon sequestration and storage, which could be measured through the implementation of carbon standards & audits in relation to NBS (i.e. protection, conservation and restoration measures).	It is unclear how it will be measured, particularly at the national scale (modelling work could be conducted at global scale).	

Target 8. By 2030, ensure benefits, including nutrition, food security, livelihoods, health and well-being, for people, especially for the most vulnerable through sustainable management of wild species of fauna and flora

8.0.1 Number of people using wild resources for energy, food or culture (including firewood collection, hunting and fishing, gathering, medicinal use, craft making, etc.)*

8.0.1 If you selected "yes, however requires further work", please describe:	8.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	8.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
creation of national platforms to keep records (in an agreed template)		
Australia understands the intended focus of this indicator to be IPLCs and other forest dependent communities, however as currently framed it may inadvertently capture all resource extraction from native/natural forests. If left as is, the scope of the indicator is too broad. Additionally, the number of people/IPLCs 'using' wild resources would fluctuate frequently based on a range of factors. To smooth out these fluctuations, we suggest replacing 'using' with 'consistently relying on'.		

Based on these proposed changes, the indicator would read: 8.0.1 Number of Indigenous Peoples and Local Communities consistently relying on wild resources for energy, food or culture (including firewood collection, hunting and fishing, gathering, medicinal use, craft making, etc.)		
		This HI is not correctly addressing the issue: If human population continues to grow, or if agriculture does not fulfil its role correctly anymore to feed to world, then more and more people will be using wild resources for these purposes. Thus pressure will increase. What we want is that these benefits from the use are sustainable for biodiversity. We could make this HI one on the biodiversity footprint of entire food system. Trends in harvested species under biologically sustainable levels should be monitored through target 4.
The indicator should monitor the number of people providing livelihoods by collection, direct use and trade of wild sources. Many people benefit from wild sources through shopping, which cannot be traced.	the indicator requires the development of methodology, but also capacities for monitoring at the national level	
Delete "food". Stimulating the consumption of wild species is dangerous when it comes to sanitary and epidemiological issues. The consumption of new species must be scientifically justified. Goals and Targets must be in the scope of the Convention and related to biological diversity. Although the relation with people is desirable, the Targets cannot involve commitments that depend on other policies that go beyond the scope of CBD.		
It is not clear what the value added is of the headline indicators proposed for Target 8. It is too general. For example, one could argue that the first headline indicator 8.0.1 could be the whole population using wild resources for energy, food or culture in some ways. Some aspects of the indicator would be more easily reported on than others. There also seems to be a disconnect between the target and the indicators. How is the percentage of the population in traditional employment measuring progress against this target? Is there an agreed upon definition of "traditional employment"?	N/A	Should this target remain in the framework, much more work would be needed to identify indicators that measure progress against this target. If Parties were to adopt a goal on nature's contributions to people, we would have to be more specific in how we measure it and perhaps talk about the quality of the benefits, and how it improves the livelihoods. One potential alternative could be the Red List Index (impacts of utilization).

As such, we are not in a position to support this indicator, as currently drafted.		
Number of people using wild resources for energy, food or culture" but suggest adding " using sustainable practices"		
The word "using" not necessary means directly "benefits". There is necessary to do a difference between ilegal and legal hunting.	This is one of the most necessary but also most challenging goals of post 2020. This goal could be closely related to the SDGs. Parties could consider doing an analysis of the national indicators they use to respond to the implementation of the Sustainable Development Goals and to identify gaps in Post 2020 indicators and incorporating them into national statistics.	
		Trends in harvested species under biologically sustainable levels (link to target 4) would include sustainable use component
The number of people use the wild species not ensure benefits. The way to ensure the benefits is protect the ecosystem services and maintain a stable source of resources through the sustainable consumption.	We proposed the following amendments: Number of people have a sustainable consumption of wild resources for energy, food or culture (including firewood collection, hunting and fishing, gathering, medicinal use, craft making, etc .)*	
		Misfit between targets and indicators, the key issue in 8 is sustainability of use, not the productivity. Target needs refinement – sustainable/traditional use might be reflected/covered.
		Both proposed HIs for T8 are not suitable and relevant. Instead, the HI(s) should rather focus on sustainable management of wild species. Other option include: Trends in harvested species under biologically sustainable levels (links to and overlaps with target 4)
"Target 8. By 2030, ensure that the management of wild species of fauna and flora is sustainable, thereby providing ecosystem services and functions to people, including nutrition, food security, livelihoods, health and well-being, for all." Our suggested indicator "xxx % of species/ habitats/area under sustainable management" would reflect this.	See above.	Does not consider the ecological sustainability and ethicality of the use.
		We can not say if an increase in 8.0.1 is a good or bad thing for biodiversity
	This indicator may be easy to calculate for those activities which requires some kind of license or	

	permits, but not those which do not require any governmental permits, so could be difficult to gather full information	
		Reject. The indicator should rather focus on sustainable management of wild species. It can be very much misused. The indicator must not suggest that the more wild species are used (even if sustainably), the more benefits. This can be highly misleading, as wild species can hardly be responsible for ensuring the food security of the planet. In addition there might be a strong overlap with Indicator 4.02.. This needs to track the sustainability of use (e.g. Red List Index (impacts of utilisation) rather than the number of users per se; an increase in number of people using wild resources could be unsustainable. If this HI should be further developed it should include the use of wild bees as pollinators: [...](including firewood and honey collection, [...]. This indicator could be instead on the biodiversity footprint of entire food system. Red List Index (impacts of utilisation) of IUCN which shows trends in extinction risk of species driven by utilisation (including reductions in extinction risk resulting from increases in the sustainability of use).
The scope is too huge for an archipelagic countries		Need to be simplified
	It is unclear what is the desirable state of this indicator. More people using wildlife species is likely to result in unsustainable use. On the other hand, a minimum value - no use of wildlife species - is in contradiction with the CBD goals. Indicators proposed in the info doc that address the sustainability of the use would be more appropriate.	
		The indicator should focus on the absence of non-sustainable use where wild resources are used, in order to not convey the message that the benefits for people are linked to the use of wild species, even if they are used sustainably. An alternative could be to measure trends in management of wild species under biologically sustainable levels.
	Jamaica can report on some aspects of this indicator; however, additional capacity would be required to report on this.	

Headline indicator 8.0.1 states "number of people using wild resources for energy, food or culture", but we think that essentially, there are few people who do not use wild resource for energy, food or culture, especially for food.		
		This indicator focuses on climate (which is covered by another convention). There needs to be an indicator to look at effects of climate change towards biodiversity.
As it is phrased the T8 and the indicators, the focus is not on biodiversity or ES, but on what it should provide to human beings, and we do not think that this is within the scope of CBD. However, it could be easily rephrased so that the focus is on sustainable use.		Is no clear what does the indicator is looking for: the increase or reduce of the number of people using wild resources for energy, food or culture?

This indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative. |
| honeygathering should be included | | |
| New Zealand consider it should be "sustainably using" – given it is the sustainability of the use that we are focused on here, and which will lead to long term benefits - not simply the use. | | |
| | | As sustainable use is a core part of this target, the indicator should be specified towards this. Proposed indicator:

Number of people that make sustainable use of wild resources |
	Capacity building and financial resources to support developing countries are required.	
Capacity Building, investment on wildlife values to sustainable use.		
		This indicator does not include reuirement of sustainable use so we could end up with a conclusion that the more trees are cut down by people to be used as energy source the better.
		Sustainably managed wild species of fauna and flora in proportion of total wild species used
Trends in harvested species under biologically sustainable levels (overlap with target 4)
Number of species that are threatened due to unsustainable use (Red Lists)

		- level of ambition is vague - number of people using wild resources sustainably (% of species/habitats/ area under sustainable management)	
			The indicator as worded (if ever it could be measured) is a proxy for resource use demand and not for its sustainable management. Just because there are more users does not mean that the resource is better managed. A better indicator would be the number of national level NDFs or credible scientific studies that indicate sustainable use of resources. A country-level index could be derived for the number of such NDFs/scientific studies relative to the number of species used for the above mentioned purposes.
			The indicator should rather focus on sustainable use and management of wild species. An indicator that expresses "customary sustainable use" would fit well in this context. As for action target 4, HI 8.0.1 could be improved by redirecting the scope of the indicator to sustainable use and customary use. We note that none of the suggested headline indicators for the GBF employs the CBD definition of sustainable use.
			We suggest to replace this indicator by "Sustainably managed wild species of fauna and flora in proportion of total used wild species"
			The target does not speak to sustainable management.
This indicator will determine the number of people consuming wild resources, but it does not measure the percentage of this consumption and the sustainable management of these resources.			This indicator cannot be applied equally to all countries, for example in the United Arab Emirates it can be applied only to fishing, as it is illegal to hunt or collect wild species.
We recommend inserting "sustainable" in the indicator so it would read "Number of people sustainably using wild resources…"			We believe that the proposed indicator would be very difficult to measure and that it does not actually assess sustainable use, and we note that almost everyone benefits from wild resources in some way. We suggest that one way forward could be to focus on a few specific resources, e.g., FAO is working to create a threat index for rivers that support inland fisheries, which could serve as a proxy for inland fisheries that are likely to be sustainably harvested. This work has been featured in the 2020 FAO State of Fisheries Report (pg. 180; http://www.fao.org/3/ca9229en/ca9229en.pdf) and

		cited in the recent WWF forgotten fishes report (pg. 23; https://wwf.panda.org/discover/our_focus/freshwater_practice/the_world_s_forgotten_fishes/), and we anticipate that there will be a publicly available threats assessment by 2022.

8.0.2 Percentage of the population in traditional employment

8.0.2 If you selected "yes, however requires further work", please describe:	8.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	8.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
needs further work with registration of people (at state registry) under traditional employment, which is missing by us		
In many Indigenous cultures, customary activities (e.g. hunting or fishing) can also sustain livelihoods, even if people are not employed in the formal economy. Amending the nomenclature of this headline indicator recognises that individuals can survive and thrive off engagement with traditional culture in multiple ways, and that there is significant economic value inherent to many traditional activities, even when not recognised by the private market. On this basis we recommend the changes shown below: 8.0.2 Percentage of the population who derive livelihoods from engagement in with traditional culture and associated land and water activities.		
		This is not an accurate HI; traditional employment has nothing to do with biodiversity
		We suggest the deletion of this indicator.
Canada is not in a position to support this indicator at this time. More information is needed on the pertinence of this indicator and why it was selected. Also, how would this indicator measure progress against target 8? In addition, how to define 'traditional employment'. Regarding possible disaggregations, 'by gender' may be a better option here.	N/A	N/A
		Average income of small-scale food producers, by sex and indigenous status (SDG indicator 2.3.2)

Is not clear how that traditional employment contribute to ensure benefits of vulnerable wild species	We need more researches, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	
		See comments to 8.0.1
		This is a difficult formulation and the aim is unclear.
		We can not say if an increase in 8.0.2 is a good or bad thing for biodiversity. "Traditional" is not a label, "sustainable" employment would be more relevant.
	will be quite difficult to gather information	
This doesn't mention relevance to biodiversity. It is not clear that an increase should necessarily be construed as a good or bad thing (this depends on the context)		
Needs an agreed country specific definition of traditional work for setting baseline	Needs to be disaggregated at the national level and needs capacity building support to track	
Que es un empleo tradicional????? muy ambiguo.		
Needs further clarification, as moderinisation is a challenge in many devepoling countries, leaving many traditional skill move to non urban areas.		
	The correlation between traditional employment and ensuring benefits is unclear.	
	Does "Traditional employment" in this headline indicator indicate the so-called primary industry? Even so, the high percentage of the population involved in a primary industry does not necessarily mean good condition.	
Malaysia whether the increase in number of people using wild resources reflect sustainable management of biodiversity. There is possibility that it will increase pressure on biodiversity.		Malaysia suggests adding the word 'sustainably' between 'resources' and 'for'

		It is no clear what it means by "traditional employment" T8 and T4 contain similar items that need to be clarified
Yes, if the meaning/explanation of 'traditional employment' is integrated into the indicator.	Yes, if the meaning/explanation of 'traditional employment' is integrated into the indicator.	
	Same as it is with many other indicators, adaptation and new investments in national monitoring and reporting systems shall be provided in most of the countries	
The definition of "traditional" is unclear, therefore it is at this point difficult to judge the relevance/suitability of this indicator.		
	Capacity building and financial resources to support developing countries are required.	
		It is not known what traditional employment is. It is not known what is the overall number that we are supposed to calculate the percentage of. This indicator is not relevant for all countries because in developed countries traditional employment is an unclear concept. It is not known whether is it good when this indicator increase or when it decreases.
		No suggested HI.
- to focus on sustainable use	an indicator should focus on sustainable use	
		The indicator as worded is a proxy for resource extraction and not for its sustainable management. Just because there are more people employed in relation to traditionally used species does not necessarily mean that resource bases are better managed. It could represent quite the opposite, and indicate rather economic downturns and/or the limited employment potential of the formal economy.
A modified indicator 8.0.2 with a focus on "sustainable use" and in line with previous COP decisions can be a solution (trends in the practice of traditional occupations decision X / 43).		

Definition of "traditional" is required		
		We consider that this indicator needs some assessment of sustainability. Also, we are not clear what we mean by "traditional employment" here? In our view mining could be considered traditional employment, but it would not be beneficial for biodiversity. In addition, we think it would be useful to clarify whether this is meant to refer to the formal economy, or to subsistence employment opportunities (such as those that may be relevant to indigenous peoples and local communities).

Target 9. By 2030, support the productivity, sustainability and resilience of biodiversity in agricultural and other managed ecosystems through conservation and sustainable use of such ecosystems, reducing productivity gaps by at least [50%].

9.0.1 Proportion of agricultural area under productive and sustainable agriculture

9.0.1 If you selected "yes, however requires further work", please describe:	9.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	9.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
first we need to set LDN target		To make use of SDG indicator 2.4.1. There is a methodology but have not yet started to collect data - WWF.
In order to measure this headline indicator a clear definition of sustainable agriculture will be needed. The complexity is that measures of sustainable will differ by industry sector (cropping, livestock, forestry etc), as well as by geographic location. The use of enterprise certification as a surrogate measure of sustainability may be simpler, such as the proportion of production that comes from certified producers, as per the suggested changes below: 9.0.1 Proportion of agricultural produce that comes from sustainability certified producers		
do we mean here organic farming???		
		Not limit this HI to agricultural area. HI should be for all productive/managed/extractive ecosystems, including for extractive activities: As agricultural land might continue to expand, the proportion is not the right way to monitor this target.

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		Add HI or component indicators on : - trends in soil quality - trends in pollinators - trends in economic benefits from protection, restoration and SU of ecosystems The numerical value should not be on the productivity gaps, but on the area of those ecosystems conserved and used sustainably with biodiversity considerations. HI proposal: 9.0.1 Trends in productive , managed, and extractive ecosystems area under sustainable management practices including biodiversity concerns and the disaggregate for the different productive/managed/extractive ecosystems types.
Target 9 is related with sustainable agriculture and other managed ecosystems (aquaculture and forest). It is necessary to define and agree about the concept of "Productivity gap" before the expression is used by the Convention, and not only being presented in an information document from the Secretariat (CBD/SBSTTA/24/INF/11). This is an essential step to understand the achieve more clarity regarding the expression "under productive and sustainable agriculture" in headline indicator 9.0.1 and its implications for monitoring and measurability.	Target 9 is related with sustainable agriculture and other managed ecosystems (aquaculture and forest). It is necessary to define and agree about the concept of "Productivity gap" before the expression is used by the Convention, and not only being presented in an information document from the Secretariat (CBD/SBSTTA/24/INF/11). This is an essential step to understand the achieve more clarity regarding the expression "under productive and sustainable agriculture" in headline indicator 9.0.1 and its implications for monitoring and measurability.	
Canada supports the selection or development of indicators for each managed ecosystem to efficiently track progress toward this target – not just "agricultural ecosystems". Linkages with other international fora's indicators should be promoted where possible. The headline indicator only addresses agriculture. Is the proposal to use the same indicator as is already used for SDG 2.4.1? (http://www.fao.org/3/ca5157en/ca5157en.pdf)	Regarding indicator 9.0.1: As currently drafted, the headline indicator only addresses agriculture. We fear that other key sectors of managed ecosystems including aquaculture and forestry will not be addressed appropriately with the current wording. Also, what is meant by sustainable agriculture? There needs to be a clear understanding of what this, as many practices in agriculture contribute to the sustainability of such ecosystems. Given the proposed indicator, it seems more appropriate for the target to aim for an increase of X% in the agricultural area under productive and sustainable agricultural practices.	In our view, the monitoring framework should address, at a minimum, agriculture, aquaculture, and forestry. For example, an indicator including sustainable forestry should also feature. Could also have an indicator on soil biodiversity.
We support this headline indicator in order to measure biodiversity in agricultural ecosystems, but believe it does not necessarily reflects productivity, sustainability and resilience of biodiversity in other managed ecosystems.		

		Proportion of aquaculture activities in which productive and sustainable aquaculture is carried out The System of Environmental Economic Accounting
	As we stated, it is necessary to re-formulate the indicator according to the target.	It is important to identify a basic list of managed ecosystems and then, to generate indicators for each type of managed ecosystem. It is important to recognize that depending on the type of ecosystem, indicators could change.
Include indicators to cover all areas under the FAO		
The sustainable model is not only to have a good manage of agricultural area, remember the fisheries and aquaculture. The world needs to improve the agricultural systems too.	We need to know how we can enhance standardization and comparability in national reporting.	
Sustainable forestry has not been defined, and that the different certification schemes do not measure sustainability directly. In most cases certified forestry is better for biodiversity than non-certified forestry, but it is not the same as sustainable forestry. Sustainable use in forestry and agriculture - concern on the practicality of the proposed indicator because e.g. sustainable forestry does not have a commonly accepted definition. FSC and PEFC are somewhat widespread certification schemes. However, they differ widely in what is regarded as appropriate conservation measures in sustainable forestry. FAO has an overview of regional indicators that may be useful and already being reported on http://www.fao.org/forestry/ci/16609/en/. Target 9 misses aquaculture The IUCN Global Ecosystem Typology has been adopted as part of the SEEA EA and includes forest.		
Yes, see comments	Yes, but do not use proportion	HI should include all FAO sectors like sustainable forestry, sustainable fisheries and aquaculture, and sustainable agriculture (organic/agro-ecology). To focus on productivity is inadequate and problematic: Productivity gap could present a risk that it invites on ways to narrow the productivity gap that are actually harmful to biodiversity. There is no baseline for assessing the objective. Potential HI on agriculture: "Trends in area of agriculture under agro-ecological practices or other biodiversity friendly practices (including the list of practices proposed in the FAO Biodiversity for food and agriculture report management practices and production approaches)

		Potential HI for forest use, "Progress towards sustainable forest management" (SDG indicator 15.2.1) Organization: FAO
		An indicator that may be easy to calculate is "burned areas" – which may indicate different things for different regions, but it points to pressures. Organization: JRC
		Circular economy could also feature here. Circular agriculture and regenerative forestry promote both soil health, carbon sequestration and biodiversity (in comparison with traditional farming and forestry).
Productivity is not an objective of the CBD, while sustainable use it. On target 9, there is an important gap concerning sustainable use of managed ecosystems. We would need a concrete Headline indicator on this important aspect that also is needed for mainstreaming biodiversity into other sectors; We propose here a new indicator: "Sustainable use of managed ecosystems". This Headline Indicator should be supported by detailed component indicators for each sector, for example on agriculture, forestry, fisheries, aquaculture, etc. For instance, an indicator that monitors the proportion of agricultural area under sustainable agriculture" alone, omitting the "productive".	See above.	
In more recent visions, agriculture's performance does not rely only on productivity, as first sentence recall (along with sustainability and resilience of biodiversity, among other co-benefits as for climate and zoonoses regulations), but in the second half of the target only productivity is valued. If the [x %] is to be kept, one should also add "reducing productivity, sustainability and resilience of biodiversity gaps by at least [x %]" or with different values of x for each issue For indicator 9.0.1; it is not sure what "productive" add to the aim of biodiversity conservation in agricultural landscape?		
		As agricultural land might continue to expand, the proportion is not the right way to monitor this target. The HIs for target 9 should not focus only on sustainable agriculture, hence we suggest having two headline-indicators: 1) for sustainable agriculture and 2) for sustainable forestry in order to reflect different managed ecosystems. 1) Possible indicator for sustainable agriculture: "[25%] of total agricultural land under certified organic agriculture" (sustainability

		certifications recognized nationally, following criteria established globally, e.g. by the planned Ad-hoc technical expert group on indicators). 2) Possible indicator for sustainable forestry: "Progress towards sustainable forestry management" (SDG indicator 15.2.1). We also support the proposed indicator "Area of forests under sustainable management: total forest management certification by FSC and PEFC schemes". Add HI or component indicators on: § trends in soil quality § trends in pollinators '9.0.2 proportion of non agricultural area under sustainable management' and '9.0.3. national strategies for sustainable management of agricultural and non-agricultural area, including national pollinators strategies' § trends in economic benefits from protection, restoration and SU of ecosystems
To be relevant, the indicator shall address all the productive/managed ecosystems, thus including also forests and other growing and innovative food production systems such as aquaculture. Furthermore, something seems to be missing about considering eco-efficient and effective production and trends in agricultural area change. Eco-efficiency indicators are a possible way to measure natural resource-use efficiency and the impact of economic activities, such as agriculture, on the environment, biodiversity and ecosystem services. Furthermore effectiveness in production should be analyzed. Effectiveness is related to quality of products that means production must be reoriented toward a variety of nutritious foods rather than aiming for increased volume of a few crops; effectiveness also encompasses circularity in production, that means reducing resources use, food loss and waste generation. Verifying dietary shifts is also useful. Finally, we consider very important to monitor biodiversity in productive/managed ecosystems: for example you can use the trends in pollinators, trends in soil biodiversity, etc. Trends in natural areas conversion towards managed ones and vice-versa (Transition matrix) may also be assessed.		
As many delegates including Japan pointed out, there is no common measurement to capture "productivity gap." The proposed indicator has no relevancy to the target in		With abovementioned, we consider that the target itself need to be reconsidered, with a view of the aim we would like to pursue.

this regard, and we suggest reconsidering the structure of this target. In the reconsidering, we recommend including the following points to be taken; - clarify the meaning of "productivity gap" and if its reduction certainly contributes to the conservation of biodiversity, as there is a possibility of trade-offs between them, - managed ecosystems other than current agricultural area or areas with its potential (e.g. buffer zone) should be included in the headline indicator, as semi-natural ecosystems that have co-existed alongside agriculture for thousands of years have a positive impact on ecosystems in many country including Japan and across Europe.		
Malaysia would like to seek clarification on the term traditional employment. What does this term encompass?		
The target of this indicator aims to ensure the sustainable use of ecosystems that are managed to ensure their resilience. It is possible to conserve biodiversity in ecosystems with some level of impact by production systems through integrated approaches such as agroforestry and silviculture. However, the actionable part of this target is focused on "reducing productivity gaps", which is an economic term, that may have several definitions. We agree that we need to clarify how this concept is related to biodiversity conservation or tailored to nature and perhaps we need to assess if it is within the scope of CBD to reduce productivity gaps. If we are going to keep the approach, this concept should be part of the terminology that needs to be defined in the GBF to avoid misinterpretation.		Wording suggestion: The proportion of agricultural area under productive and sustainable agriculture type of practice. Consider an indicator related to soil organic carbon (SOC). Another important element to consider here is food waste. In many cases, the real issue behind the need to increase production for a growing population may rely on the redistribution of it.
This implies that also productive not sustainable should be measured? This needs to be clarified. Or it means 'under a productive sustainable agriculture'?	This needs to be clarified - see comment above.	
Currently the indicator does not say anything about productivity gaps. As mentioned in our statement, this means the Target itself should be rephrased, rather than the indicator, as productivity is not a primary focus of the CBD. As a component indicator, it would be useful to also include an indicator on restoration, e.g. percentage of degraded managed lands to sustainable and productive managed lands. Suggestions:		

* Add aquaculture and forestry (see components) * Set of component indicators and complementary indicators should be further reviewed, also in relation to Goal A (and Goal A indicators). Goal A (and also Headline indicator A.0.5). should cover both wild and domesticated species, but it seems that "managed ecosystems" is part of Target 9, while "Goal A" title is mentioning only "natural ecosystems". * 9.1.3 – SDG 2.5.1 * T9.4 – SDG 2.5.2 * Comment/question with reference to Aichi Target 13. Aichi Target 13 includes both domesticated and wild genetic diversity. Target 9 (or other Targets) does not very well cover the aims of Aichi Target 13, and/or Target 9 is less ambitious than Aichi Target 13 with respect to Genetic Diversity. This should also be judged in connection with Goal A Headline Indicator on Genetic Diversity Aichi Target 13 - By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity		
Which agricultural areas that are productive will be open for judgement. Vast areas are unfavourable for arable crops, and are mostly taken into more extensive uses, for instance rangelands. Such use can still be regarded as productive as conditions are unfavorable.	See above.	We propose two separate headline indicators: * one that tracks progress in "land-sparing" approaches, that measures productivity improvements, as this allow for sustained output on a smaller portion of land, which also allows for a higher share of riparian buffer strips, ecological compensation areas etc. * one that track progress in "land-sharing" approaches, where agriculture is sustained alongside wildlife that belongs to these landscapes. improvements in sustainable intensification that

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		allows for should be indicator should be able to track progress both for "land-sparing"-
	Capacity building and financial resources to support developing countries are required.	
Capacity Building, enhance investment on countries origen center.		
		This indicator is not relevant to the "reducing productivity gaps" target. Additionally it is unclear what the productivity gap is. The indicator itself is not clear: is it about proportion between intensive agriculture' areas and sustainable agriculture' areas? How are both terms defined? Where should the data come from?
		Trends in managed ecosystems area under sustainable management practices and with high biodiversity value.
The component indicators of this headline indicator cover both agricultural and forestry areas. However, it seems that the headline indicator only covers 'agricultural area'. The Food and Agriculture Organization of the United Nations (FAO) also evaluates forestry and agricultural areas separately. Thus, to make this headline indicator more clear, we suggest the following revision. (Revision) Proportion of agricultural and forestry area under productive and sustainable agriculture and forestry		
- productivity is not the objective of the CBD - to expand the focus beyond agricultural sector to forestry, aquaculture - ensuring 'sustainablity' of agriculture for BD (reduced pressure of agri on water, soil, wild birds , reduced the pesticides, cleaned water…	- clear reference to agroecology, organic matter conservation, conservation agriculture, reduced tillage (without use of the herbicides) - integrated plant/crop management (FAO)	- Wild Bird Index (farmland species), produced by BirdLIfe/RSPB/EBBCC and USGS
More focus is needed on pollinators as a functional group, and on soil biodiversity, reflecting ecosystem services in agricultural lands. Soil erosion should be considered as well.		% of agricultural areas with high natural values
Need to identify information required to calculate this indicator	capacity building and expert inputs needed to use this indicator	
The headline indicator 9.0.1 "Proportion of agricultural area under productive and sustainable agriculture" should not be limited to agriculture but also include other managed habitat types, such as aquaculture. The focus	The headline indicator is the same as SDG indicator 2.4.1. The SDG indicator is computed through eleven sub-indicators covering socio-economic and environmental dimensions at farm level, e.g., farm income, labor conditions, soil and	This HI could be supplemented by component indicators such as RSP's CSI 6 and 7 relate to aquaculture: 6- application of risk assessment to account for pollution and biodiversity impacts

should be on sustainable use in order to maintain the long-term production capacity of used ecosystems.	water quality, biodiversity and reported through a traffic-light dashboard at national level. It is a challenge to report on all sub-indicators and so far only one country has reported all eleven indicators and 26 countries has reported at least one sub-indicator.	7- Destruction of habitat due to aquaculture. Reference: United Nations Environment Programme (2021). Regional Seas Biodiversity under the post-2020 Global Biodiversity Framework. Nairobi.
We propose the alternative formulation:" Proportion of sustainable agriculture to the total area used for agriculture, and so on with the other used ecosystem types, including soil".

Rationale:
- It should be a pairwise comparison:
- it is not required to mention "productive" | | As of today, the indicators does not cover soil biodiversity. |
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. If we were to do this, further clarity would be needed on what is considered 'productive and sustainable' and how this links to semi-natural ecosystems, and whether that would include maintaining genetic diversity of crops.
In our view, productive and sustainable agriculture can be broadly defined, e.g., monocultures can be productive and sustainable. We believe that it is more important to retire or repurpose ag lands that are not productive and not sustainable rather than look at overall percentages. We consider that identifying such lands and restoring/retiring/re-purposing them would be a much better measure here. We note that a lack of clear definition of "productive" and "sustainable agriculture" will likely pose challenges for measurement, so we suggest using the same methodology for measurement as SDG Indicator 2.4.1. Another option could be to take a more detailed approach, perhaps to consider percent of land dedicated to heirloom and other native food products.		We suggest that if soil organic carbon (SOC) is an indicator, soil biodiversity can be measured by PLFA or reflected in biological activity through respiration or enzymes.
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. If we were to do this, further clarity would be needed on what is considered 'productive and sustainable' and how this links to semi-natural ecosystems, and whether that would include maintaining genetic diversity of crops.

Target 10. By 2030, ensure that nature-based solutions and ecosystem approach contribute to regulation of air quality, hazards and extreme events and quality and quantity of water for at least [XXX million] people

10.0.1 Population living in areas with clean air and clean and accessible water*

10.0.1 If you selected "yes, however requires further work", please describe:	10.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	10.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		This indicator could be achieved through a range of means and not necessarily through nature-based solutions. In the absence of a feasible option to measure the benefit provided by NBS consistently across all Parties, measuring levels of investment in nature-based solutions (by type) through domestic and ODA expenditure might be the most practical proxy.
		The HI (as well as the target) should assess all kinds of NBS, not just those mentioned in the target 10, but also NBS related to climate change mitigation and adaptation and disaster risks reduction, as well as those related to Health 10, and those NBS have to be biodiversity friendly. HI Proposal: 10.0.1 (trends in the) area covered by Biodiversity friendly Nature Based Solutions Other proposals : - trends in natural disasters - trends in water quality and quantity - trends in ecosystem based approaches for Climate mitigation and adaptation
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
Canada is of the view that we should strive to have, as much as possible, headline indicators that already exist so that Parties can start assessing progress as soon as possible and therefore avoid repeating the mistakes from Aichi. Additionally, Canada is of the view that indicators, and mostly headline indicators, should look at biodiversity positive outcomes whenever possible. Regarding indicator 10.0.1– Canada does not support it. This has no clear linkage to biodiversity. In addition, we	N/A	A new alternative to 10.1.1: A reference to the most vulnerable ecosystems and marginalised peoples, to recognise the differentiated impacts of climate change and the need to safeguard these groups.

should avoid using numbers of humans as indicators in general, since targets could be met through population growth rather than improved management.		
		The scope of this target goes beyond the access to water , also the qualitative elements are not included in the indicator. In this sense we don't believe that this indicator reflects the aim of the target, also we would prefer to have existing indicators so parties can report as soon as possible.Nature base solutions are key to the achievement of both Conventions of CBD and UNFCCC . Countries should report actions of synergies among implementation of both Conventions
		Alternatives: - trends in natural disasters - trends in water quality and quantity
Nature-based solution does not have an intergovernmental agreed definition. Population doesn't a good indicator of air and water quality to measure the contribution of ecosystem. Extreme events fight need more than air and water quality. i.e fires, earthquakes.	The use of this indicator depends on the analysis and result of the work carried out by the group of technical experts on indicators for the post-2020 global biodiversity framework.	
Clean air and water benefits are not attributed to NbS and other factors (emissions, water treatment investments etc.) are important. Indicator is not linked to Biodiversity and ecosystem services, many other factors can affect it, some unrelated to the work of CBD.		
		See also comments for 7.0.1 For NBS monitoring and indicators see: Evaluating the impact of nature-based solutions - A handbook for practitioners https://tinyurl.com/nmjvb3dd Evaluating the impact of nature-based solutions - Appendix of methods https://tinyurl.com/ka3ktzaa An assessment of indicators to measure NBS for air and water quality is published on https://tinyurl.com/tvd7mezk
		This needs to refer to the benefits provided by biodiversity/ecosystem services and functions.
Instead of [XXX million] people, one should aim at 100 % of people, as it could cover two cases : i) in poor regions where there is a lack of ecosystem services due to biodiversity degradation ; ii) in other regions where ecosystem services have been replaced by	See previous comment	

human/anthropic services (water treatment plants, or other human infrastructures that replace natural functions). It is however not obvious how the indicator should be interpreted. Population growth in areas with clean air and water, as well as migration to such areas from other areas, would contribute to an increase in the metric, but entirely miss the point that nature-based solutions should be more widely applied, with safeguards for biodiversity.		
well, the indicator doesn't look bad, but I'm not sure if in all instances you can attribute clean air and water to nature-based solutions.		
		The HI (as well as the target) should assess all kinds of biodiversity friendly NbS, not just those mentioned in the target 10, but also NbS related to climate change mitigation and adaptation and disaster risks reduction, as well as those related to health expressed in current indicator 10.0.1. Alternatives: § Trends in natural disasters. § Trends in soil quality. § Trends in water quality and quantity.
Definition of clean air needs to be documented	Needs capacity building support to track	
		The suggested indicator is not a measure of the ecosystem contributions toward clean air and water. Measure of the cleanness of natural resources of drinkable water (or a proxy) may provide a more suitable indicator, e.g. as suggested in the info doc: "Proportion of river basins, in a country, where environmental flows are provided in accordance with the e-flow methodology of SDG indicator 6.4.2"
		The indicator doesn't measure NbS or EbA direct contribution to regulation of air quality, hazards and extreme events and quality and quantity of water. In order to do this, the indicator should measure progress in applying NbS and EbA to the ambits air quality and water quality. In addition, we suggest a change in the title of target 10, here and in the next tab, by modifying the wording «ecosystem approach» with «ecosystem-

		based approach to align it with the language used within the CBD (see also the title of target 7).
		Issues of hazards and air and water quality don't need to be solved by Nature's Contributions to People（NCP）alone, and it is difficult to quantify.
		Is the direct benefit to the population associated only with water resource? Or with any of the other elements, as already mentioned, the Post 2020 GBF is being pressured to guarantee benefits that go beyond its attribution, considering that the end is "quality and quantity of water" promoting its reach to at least xxx million people. It is hard to understand why there are only 3 ES mentioned, and only one has a numerical value, from a very anthropocentric point of view (to provide the service from x number of people), losing the focus on biodiversity and ecosystem services. In this case, it may be better to have a rather general formulation that includes a broad range of ecosystem services and that the indicators focus on the area of Ecosystems that provide some kind of service (cost protection, landslides …). There are different point of views related to Nature Based Solutions and ecosystem base approach that be clarify.
	Difficile à calculer	
	The headline indicator does not address the contribution of NBS and the relevance of the target for the objectives of the CBD should be assessed. Consider merging target 7 and 10 including their headline indicators. Alternative indicators could be: X countries addressing NBS/EBA in their NDC's X countries addressing climate action in NBSAP	

The key water related element that needs to be measured by this indicator is improvements in sustainable management and access to safe and drinkable water for people reliant on water from ecosystems. In this respect (and as noted below against 10.0.2), we suggest it will be important for the indicator to make a clear link to biodiversity, and recognise the role of water-related ecosystems in providing safe drinking water for a large proportion of people. Conserving, restoring and sustainably managing natural water related ecosystems and watersheds, including natural forest water catchments and wetlands, play essential roles in the provision of safe drinking water, through ecosystem-based water processing, filtering and storage. We also note that hazards and extreme events are not able to be regulated but the mitigation and response to these can and the consequences of them can be.	Important a link is made to water-related ecosystems	
	Capacity building and financial resources to support developing countries are required.	
Indicators measuring air quality and water quality would have to be unified.		The method of calculating this indicator would need to be described, national data would have to be easily accessible. Additionally it is not clear what level of accuracy is needed when calculating this indicator.
		See: Evaluating the impact of Nature-based Solutions: a handbook for practitioners | European Commission (europa.eu)
	- how to evaluate those ecosystem services - how to measure progress in applying nature based solutions	
The indicator is not well articulated since the issue should be about tracking whether the so-called nature based solutions are contributing to the regulation of air quality. People are beneficiaries of the effectiveness of the NbS for this purpose. We are also not certain if these NbS will work in regulating air quality. So the indicator needs to be reworked.	In addition to capacity building. Requires further work to tease apart the appropriate interventions and reporting metrics at appropriate scales.	
Sweden supports an indicator that focuses on the sustainable provision of ecosystem services (clean air/clean water). It is however not obvious how the indicator should be interpreted. Population growth in areas with clean air and water, as well as migration to such areas from other		For target 10, SE wants to see a headline indicator that measures progress in applying nature-based solutions and that also takes into account effects on biological diversity. This should not be restricted to a few kinds of nature-based solutions.

areas, would contribute to an increase in the metric, but entirely miss the point that nature-based solutions should be more widely applied, with safeguards for biodiversity.		
		There is hardly any link with biodiversity.
The overlap between this target and those of waste/chemical conventions should be considered. The target itself should also not specify a certain number of people, but rather a percentage of the population.	The sizeable overlap with other conventions should be considered.	
Definition of clean air is required, what it means and what kind of pollutants it includes. Also, kindly provide the equation and calculation.	- Countries need to agree on the approach and the description/ definition of clean air, pollutants covered, number of population and area. - Countries need to agree on the calculation methodology - Some countries will require capacity building and knowledge transfer. - Some countries will require building systems / software to gather the required data to calculate the target.	
We consider that further work is needed to define the resolution of areas of measurement, to make sure that vulnerable people are counted.		

10.0.2 Ecosystems providing reduced coastal erosion, flood protection and other services)*

10.0.2 If you selected "yes, however requires further work", please describe:	10.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	10.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
Australia is supportive of this indicator in principle, but queries what 'other services' entails. We also feel this indicator would benefit from measuring the specific ecosystem types which particular service sets, ensuring adequate coverage of all relevant service types (e.g. saltmarsh, mangrove forests, mudflats, rocky reefs, etc).		
This HI should be on all natural disaster risk reduction.		
		Total climate regulation services provided by ecosystems (7.0.1.)
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.

Canada does not support this indicator as is (and notes that it is not operational yet) but could possibly support for the future with changes, noting that the indicator as it is might be difficult to report on currently. Canada is of the view that headline indicators should be already existing indicators to allow Parties to start reporting on targets as soon as possible. Some of the headline indicators have data types that don't match their possible disaggregation(s). For example, headline indicator 10.0.2 is looking to measure "Ecosystems providing reduced coastal erosion, flood protection and other services", but it wants data disaggregated "by sex".	Either the indicator or the disaggregation should be adjusted so they agree. For example if you changed the indicator to "Population benefitting from ecosystem services that provide protection from…", then you could break down by sex because your dataset is about people, while also specifying the ecosystem service they're receiving. Improving this will improve the clarity of the datasets being asked for – and what's important about them.	In the absence of such a suitable existing indicator, Canada could support with changes in order to reflect other ecosystem services such as adaptation and mitigation. Then we would need to raise the question of metrics: i.e. quality of services vs quantity?
IT could be more useful in terms of people benefited or areas (hectares) with implementation of NBS for the reduction of coastal erosion, protection against floods and other services.		
This more sense refer to avoid extreme events but should consider the ecosystems more clear complement indicators to show the multiple scenarios about this issue, i.e: landslides into the cities, fires, and other events.	The use of this indicator depends on the analysis and result of the work carried out by the group of technical experts on indicators for the post-2020 global biodiversity framework.	
Yes, see comments		Although this should not be so difficult to quantify using a qualitative approach, in essence this is the same indicator as ecosystem extent (A.0.1) See also comments to 7.0.1. and 10.0.1. An assessment of indicators to measure NBS for flood and disaster protection is published on https://ec.europa.eu/info/news/evaluating-impact-nature-based-solutions-handbook-practitioners-2021-may-06_en Potential indicators could be absolute area of ecosystem-based approaches and NbS for mitigation, adaptation, and disaster risk reduction, the number of people whose resilience is improved due to NbS for adaptation and disaster risk reduction
		10.0.2 is not an indicator. We don't see what is being measured. The rephrasing to "Proportion of missing or degraded ecosystems providing coastal erosion, flood protection and other services" would allow to monitor lack of ecosystem services to people and could be linked to restauration targets.
I don't know what is the methodology for this indicator, if exists, may be a good option		

In principle it is appropriate to measure the ecosystem service benefits as a headline indicator for T10. Though in its current form it is not clear what the metric would be - in particular how individual ecosystems and associated services would be accounted for and/or reflected in one overarching metric (presumably of a measure of 'ecosystem services'). Secondly, whilst the scope of this indicator aligns to the current framing of the target, we would recommend expanding this element to recognise the full suite of regulating ecosystem services benefits (i.e. including climate mitigation). Not clear how and why this indicator should be measured by sex.	Metric not clear.	
Needs capacity building at a national and sub national level to support reporting	Needs to be disaggregated at the national level and needs capacity building support to track	
To be measurable, the indicator should be the extent/state of the ecosystems providing etc.		
The indicator as it stands does not appear to be completely relevant for measuring the contribution of NbS or EbA. It is suggested to modify by trying to use the number of NbS or EbA used for the purposes identified. If the number of solutions or approaches is not an easy information to get, then it is suggested to consider other factors such as the economic resources dedicated to the application of this type of solutions, or the number of activated projects. Or, as a further alternative, you can consider to use the populations that benefits directly from the applications of NbS or EbA in this ambits. We also suggest expanding the list of ambits indicated in the name of the indicator, in order to also specify what is meant by «other services». Finally, we emphasize that if you accept the modification of the indicator 7.0.1 as we suggested, this indicator 10.0.2 would become easier to measure.		
		Issues of hazards and air and water quality don't need to be solved by Nature's Contributions to People（NCP）alone, and it is difficult to quantify.
There is a need to identify the ecosystems that provide the aforementioned services.		Malaysia suggests to replace with plans in place to address coastal erosion, flood protection etc.
		It is necessary to know the components of this indicator to determine its impact and reporting.
This indicator needs to be reworded to include also some other regulating services examples. Also, suggestion to		

change 'providing reduced' to regulating: regulating coastal erosion, inland and coastal flood and other services.		
Same as it is with many other indicators, adaptation and new investments shall be provided in most of the countries		
	Need to define other services	
This indicator will need to make a clear link to biodiversity, and recognise the role of water-related ecosystems in providing safe drinking water for a large proportion of people. Conserving, restoring and sustainably managing natural water related ecosystems and watersheds, including natural forest water catchments and wetlands, play essential roles in the provision of safe drinking water, through ecosystem-based water processing, filtering and storage. Other ways in which water related ecosystems also enhance other ecosystem services and benefits, which might also be considered in the further development of this indicator, include via: • Erosion and flood control, • nutrient cycling, and • removal of sediment and nutrient pollutants, • as well as by maintaining healthy freshwater biodiversity.		
Relevant, but needs to be better defined: - Selection of services mentioned need to be completed, preferably aligned with for instance SDGs. - What is measured? "Ecosystems" is not a scale to track progress on	See above	
	Capacity building and financial resources to support developing countries are required.	
Capacity Building, investment assessment and monitoring coastal erosion		
		This indicator could be relevant for this target but there are several elements which are unclear. Are we expected to count number or % of ecosystems with those functions? % of the area of Earth that is covered with those ecosystems? % of ecosystems with recovered functions as a result of ecosystem restoration?

A selection of ecosystem services should be specified. It is not clear what the metric would be - in particular how individual ecosystems and associated services would be accounted for and/or reflected in one overarching metric.	See above.	
	- to recognise the full suite of regulating ecosystem services benefits (including climate mitigation).	
	Requires competent institutions and associated skills	
	There is a lack of data.	
The headline indicator 10.0.2 should measure progress in applying nature based solutions as well as the effects on biodiversity itself, in order to ensure that safeguards for biodiversity is applied effectively.		
We propose to write: "Change in area in ha of Ecosystems providing reduced coastal erosion,flood protection and other services)"		
Clarification is required. All ecosystems provide these services to some extent. It is therefore necessary to identify specific services, units of measurement and assessment methodologies in order for this indicator to be useful.	Useful with clarification	
		We suggest using the percent of coastlines with native vegetation since that is measurable, and gray infrastructure like sea walls can prevent coastal erosion and provide flood protection. We also suggest that specific areas of ecosystem services be identified and then measured.

Target 11. By 2030, increase benefits from biodiversity and green/blue spaces for human health and wellbeing, including the proportion of people with access to such spaces by at least [100%], especially for urban dwellers

11.0.1   Average share of the built-up area of cities that is green/blue space for public use for all

11.0.1 If you selected "yes, however requires further work", please describe:	11.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	11.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
	work needs to be done with local government, especially in terms of capacity building in order to be able to absorb finance to reach the target	

		This HI (and related target) should monitor urban biodiversity, not only human access to green spaces. It is of upmost importance to have a HI for this target that monitors the area or trends in area of biodiversity rich/friendly green and blue spaces in urban areas. - not only urban dwellers, - not only important for human health, also for nature HI Proposal: 11.0.1 Area (or trends in area) of biodiversity rich/friendly green and blue spaces in urban areas
	The indicator requires the development of monitoring capacity at the national level	
		We suggest the deletion of this indicator, as it lacks a clear linkage with biodiversity conservation and sustainable use.
Canada could possibly support this indicator as a starting point but it may be new to report upon so there would be need to be more information and on how to implement it. However we note that this indicator is focused on the quantity of green/blue space and not on the quality. Although this target does not link to the direct drivers of biodiversity loss nor to the three objectives of the CBD, Canada recognizes the importance of green/blue spaces for human health and well-being. Furthermore, we know that when people experience and benefit from nature, they are more likely to appreciate and care for it. Many studies have demonstrated that connectedness to nature is a strong predictor of positive conservation behavior.	Canada could make some suggestions to the indicator to keep the elements found in this target related to access to green/blue space but include an educational/public awareness component. Education and public awareness are elements that are currently lacking in the framework. Awareness has been incorporated in target 19 but it is not appropriately integrated currently.	Canada could also suggest indicator 11.1.1.1 as a headline indicator. Another potential idea would be to add an indicator of the number of cities of more than 150,000 inhabitants (or other threshold) that have identified blue/green spaces (or corridors) over their territories, prioritized action and implemented them to maintain or restore these spaces or corridors, and enabled access to them. Similarly, another possible idea could be adding a headline indicator on the percentage cover of urban canopy in cities with more than 150,000 inhabitants (or other threshold).
		Urban Biodiversity Index (based on Red List Index), Structural and / or functional connectivity of urban green areas. No. of urban protected areas. The United Nations System of Environmental Economic Accounting (SEEA) methodology.
The words "green/blue spaces" should be replaced by "natural spaces" or "natural public spaces" in both the target 11 and indicator 11.0.1. The terms green/blue are not defined terms and create ambiguity. Nowadays this target is implemented by SDG 11.	We need more researches, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	
Headline indicator is generally good and linked to SDG but the health and well-being component of biodiversity beyond access to green areas is missing, a gap which would need to be further developed. Indicator does not include accessibility across social groups, quality of green/blue spaces, or health benefits		

Quality and distribution of urban green spaces is not covered (adequately).		
Yes, but the proposed HI doesn't capture quality and biodiversity of green/blue space nor health aspects. The HI should strive to include both extent of green spaces, walls and roofs and urban biodiversity.	See comments	The HI should also try to capture urban biodiversity, not only human access to green spaces, e.g. the area or trends in area of biodiversity rich green and blue spaces in urban areas.

Many methods on green space are available and this can be globally calculated using the JRC's high resolution human settlement layer + protocols in Google Earth Engine. Organization: EC/JRC

An assessment of indicators to measure NBS for share and quality of green and blue spaces in urban areas is published on https://ec.europa.eu/info/news/evaluating-impact-nature-based-solutions-handbook-practitioners-2021-may-06_en |
| Quality and connectivity of green/blue spaces should be considered. While we generally agree on the indicator, we suggest to also look at the distribution and accessibility. How about proportion of built-up area of cities with green/blue spaces within 500m? | See above. | |
| | | Proposed HI does not capture quality of green/blue space nor health aspects. It does not measure if biodiversity in urban areas/green/blue spaces is enhanced/if the status has improved. Green/blue space need to be defined to ensure benefits for biodiversity. Also, this HI is not correctly worded, as the "build-up area" is defined as the presence of buildings (roofed structures), excluding other parts of urban environments such as urban green spaces (parks, gardens). (OECD)
Hence, the possibility to merge Targets 7, 10 and 11 and make target 11 an urban biodiversity target could be assessed. It is important to have a HI for this target to monitor the area or trends in area of biodiversity rich/friendly green and blue spaces in urban areas. The target could be focusing on: Area [or trends in area] of biodiversity rich/friendly green and blue spaces in urban areas |
| please indicate how this 'average' will be counted, i.e. percentage? or by the use of units? | | |

Needs clear definitions and capacity building training to assess	Needs capacity building support to track	
100% is unrealistic target		
The index should measure not only area per se but green/blue area available per person . A measure of accessibility should be added , e.g. distance from residence to nearest green/blue space of X size.	Requires capacity building on the national level	
		The indicator doesn't give information neither about the human health and wellbeing benefits provided nor about the accessibility and quality of green/blue spaces for both biodiversity and people. If we understand correctly, this indicator should measure urban biodiversity, or biodiversity accessible to citizens, and consequently those benefits to citizens that can derive from it. Measuring the amount of green/blue areas does not provide this type of information. In fact, the quality of these areas should first be verified, by measuring their biodiversity. Furthermore, we underline that this indicator covers only the cities, while green and blues spaces for human health and wellbeing could also be coastal areas, MPAs, etc. Finally, we note that data for this indicator may not always be readily available.
		Alternative Indicator: Proportion of local governments that have developed a green space allocation plan that takes biodiversity into consideration Reason: The proposed headline indicator cannot evaluate numerical target. In addition, the viewpoint of biodiversity should be included.
		The focus of the indicator should be the benefits of biodiversity and ecosystem services, and it is necessary to include quantity and quality. Public use should be defined for everyone since the trend in many cities is green and blue areas with restricted access
The headline indicator does not focus also on biodiversity and 'built-up area' needs to be further defined. The target and headline indicator should also focus on the contribution of urban green spaces to biodiversity/the quality of urban green spaces.		

We note that greenspace can be quite unevenly distributed, and that people in low socio-economic areas may be less likely to have it nearby and less likely to be able to travel to get to it. We suggest consideration is given to a measure reflecting what proportion of a city includes a green/blue space within 10 minutes walking distance. The aim should be to have 100% of people with access to nature in their daily lives.		
How will the access be measured? Area of green/blue spaces in ha per person? Area in vicinity of 1 km distance from every urban dweller? Areas accessible within 5 min walk?		
The proposed HI does not capture the biodiversity of green/blue spaces nor health aspects. The HI should monitor urban biodiversity, not only human access to green/blue spaces, e.g. "Trends in area of biodiversity-rich green and blue spaces in urban areas". Also, this HI is not correctly worded, as the "build-up area" is defined as the presence of buildings (roofed structures), excluding other parts of urban environments such as urban green spaces (parks, gardens) (OECD).	See above.	
- to measure progress in applying Nature based solutions that have positive effect on biodiversity	- To develop indicator for urban BD	
		SE considers that the proposed indicator does not cover the expected scope of the target. Indicators should focus on the quality of biodiversity and ecosystem services and the expansion of green and blue areas in urban areas. The Singapore Index on Cities' Biodiversity provides several quality related indicators that also can be measured via remote sensing. The Singapore City Biodiversity Index (CBI) includes 23 indicators, including "Indicator 13: Area with parks with nature reserves and protected or protected nature areas / 1000 people". Relevant action indicators are: Number /% of cities/sub-national governments per country that develop Local Biodiversity Strategies and Actions Plans that are aligned with/supporting the implementation of NBSAPs and the GBF Number of cities per country that apply a TEEB inspired valuation of nature in cities (based on TEEB Manual for Cities, 2011). > Component 11.2

		Relevant indicators to measure progress are: Number /% of cities per country that apply the City Biodiversity Index - CBI or at least selected CBI indicators e.g. Proportion of Natural Areas in the Cities (CBI 1) Connectivity measures or ecological networks to counter fragmentation (CBI 2) Access to urban green/blue (natural) areas (CBI 13)
We prefer the following wording: "Change of area in ha of green/blue space with focus on biodiversity and for public use for all" which adds the measurement unit.		
		different geographic capacities and varies from one country to another so some countries need less effort and load than ones who has harsh environment conditions
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. This indicator could consider the percentage of population living within certain proximity to green/blue space. It needs to capture improvements in accessibility to green/blue spaces and risk of green/blue spaces being concentrated in more affluent areas.
This indicator does not address non-urban dwellers, such as displaced indigenous peoples for whom access to green/blue spaces, especially in their traditional lands is important. We suggest that urban agricultural lands also be included here since they can provide similar or even greater, benefits.		
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. This indicator could consider the percentage of population living within certain proximity to green/blue space. It needs to capture improvements in accessibility to green/blue spaces and risk of green/blue spaces being concentrated in more affluent areas.

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Target 12. By 2030, increase by [X] benefits shared for the conservation and sustainable use of biodiversity through ensuring access to and the fair and equitable sharing of benefits from the utilization of genetic resources

12.0.1   Numbers of users that have shared benefits from the utilization of genetic resources and/or traditional knowledge associated with genetic resources with the providers of the resources and/or knowledge

12.0.1 If you selected "yes, however requires further work", please describe:	12.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	12.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
As the target calls for an increase, the indicator should measure the trend not the number. Suggested changes have been made below to reflect this. 12.0.1 Trend in the numbers of users that have shared benefits from the utilization of genetic resources and/or traditional knowledge associated with genetic resources with the providers of the resources and/or knowledge		
The target is about benefits shared but this indicator is about users sharing benefits. The articulation is not clear.		
		The relation between total amount of of monetary benefits (in United States dollars) and monetary benefits received by countries from utilization of genetic resources as a result of an ABS agreement, including traditional knowledge
		Amount of money in the benefit-sharing fund of the ITGRFA and other existing or future ABS funds, and cumulatively shared in the ABS agreements reported in the ABS-CH or in national reports to the CBD and the number of recipients of these funds.
Canada does not support 'number of users' - it is meaningless, even for jurisdictions with strong Nagoya compliance measures. Suggest deleting this indicator. It is not clear who (user and /or provider country/ies) would measure and report on the number of users, or how it would be done so the data would likely be challenging for countries to be able to provide.	N/A	Benefits should include monetary and non-monetary benefits, so an alternative indicator to measure non-monetary benefit-sharing including capacity building would be helpful.
		Number of species from which there are benefits shared from the utilization of its genetic resources, their derivatives and its associated traditional knowledge under ABS permits or their equivalent, disaggregating those that are under any threat category of the IUCN

Most developing countries do not have substantial studies on this topic.		
The benefits measure through monetary and no monetary but this not evaluated in this target.Exists some troubles to executing the article 10 of Nagoya Protocol.	We suggest some redaction as follows: Numbers of users share no monetary and monetary benefits from the utilization of genetic resources and/or traditional knowledge associated with genetic resources with the providers of the resources and/or knowledge	
The major issue is the percentage increase (the numerical value). How can countries, which are the addressees of the political commitment under the GBF, commit to an increase of the volume of benefits to be shared, when that is subject to many variables and is outside of government control. The indicator focuses on number of users, but this is out of governments' control.		
		The proposed HI is not suitable as the focus of the target is about benefits shared while the HI focuses on users sharing benefits: monitoring the number of users does not seem to be relevant to provide information about the benefits shared. Further, it will be extremely challenging to use such HI (starting with the identification of users). A suitable set of HIs could probably focus on the measures creating enabling frameworks for access and benefit sharing, as well as on the type of benefits shared. Yet, this would require additional discussion on the focus of the target
To measure increase with a number of users that have shared benefits is not feasible while we lack proper baseline. Furthermore, to evaluate increase in benefits shared, Parties need to report on the volume and nature of monetary and non-monetary benefits received.	This might work if the baseline is known and Parties have reported the benefits received.	
		The number of users depend of the level of use, and shared benefits could decrease only by the decrease in use of GR through Nagoya protocol, making hard to interpret evolution in 12.0.1 as good or bad. Maybe an indicator based on the number of conflicts between users and owners would better address completion of the third mission of the CBD.
		For component 1, HI could focus on § Number of ABS measures providing facilitated access § Number of countries publishing their national ABS permits as IRCCs § Number of countries publishing CPCs

		§ Number of regional ABS frameworks leading to standardization/harmonization § Number of ABS measures channeling benefits raised to conservation of biological diversity and sustainable use of its components
the wording is complicated and grammatically wrong		
For those who are now setting up Nagoya ABS the human capacity is a constraint to track the numbers and maintain the databases with this info	Needs capacity building support to track	
Un vacío, es el número de proveedores que se ha beneficiado de los beneficios (monetarios y no monetarios) derivado de la utilización.		
The domestic regulations concerning this area is still on going progress and needs to be further completed.	For country which possesses the large number of biodiversity the standardization and the comparability in national reporting should be assessed more thoroughly. This particular country might need stronger system, more competent human resources and high amount of budget that will work into vast area of biodiversity distribution.	
		Headline indicator 12.0.1 could be replaced by complementary indicator 12.1.1.7 (Estimated % of monetary and non-monetary benefits directed towards conservation and sustainable use of biodiversity), as well as the current Target 12 should be revised as follows. "By 2030, allocate [X%] of the benefits shared from utilization of genetic resources and associated traditional knowledge toward the conservation and sustainable use of biodiversity" Reason: Paragraph 90 in CBD/SBSTTA/24/3/Add.2 mentioned that there was little information on benefits shared, and hence it is obviously difficult to measure progress towards the current proposal of Target 12 (increase by [X] benefits).
	It needs to be considered that one of the issues of the Nagoya Protocol is vastly heterogeneity between the laws and implementation among countries (subject to the national legislation). This indicator could be useful for all countries. Mexico does not agree with the indicator 12.0.1. It is not feasible for us.	The indicator is confusing - is access alone measured? And, how it incorporate that benefit access is continuous? There is no scientific or technical information or baselines on benefit sharing.

Same as it is with many other indicators, adaptation and new investments shall be provided in most of the countries		
		'Numbers of users that have shared benefits from the utilization of genetic resources and/or traditional knowledge associated with genetic resources with the providers of the resources and/or knowledge' better replaced by 'Number of benefit-sharing agreements concluded on the utilization of genetic resources and/or traditional knowledge associated with genetic resources', as a user may conclude more than 1 agreement. In the end it is the number of agreements that is important. This is already covered in headline Indicator 12.0.2, so 12.0.1 can be deleted
There needs to be clear guidance on which parts of this target where there already exists a system for reporting in ABS Clearing House.		
	Capacity building and financial resources to support developing countries are required.	
Even if we will know the level of benefits shared by the users we will be able to observe the trend in interest in ABS. However it will be very difficult to collect the data.	It must be clearly described what data should be used to calculate this indicator and where can it be taken from. At the same time it must be kept in mind that there will be difference in the meaning of this indicator in the provider country and in the user country that does not regulate access to its own genetic resources.	
		No suitable HI identified.
	Difficult to measure, better to measure more qualitatively – how well ABS measures are in set up for ABS and for facilitating GR research, we suggest changing the target.	- to set up simplified and clear ABS measures, ensuring access/exchange of genetic resources; - establishing measures that facilitate access to GR for research, especially in the field of environmental science, health, food security;
The wording of the indicator is currently a poor proxy for positive conservation and sustainable use outcomes through ABS. The current wording of the indicator should be changed to ''Numbers of users that have shared benefits from the utilization of genetic resources and/or traditional knowledge associated with genetic resources with the providers of the resources and/or knowledge, for the benefit of conservation and sustainable use''. This amendment is necessary to ensure that reporting remains	Yes, if the indicator is changed as proposed above. The information required should be readily obtainable from the ABS NFPs of Parties as they will be tracking the relevant benefit sharing agreements, and will know whether these agreements directly promote conservation and sustainable use of biodiversity. In cases where there are no functional NFPs there likely is no relevant ABS policy, legislation and regulations in	

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linked to the target, which is explicit that the benefits being monitored as those that are for the conservation and sustainable use of biodiversity. Otherwise, in the course of monitoring, the number of users submitted by Parties will include all those who have shared benefits, but where these benefits are not directed towards any conservation and sustainable use outcomes, but rather social or individual enrichment outcomes.	place in that country, and so no ABS-related benefits accrued, and so no related user numbers to report as per the indicator.	
		Quantifying the number of users seems challenging; especially in the context of SIDS
We suggest measurement of how many genetic resources are shared as a result of the agreement as the measurement of access to benefits.		
12.0.2 Number of access and benefit-sharing permits or their equivalent granted for genetic resources (including those related to traditional knowledge)		
12.0.2 If you selected "yes, however requires further work", please describe:	**12.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**12.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
There is need to work on mechanisms to access genetic resources in possession of indigenous peoples and in access to traditional knowledge associated to genetic resources		
How to account for those cases where access is open/free (when PIC is not a requirement)? And how does this relate to IRCC?		
	The indicator requires the development of binding legislation and monitoring capacity at the national level	
Canada could support this indicator but recognizes that it likely would only be relevant for Parties that require Prior Informed Consent for access to genetic resources and Traditional Knowledge.	Unless this is purely measured via numbers of IRCCs in the ABS Clearing House (which would under-count the number of ABS-related permits actually granted), this would be a new indicator to report upon so would require an investment to do so and would likely be challenging for countries at this time.	A more meaningful alternative indicator could be, inter alia, the number of access permits whose conditions enabled the actual use of genetic resources in research and development projects. Another indicator could be the ratio of requested and granted access requests.
Number of access and benefit-sharing permits or their equivalent granted for the obtention and use of genetic resources, their derivatives and its associated traditional knowledge, practices and innovations.	The measurement of this indicator should be accompanied by the strengthening of the capabilities of National Competent Authorities in ABS matters of each Party	
It would be relevant to segregate permits to access genetic resources from permits to access associated		

traditional knowledge (TK). It would encourage countries to improve implementation of ABS related to TK		
We need to measure the benefits no permits, this is associated that mentioned in the indicator 12.0.1.	Need a standardized form that allows for international comparability. We can suggest the following text to improve the target: Quantify the monetary and no monetary benefits of access and benefit-sharing for genetic resources (including those related to traditional knowledge)	
As the number of permits depends on the number of users, the governments do not have control over this.		
		The proposed HI is not suitable as the number of permits issued does not provide any useful information about the volume and nature of benefits shared. Such indicator could be useful to monitor progress with the implementation of ABS measures, where access is regulated.
Number of access and benefit-sharing permits may be indicative for benefits shared. However, not all permits lead to benefits to be shared.	See above.	
		For component 2, HI could focus on § Methodologies developed for measuring a broad set of benefits shared (list of benefits to be developed) § Number of BS baselines established
Needs to consider how to track in countries that have not ratified Nagoya	Needs to consider how to track and monitor in countries that have not ratified Nagoya and may not have an ABS tracking database set up	
Needs more solid system to assess this indicator to be incorporated into the current permit system.	For country which possesses the large number of biodiversity the standardization and the comparability in national reporting should be assessed more thoroughly. This particular country might need stronger system, more competent human resources and high amount of budget that will work into vast area of biodiversity distribution.	
		The proposed metrics can be significantly influenced by actual demands for genetic resources, which are not predictable. Besides, just pursing increase of access to genetic resources (regardless of actual needs) could lead to unnecessary exploitation of natural resources.
The approach on how many permits have been given in a certain period and how many of these have generated	It needs to be considered that one of the issues of the Nagoya Protocol is vastly heterogeneity	The indicator is confusing - is access alone measured? And, how it incorporate that benefit

distributed benefits with the suppliers would be ok. This information could be easily obtained through the Information Exchange Center and National Reports.	between the laws and implementation among countries (subject to the national legislation). This indicator could be useful for all countries.	access is continuous? There is no scientific or technical information or baselines on benefit sharing.
It should be made clear that this indicator does not only include the number of permits or their equivalent granted in the framework of the Nagoya Protocol (IRCCs), but also those in the framework of the specialized instruments ITPGRFA and PIP Framework. The numbers of IRCCs per country is available on the ABS Clearing House website of the CBD. The numbers of SMTAs can be obtained from the secretariats of the ITPGRFA and PIP Framework		
		It has to be kept in mind that there are countries that do not regulate access to their genetic resources so they do not issue benefit-sharing permits at all.
		No suitable HI identified.
	Countries, cant commit to an increase of the volume of benefits to be shared, since that is subject to many variables and is outside of government control. Also problems in establishing a baseline, lack of information on BS, lack of methodology to value non-monetary benefits…	build synergies among different ABS instrument, in a way to contribute to biodiversity;
The indicator should be changed to ''Number of access and benefit-sharing permits or their equivalent granted for utilization of genetic resources (addressing only those permits that benefit conservation and sustainable use, including those related to traditional knowledge)''. Without these changes it is highly likely that Parties will erroneously include in their tally the number of basic science permits provided to researchers (e.g. permits to collect for taxonomic purposes), which are not permits for utilization in the sense of the Nagoya Protocol. The number of access permits would accordingly become inflated in reports. Further, permits that do not directly benefit conservation and sustainable use would also be included, which would represent a misalignment with the target	Yes, if the indicator is changed as proposed above. The information should be readily obtainable from the ABS NFPs of Parties as they will be tracking the relevant benefit sharing agreements, and will know whether these agreements directly promote conservation and sustainable use of biodiversity.	
The identification and elaboration of relevant indicators should take into account that regulation of access is voluntary. Additional discussion and guidance is needed on how relevant information on benefit sharing generated under ABS frameworks other than the NP could be collected		

and contribute to build relevant indicators for the ABS goal and/or target.		
Suggest the language is slightly changed to be number of benefit sharing 'agreements' rather than permits as it is within the agreement where details of benefits would be defined. Taking the Nagoya Protocol as an example, prior informed consent (PIC) may be granted but mutually agreed terms (MAT) may not materialise. The existence of PIC would not alone demonstrate benefit sharing had taken place.	Further consideration needed on the challenge of global reporting and standardization as there could be several ABS mechanisms captured by the indicator, which could be hard to standardise.	
We note that data on the number of permits granted (only) could be misleading, e.g., if no one in County A applied for a permit, Country A would have a 0 but that data would only show that no one applied. Conversely, if 100 applications were submitted and 0 were accepted in Country B, the two countries would have the same figure but County B would have denied opportunities for increased benefit sharing.		
Suggest the language is slightly changed to be number of benefit sharing 'agreements' rather than permits as it is within the agreement where details of benefits would be defined. Taking the Nagoya Protocol as an example, prior informed consent (PIC) may be granted but mutually agreed terms (MAT) may not materialise. The existence of PIC would not alone demonstrate benefit sharing had taken place.	Further consideration needed on the challenge of global reporting and standardization as there could be several ABS mechanisms captured by the indicator, which could be hard to standardise.	

12.0.3 Extent to which legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits have been adopted*

12.0.3 If you selected "yes, however requires further work", please describe:	12.0.3 If you selected "yes, however requires further work on capacity-building or other work", please describe:	12.0.3 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Types of benefit-sharing (monetary/non-monetary) included in agreements - WWF.
"Extent to which"? A framework is either adopted or not. Why not "number of". "access" should be included "ensure access and fair and equitable…" The proposed indicators do not provide information on the contribution to conservation and Sustainable Use. At least the adoption of frameworks should reflect this link.		

		We suggest the deletion of this indicator, since it does not capture the actual increase in benefit-sharing. Furthermore, such an indicator poses additional measurability issues, as it might be challenging to identify adequate criteria to assess the "extent to which … have been adopted".
Canada supports indicator 12.0.3, although with modification.	It is not clear how frameworks will be evaluated ('extent to which'?), and who will evaluate. Canada would prefer to incentivize countries to share such information via the ABS Clearing House (see 12.1.1.6).	N/A
Number of legislative, administrative or policy frameworks to ensure fair and equitable sharing of monetary and non-monetary benefits from the utilization of genetic resources, their derivatives and its associated traditional knowledge, practices and innovations that have been adopted in Parties that does not have adopted such frameworks.	This indicator to be standar and comparable it is important that the "extent" proposed is defined, for example, as proposed before, changing the word "extent" to "number of	
	"Extent to" is not clear for reporting. Also, we consider this indicator should be 12.0.1.	
According the annex I, this indicator should be reviewed for a group of technical experts on indicators for the global framework of biodiversity post 2020	The use of this indicator depends on the result of the group of technical experts on indicators for the post-2020. This is achieved in Aichi Target 13 in Ecuador with adoption of Nagoya Protocol.	
The only indicator that depends on the governments. However what is meant by extent? How will it be measured? Parties either have legislation adopted or not. The question about implementation raises after the adoption of legislative framework.		
		The wording "Extent to which" is rather vague and unclear how to measure it. A framework is either adopted or not. The HI also doesn't make any distinction between the mandatory measures (such as compliance measures under the NP) and voluntary (such as regulation of access under the NP and CBD).It should be clarified what "frameworks to ensure fair and equitable sharing" refers to and whether measures under other ABS instruments (beyond the NP) are encompassed. Options: This HI needs to be much more precisely worded. Perhaps focusing the HI on the number of measures facilitating access, or establishing standard clauses in certain sectors, could be more appropriate. In all cases, such an indicator would be useful to monitor progress with the implementation of

		ABS measures, but not necessarily provide information about the benefit shared.
"12.0.3 Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted" (Number of countries at the global level). These data should be available at national and CBD levels. Establishment of ABS measures does not necessarily and straightforward lead to generation and sharing of benefits deriving from genetic resources. We should focus on the enhancement and better implementation of the ABS frameworks. This would reduce administrative burden, implementation costs, ensure transparency and legal certainty, create standardized access procedures and facilitating access for researchers, which may in turn result in more benefits.	See above.	See also above. New wording: 12.0.3 Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted" (Number of countries at the global level).
I don't get what "extent" means in terms of indicator, quite difficult to assess		
The extend must be measurable		
Needs to ensure that countries that have not acceded to Nagoya and do not have an ABS framework can also be included and report	Needs to be disaggregated at the national level and needs capacity building support to track	
The coordination, the harmonization, and the formulation of strengthened cross-cutting legislation, administrative, and policy framework to ensure fair and equitable sharing of benefits is complex and require massive work. The certainty of laws, the protection for provider are dimensions that need to be carefully designed.	To build a solid legislative and policy framework, country needs stronger system, more competent human resources and a proper budgeting, This work is massive and complex.	
More precise guidance on how to measure this metrics is needed.	Only if our proposal for amendment as described above is reflected in the text of this indicator.	
		The approach on how many permits have been given in a certain period and how many of these have generated distributed benefits with the suppliers would be ok. This information could be easily obtained through the Information Exchange Center and National Reports.
It should be made clear that the policy frameworks referred to ("legislative, administrative or policy frameworks to ensure fair and equitable sharing of	Countries should be assisted in the development of effective policy frameworks. The fact that ABS measures/mechanisms are in place is not a	

benefits") are not necessarily regulating access. Policy frameworks aimed at monitoring compliance, and not access (such as the EU ABS Regulation) should also be included in this category of policy frameworks.	sufficient condition to ensure that benefits are shared, in particular if the access measures act as a deterrent to access and utilisation. Countries should be assisted in the enhancement of existing ABS frameworks, in such a way to make them more efficient, reduce administrative burden and costs and to facilitate the effective generation of benefits.	
Definitions/delimitations of requirements to satisfy conditions given in indicator need to be established as soon as possible.		
Capacity Building, investment assessment on benefits sharing		
This indicator needs to be more precised. We think that it presumes that countries either have (1) or do not have (0) appropriate frameworks, but it could as well mean progres in adoption of different elements of the framework in particular country… It is unclear what the word "extent" means in this context.	See above	
		No suitable HI identified.
	Instead of focusing on adoption of policies, focus could be on the impact – that access to GR for research is facilitated, that access to ABS is ensured and ABS measures are simplified and clear	
The indicator should be changed to ''Extent to which legislative, administrative or policy frameworks have been adopted, to ensure fair and equitable sharing of benefits for the benefit of conservation and sustainable use of biodiversity". Without these changes it is highly likely that subsequent monitoring will erroneously include ABS policy, legislation and regulation developments that do not benefit conservation and sustainable use, but rather lead only to social or individual enrichment outcomes.	Yes, if indicator wording is changed as proposed	
The identification and elaboration of relevant indicators should take into account that regulation of access is voluntary. Additional discussion and guidance is needed on how relevant information on benefit sharing generated under ABS frameworks other than the NP could be collected and contribute to build relevant indicators for the ABS goal and/or target.		

We preffer the following formulation: Extent to which legislative, administrative or policy frameworks have been adopted to ensure access to genetic resources and/or associated traditional knowledge and the fair and equitable sharing of benefits arising from their utilization This indicator is important, as it monitors the implementation of ABS instruments. However, the current wording needs further refinement. In particular, the indicator should specifically refer to benefits arising from the access and utilization of genetic resources and/or traditional knowledge The wording "extent to which…." is not very specific and needs further refinement (e.g. by the suggested AHTEG). It may be important to include also qualitative information on the implementation, rather than only quantitative information on e.g. the number of Parties that have ratified a given instrument.		
We support this indicator as it gives the focus on implementation that we are interested in seeing. If we can have an indicator that demonstrates that countries are setting the right enabling frameworks (e.g. compliance legislation as in the UK) then users have the legal certainty needed to undertake benefit sharing. This indicator is broad enough that it would capture legislation and admin frameworks beyond the Nagoya Protocol. Further work is required though to ensure that legislative, administrative or policy frameworks are operational, not just adopted, and the extent to which these agreements are fair and equitable.	Further consideration needed on the challenge of global reporting and standardization as there could be several ABS mechanisms captured by the indicator, which could be hard to standardise.	
We believe that this would likely be difficult to standardize as each country would have its own approaches	We believe that this would likely be difficult to standardize as each country would have its own approaches.	
We support this indicator as it gives the focus on implementation that we are interested in seeing. If we can have an indicator that demonstrates that countries are setting the right enabling frameworks (e.g. compliance legislation as in the UK) then users have the legal certainty needed to undertake benefit sharing. This indicator is broad enough that it would capture legislation	Further consideration needed on the challenge of global reporting and standardization as there could be several ABS mechanisms captured by the indicator, which could be hard to standardise.	

and admin frameworks beyond the Nagoya Protocol. Further work is required though to ensure that legislative, administrative or policy frameworks are operational, not just adopted, and the extent to which these agreements are fair and equitable.		

Target 13. By 2030, integrate biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies and accounts at all levels, ensuring that biodiversity values are mainstreamed across all sectors and integrated into assessments of environmental impacts

13.0.1 Extent to which national targets have been adopted for integrating biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies and accounts at all levels, ensuring that biodiversity values are mainstreamed across all sectors and integrated into assessments of environmental impacts*

13.0.1 If you selected "yes, however requires further work", please describe:	**13.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**13.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
his HI is not making the target SMART. Belgium highlights that article 14 of the convention is key to its implementation and is not being appropriately assessed in the monitoring framework. Having a headline indicator in this regard that would be more SMART could be: "Number of countries that require environmental impact assessment for all its proposed projects that are likely to have adverse impacts on biodiversity."		
		The number of environmental impact assessment studies with on-site biodiversity research
		Number of Environmental Impact Assessment Reports officially submitted and approved to national public authorities.
Canada notes that this proposed headline indicator is not operational yet. Given past experiences with Aichi target 2, notably the weaknesses of its overall measurability, Canada supports strengthening the indicators to enhance monitoring and reporting of progress toward this new proposed target. At this time, the measurability of this target is problematic. According to section 18.a.1 of the framework, NBSAPs should include all targets and actions. In view of this, this indicator is redundant and does not have any value added. In addition, whether or not Parties have a national target on this element of the framework is not an indicator of the progress made to implement target 13.	This would be new to report upon so guidance would be needed on common definitions and parameters. Canada is of the view that additional work is needed to find operational indicators in order for this target to be considered.	We recall from the first version of the zero-draft that there was a reference to strategic environmental assessments and environmental impact assessments in the target. While we do not think that this element should be included in the target itself, it would be a great indicator for this target.

Clarification is needed on how the level of adoption of biodiversity values in national policies, plans and programs will be measured.		
TO extend to which national targets have been adopted for integrating biodiversity as cornerstones", and 2) "number of countries with implementation progress" or "proportion of progress in implementation	Parties need capacity building on the dimension of implementation and standardization.	
It's important to consider that it is something that goes beyond environmental competencies, also there are many things that measure here or only measure through dichotomy way?	Especially capacity building needs in this target because from the environmental sector should motivate to other sectors to implement sustainable practices and is important to motivate this from the multilateral spaces.	
LTAM and Action Plan provide actions and approaches that could be incorporated into the monitoring framework to better assess target success. Suggestion for sectoral led approach as indicated in Action Plan i.e. for government and its policies and for businesses T13 is focused on public sector. The aim was to focus T14 on private sector.		
Yes, but proposed HI seems very difficult/ impossible to measure. Risks of endless debates on "biodiversity value".		Indicator name: number of countries that apply a whole of government and whole of society approach for the development, reviews and implementation of the NBSAPs
		On target 13, the proposed Headline indicator seems very difficult or even impossible to measure. We see that mainstreaming is the key focus here. Thus, we need a concrete Headline indicator on this important aspect. There are at least two options that we would suggest: One related to NBSAPs and the other to integration of biodiversity values in different sector policies and planning. Specifically, the first option could read as: "Number of countries that apply a whole of government and whole of society approach for the development, reviews and implementation of the NBSAPs." And the other option could read as: "Integration of biodiversity values in different sectors as well as in policies and planning at subnational and local level".
Proposed HI seems very difficult or even impossible to measure; the mention of 'Extent to which...' is unclear, leading to uncertainties in what the aspect to measure is, and the list of areas for integration is very broad. There is		

a risk of endless debates on what "biodiversity values" mean.		
I'm not sure how to assess this indicator. The work extent makes it a bit unclear		
Proposed HI seems very difficult/impossible to measure. Risks of endless debates on "biodiversity value". Possible solution for a SMART HI: "Number of countries that require environmental impact assessment for all its proposed projects that likely to have adverse impacts on biodiversity."	No SMART indicator.	Number of countries that require environmental impact assessment for all its proposed projects that are likely to have adverse impacts on biodiversity. Further possibilities: § Number of countries that apply a whole of government and whole of society approach for the development, reviews and implementation of the NBSAPs. § Indicators on the integration of biodiversity values in different sectors as well as in policies and planning at subnational and local level could support the target and engaged further actors.
The extend must be measurable		
	The baseline of each member state might be different from one country to another. This difference needs to be recongnized and not be treated as "one size fits for all" approach.	
"Extent" needs further definition - e.g. number of policies where integrated out of total, or differentiated by sector	See above	
Consideration is needed to make the scope of the headline indicator concrete, otherwise it is too broad as well as confusing when collecting data.		
The indicator might be adequate, but very ambitious if we do not prioritize sectors to review and report. We anticipate many Parties won't be able to comply with these indicators. A prioritization of sectors, just as we did for Aichi, could do clear focus in the GBF.		This indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative.
on this indicator should be inclusive of nations' activities in international spaces (ie in Arctic, Southern Ocean, High Seas, etc.)		
	Capacity building and financial resources to support developing countries are required.	

Capacity Building, investment assessment on biodiversity values that are mainstreamed across all sectors and integrated.		
It must be ensured that this indicator will be measurable. What does „extent to" mean? If it means number of countries, it can be calculated. It has to be explained how to calculate this target.		
Proposed HI seems very difficult or even impossible to measure; the mention of 'Extent to which...' is unclear, leading to uncertainties in what the aspect to measure is, and the list of areas for integration is very broad. There is a risk of endless debates on what "biodiversity values" mean. The marine environment must not be overlooked. It could be rephrased to: "Proportion of government ministries with biodiversity integrated into legislation".	More work needs to be done towards capacity building in ocean literacy, in order to include the ocean in all the equations and mainstream marine biodiversity across all sectors.	
	We miss references to specific sectors, such as agriculture, mining, tourism, forestry, infrastructure etc. This could be done through subtargets	
As it stands, this indicator is vague and requires further refinement. It should be noted here that a missing element from this target is specifying that the term "values" refers to multiple values, not just economic values. We suggest that it should be made explicit in the target that "values" includes intrinsic, relational and instrumental values. This draws on the conception of values developed as part of the IPBES Values Assessment. This has direct implications for the types of metrics used and the kinds of NCA work that is focused on. We suggest that a useful headline indicator for Target 13 would be the number of countries that have incorporated biodiversity into their national development plan (or equivalent overarching national policy), and would be relatively easy to assess. However, this indicator might be redundant with 13.0.2 and the EEA-SEEA indicator might be a more robust indicator of mainstreaming various ways of valuing biodiversity into economic decision-making.	Developing adequate reporting and monitoring systems requires adequate data gathering mechanisms and capacity. Ensuring various measures of biodiversity values are being adequately baselined and measured across a range of sectors is a complex undertaking	
It is unclear how it "the extent to which" be measured. Further work on the indicator is needed to clarify methodologies and criteria for its development.		Alternatives: indicators on the mainstreaming of biodiversity in different sectors (e.g. infrastructure, energy, mining, tourism, health, agriculture, forestry, fisheries, aquaculture).
SE flags that the scope of target component 13.1. goes beyond the integration of biodiversity values into strategies and plans. The broader focus should be reflected in the headline indicators.	SE thinks it is imperative to formulate a common definition of the term values to be used for this indicator. Both biodiversity and ecosystem services	

	values should be included and addressed by the definition.	
We find the target too long and suggest to remove everything after "at all levels".		
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. This indicator as worded is too broad, and further guidance is needed to assess implication of national implementation. The UK is ready to work with the secretariat to facilitate that work. The role of the finance sector will be key to delivering this target and we may want to reflect it in the indicator.
		In our view, this indicator does not capture extent to which relevant targets have been adopted by subnational jurisdictions, autonomous regions and indigenous communities or nations and it is overly complicated for use as a headline indicator. We suggest that the indicator focus on accounts or regulations – either way we recommend picking only one. Otherwise, we anticipate that an index that is meaningful and can track toward progress would need to be developed. As the text is currently written we are not certain how it would be possible to know if a difference was made.
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. This indicator as worded is too broad, and further guidance is needed to assess implication of national implementation. The UK is ready to work with the secretariat to facilitate that work. The role of the finance sector will be key to delivering this target and we may want to reflect it in the indicator.

13.0.2 Integration of biodiversity into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting

13.0.2 If you selected "yes, however requires further work", please describe:	13.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	13.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
	The indicator requires the development of monitoring capacity at the national level	
		Number of activities that contribute to the conservation and sustainable use of biodiversity certificated by public authorities.
It is unclear how this indicator works. We need clarification on the type of data that will be generated from this indicator. Similar indicators, adopted for Aichi Target 2, were inefficient. However, this could be a possibility for an indicator.	Subnational accounting and reporting systems should be added.	N/A
it is not addressing the implementation progress		
	Parties need capacity building on the dimension of implementation and standardization.	
Ecuador applied the methodology of the System of Environmental Economic Accounting (SCAE). The country has both developed and exploratory accounts,.Target 13 It needs to be clarified and given a sustainable use focus with the mainstreaming scenario.	We need more researches, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	
		Alternative: Changes over time of extent, condition, supply and use of ecosystem services linked to Biodiversity according to SEEA-EEA framework of United Nations Statistical Division.
The integration must be measurable		
Needs capacity building on how to collect data and how to integrate	Needs capacity building support to track	
There is a need of further work to explore the possible integration of biodiversity into national accounting to apply this indicator. The Fourth Report on the State of Natural Capital in Italy has analyzed with biophysical and economic valuation 12 ecosystem services (woody biomass supply, agricultural, fish, water availability, pollination, flood risk regulation, erosion protection, hydrological regime regulation, water		

purification by soils, habitat quality, carbon sequestration and storage, and recreational tourism) and their change between 2012 and 2018 . Furthermore data and information related to the target of the SEEA-EEA framework of United Nations Statistical Division shall be taken into account.		
	This accounting system is not currently in use in all countries. Appropriate mechanisms would have to be set up to be able to measure this indicator.	
Consideration is needed to make the scope of the headline indicator concrete, otherwise it is too broad as well as confusing when collecting data.		
	Requires capacity building on environmental accounting methodology.	
The indicator might be adequate, but very ambitious if we do not prioritize sectors to review and report. We anticipate many Parties won't be able to comply with these indicators. A prioritization of sectors, just as we did for Aichi, could do clear focus in the GBF.		This indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative.
		Not sure this is applicable or have capacity to measure this. Needs more clarity.
The availability of an NCA as such is not sufficient as an indicator; a measure for the maturity of the NCA has to be included, as well as a measure for the integration in procedures for budgeting, reporting and planning For example: The first national Natural Capital Account of the Netherlands based on the new SEEA-standard is published in May 2021. This excellent work could count for a 100 % availability score. But the present NCA is not yet fully developed and has to be further improved (still missing ecosystem services added, valuation-models refined, and a method developed to include and value non-market priced welfare effects on biodiversity and natural capital). A maturity score would count something like 70 %. But only a few NCA-indicators are integrated in the national Monitor Broad Welfare, this has to be elaborated coming years. Also a procedure has yet to be developed to link this information to the standard national economic accounts, to procedures for budgeting and reporting, and to national environmental and spatial planning systems. So an		

integration score this moment would count to something like only 10 %. In this way the total score (with double weight for the availability) would be something like 20 + 7 + 1 = 27 of the 40 or 67,5% .		
Capacity building and international cooperation		
	Ensuring data availability requires commensurate resourcing. The technology transfer and capacity building needs for the integration of NCA into national accounts will be significant. The best would be to do ensure that effort invested in producing foundational data layers like ecosystem type maps are doubled up in indicators such as NCA,	Another missing element from Target 13 is reference to mainstreaming spatial biodiversity priorities into the decision-making of a range of sectors. These spatial biodiversity priorities could include KBAs, EBSAs and other systematically identified biodiversity priority areas. Maps of biodiversity priority areas have proved to be powerful tools for mainstreaming biodiversity in many countries.
But very difficult and more capacity needed	same as above	
HI B.02. and the component indicators for B would be more relevant under T13 than under goal B. Indicators for the integration of biodiversity values in different sectors, e.g. climate and energy as well as in policy and planning at sub-national and local level could support the target and engage additional actors.		SE thinks that mainstreaming of biodiversity values in sectorial policies such as climate and energy and in subnational governance is not sufficiently covered by the suggested HI:s.
		Consideration should also be given to an indicator at the component or complementary levels that captures actions taken by non-government actors, for example, measuring the number of companies including biodiversity considerations in their investment decisions or taking part in biodiversity-related risk disclosure.
In our view, this has very little meaning without standard measures, definitions, and approaches.		
		Consideration should also be given to an indicator at the component or complementary levels that captures actions taken by non-government actors, for example, measuring the number of companies including biodiversity considerations in their investment decisions or taking part in biodiversity-related risk disclosure.

Target 14. By 2030, achieve reduction of at least [50%] in negative impacts on biodiversity by ensuring production practices and supply chains are sustainable		
14.0.1 Potential population and species loss from terrestrial and marine human modification*		
14.0.1 If you selected "yes, however requires further work", please describe:	**14.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**14.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		Appropriate positive economic incentives, including biodiversity-motivated subsidies and payments for ecosystem services - WWF
		This indicator is unclear, and as written, does not relate to the production practices and supply chains of the target. The link between species loss and human modification may not always be easy to establish. Suggest closer alignment to the target by narrowing focus to 'production practices and supply chains' rather than 'human modification'.
		Pressure on ecosystems should also be monitored by a HI. Pressure on species not just due to human modification but also from exploitation, harvesting (which are at the source of the supply chain). The Long Term Strategic Approach on Mainstreaming proposes more suitable indicators (LTAM Strategy Area 2 on business and economic sectors) that could be used as HI for this target: 1. Number of companies integrating the value of nature into decision-making or making net positive impact commitments, or the volume or percentage of their investments; 2. Number of companies publishing their biodiversity dependencies and net impacts in corporate reports; 3. Number of companies which demonstrate, in their corporate reports, their net positive impacts and contributions to ecosystems, species and human health; 4. Area of ecosystems lost/restored/protected by private sector activities
	The indicator requires the development of monitoring capacity at the national level	

		Species population dynamic trends on terrestrial and marine ecosystems with human activities.
We find it problematic that the two headline indicators proposed are not currently functional and for 14.0.1 would not be easily measurable. It is also unclear how we would be able to attribute the loss of biodiversity to production vs other drivers of biodiversity loss.	N/A	It is important to consider that loss often occurs due to a combination of multiple contributions, rather than one cause alone. Moreover, considering the time and scale of trends over time is important, not just looking at absolute loss.
This will require the establishment of modeling to count on that prospective data.		
		Ecological Footprint
		We believe that this indicator would be difficult to report on, this target is critical for achieving the level of transformative change and we believe the scope does not reflect the production practices and supply chain that are crucial to achieve sustainable development models.
		too many confounding factors in the proposed indicator
Is hard to understand the way to measure, the production practices and supply chains are more than that a population and species loss. Reduction of 50% of negative impacts will depend the sector, impact and the cost effective process	Also we can suggest the following improvements: Number of industries / enterprises applies sustainable practices to improve supply chains in this target	
		It is not clear how this would relate to supply chains specifically Not clear what is meant by this indicator. Needs definitions and criteria. How will "potential" loss be assessed?
		To be potentially further developed via the Ecological footprint. Organization: Global Footprint Network, https://www.footprintnetwork.org/
		Need for clarification. Also, modification is not only linked to production practices but to other interests such as housing and tourism. We also question the aim tp 50%? Why not 100%?
		Complementary Indicator 14.1.1.1. - Ecological footprint - is based on concepts and methodologies established and used over the last 20 years (https://www.sciencedirect.com/topics/agricultural-

		and-biologicalsciences/ ecological-footprint).
		Too generic. Pressure on species not just due to human modification but also from exploitation, harvesting (which are at the source of the supply chain). A HI on the reduction of the negative impact on habitats/ecosystems/ ecosystem services is needed, incl. on tele-coupling effect and use within planetary boundaries. LTAM (SBI-3 AI 11) proposes more suitable indicators (LTAM Strategy Area 2 on business and economic sectors): 1. Number of companies integrating the value of nature into decision-making or making net positive impact commitments, or the volume or percentage of their investments; 2. Number of companies publishing their biodiversity dependencies and net impacts in corporate reports; 3. Number of companies which demonstrate, in their corporate reports, their net positive impacts and contributions to ecosystems, species and human health; 4. Area of ecosystems lost/restored/protected by private sector activities Potential other indicators: § 14.1.1.1. Ecological footprint (or other footprint measures) § Telecoupling indicator. § Local consumption.
needs capacity building or south-south/north south co operation to support data collection	Needs to be disaggregated at the national level and needs capacity building support to track	
en lugar de pérdida de poblaciones, "REDUCCIÓN" de poblaciones		
This is the cause of the loss of threatened species (duplication goal A.01). Therefore, needs to be rules and managed constructively.		
The measure itself is unclear, especially what is meant by "potential". Ecological Footprint , as suggested in the info doc, could provide the needed elements	See above	
		The target explicitly refers to «production practices and supply chain», whilst the term used in the indicator «human modification», and it is very wide as

		it includes also other human interventions: eg. construction of artificial barriers at sea, that have nothing to do with production practices/supply chain. This target should be referred to other pressures, e.g. to food system production, exploitation and harvesting.
		This target is focused on the production sectors, and while we support the importance of having a target to address sustainability in production and supply chains, the text of this target and their indicators are vague and weak as it is phrased now.
We find the reference to "potential" population and species loss problematic and arguably unnecessary.		
		This indicator seems un-SMART, very complex and challenging to measure in a clear way.
Capacity building, management and monitoring of negative impacts on biodiversity to assess supply chains.		
		It is not clear what this indicator is about and what is the relation between this indicator and the target.
		Complementary Indicator 14.1.1.1. - Ecological footprint - is based on concepts and methodologies established and used over the last 20 years (https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/ecological-footprint).
It would be hard to separate the effects caused by unsustainable production from those caused by other drivers that affect biodiversity		
There needs to be a baseline on what is being measured in terms of supply chains and production practices and understand and measure its impact on biodiversity in order to turn this into an indicator.	The unlocking of green supply chain policies across full pipelines and the commensurate resourcing to develop implementation frameworks for green supply chains (especially in developing countries) need to be established in order for this to be possible. There is a danger here of externalising the impact to developing nations. The means of implementation need to be carefully considered. Developed countries must support compliance with commensurate resources for carrying out this work, and more broadly the means of implementation for unlocking the shifts required.	

More research needed	More capacity needed for research	
		An HI on the reduced impact is needed, e.g. the ecological footprint or on measures taken by governments to reduce the footprint. Indicators of adverse effects should focus on habitats / ecosystems and should include telecommunications effects. SE assesses that HI 14.01. it should be rejected because it is not relevant for the scope of the target. The ecological footprint (by country or sector) may make more sense here.
		We propose to use the indicator: Number of countries implementing sustainable public procurement policies and action plans, that address biodiversity " Rationale: The proposed headline indicator 14.0.1 is not suitable. It is not clear and does not include the supply chain aspect. We therefore suggest an alternative indicator
What is meant by "potential"?		
		It is unclear how this indicator will be related to supply chains. We consider it important for an indicator related to sustainable supply chains to be retained at either the headline or component level as appropriate.
In our view, neither indicator fully captures sustainability of supply chains. We are also not certain why the word "potential" is used here, and we suggest that we avoid referencing populations, as we anticipate that it is likely hard to define and/or measure. We believe the underlying concept itself is fine, but we note that the measure likely needs to focus on measures implemented to increase biodiversity in and around production practices and supply chains instead of seeking to identify past impacts and then reducing them. We believe that we need to work to improve what we have in and around production systems and that finding and identifying everything that was lost and then "reducing" that impact is not a realistic task. We suggest that the adoption of certification and traceability systems could be one possible addition to remedy this situation. In addition, we consider that there is no baseline for this measure, so reducing it by 50% lacks meaning.		

		It is unclear how this indicator will be related to supply chains. We consider it important for an indicator related to sustainable supply chains to be retained at either the headline or component level as appropriate.
14.0.2 Corporate sustainability reporting includes impacts on biodiversity*		
14.0.2 If you selected "yes, however requires further work", please describe:	**14.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**14.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the**
		exact name of the indicator and the name of the organization that maintains it.
Do we mean 'number of …'?		
	The indicator requires the development of binding legislation and monitoring capacity at the national level	
		In view of the need to promote synergies with the 2030 Agenda for Sustainable Development, we propose replacing indicator 14.0.2 with SDG indicator 12.6.1: "Number of companies publishing sustainability reports ".
This suggested indicator does not meet the headline indicator criteria to be nationally relevant as corporate social responsibility reporting is done across supply chains and not at the country level. Further, the criteria to use indicators with publicly available data and metadata which is nationally validated, and for which a global programme exists for monitoring, is also unlikely to be met. In addition, the proposed indicator risks presenting an alternate view of progress, where reporting on biodiversity impacts does not equal to mitigating impacts. Also, we understand that the indicator does not exist yet.	N/A	This would require new reporting so Canada would need guidance on common definitions and parameters.
		Number of Parties with implemented bioeconomy and/or national circular economy strategies
We believe this might be more adequate for headline indicator, nonetheless we would need more guidance on the parameters and information on the information already available to report.		
Target 14 needs to clarify which sectors and what their negative impacts have been and we agree that a significant investment is required for this target. When say	We think only take the 14.0.1 for this target, but if is not possible can we suggest the following adjust:	

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sustainability reports is the same as an environmental audit, is not clear. The corporate sector are not acquainted to that practices how can measure this?	Number of industries / enterprises applies sustainable practices to improve supply chains	
Not necessarily fitting for 14 14.02 does not require any reduction of the impacts and is voluntary, global standards are needed for reporting, and reporting needs to include impact reduction targets.		
		The proposed HI is unclear. It is not clear if reporting needs to include any targets to reduce impacts and a follow up process etc. Could be further developed via the Ecological footprint & Circular Economy. Organization: Global Footprint Network
Unclear what this entails? What is the scientific basis for suggesting 50% ?	See above.	
The HI does not require any reduction of the impacts and is voluntary. Listing impacts does not imply that actions will be taken to reduce negative impacts. Global standards are needed. Also, the sustainability of supply chains and production practices needs to be verified by governments.	Standard are imperatively needed here.	
The indicator does not address whether x% is reduced		
Units unclear, low ambition level, not clear if reporting needs to include any targets to reduce impacts have a follow up process. An international reporting and measurement standards would be needed to ensure transparency and comparability of CSR reporting. These standards should be science-based and not only be developed by the sectors. The IPBES assessment could help to provide an overview of standards, identify the gaps and make findings available for an international peer-review.	Units unclear.	
Private sector need to be engaged to understand their responsibility and ways to meet that responsibility and they need to co-operate on this target	Needs Private sector capacity building support to tracking this indicator and needs identification of entry points with private sector	
The word of "corporate sustainability reporting" has ambiguity, which could cause double counting when a company updates its sustainability report, for instance.		Revision for the indicator: Number of corporates which have sustainability report including impacts on biodiversity" The name of the organization that maintains it: Each Party

		If this indicator aims to improve production practices and supply chains, then the percentage of reduction should be focused on this too.
Capacity building, management and monitoring of negative impacts ensuring production practices.		
		It is not clear how to calculate this indicator and in general – how is this indicator expected to translate into reducing impact on biodiversity?
The HI does not require any reduction of the impacts and is voluntary. Listing impacts does not imply that actions will be taken to reduce negative impacts. Global standards are needed. Also, the sustainability of supply chains and production practices needs to be verified by governments. However, this Indicator can evolve with the work under development by the TNFD – Taskforce on Nature-related Financial Disclosures (https://tnfd.info/).	International reporting and measurement standards would be needed to ensure transparency and comparability of CSR reporting. These standards should be science-based.	
Unclear whether governments should mandate these reports, as companies are not CBD parties?		
HI 14.0.2 may be relevant, but international reporting and measurement standards would be needed to ensure transparency and comparability of CSR reporting.		The SDG:s contain relevant indicators for measuring parties progress in facilitating sustainable production: • Number of countries with sustainable consumption and production (SCP) national action plans or SCP mainstreamed as a priority or target into national policies (SDG Indicator 12.1.1) • Number of countries implementing sustainable public procurement policies and action plans (SDG 12.7.1) • Amount of support to developing countries on research and development for sustainable consumption and production and environmentally sound technologies (SDG 12.1 A) Also, based on the recommendations of the IPBES global assessment report additional relevant indicators could be developed: • Number of countries / private-sector organizations with circular economy strategies • Number of countries with life cycle assessment requirements for products • Number of countries with resource caps / taxes • Share of biodiversity-friendly certified products on the domestic market • Number of trade agreements with environmental provisions

		• Number of companies that assess their (ecological) impact abroad (several indicators – no common standards) Number of countries that use alternative measures of economic welfare e.g. Gross National Happiness Index and Natural Capital Accounting
This would be voluntary reporting as there is little to no legal obligation on the corporate sector to report on biodiversity impacts and to verify such proposed reporting. An additional indicator would be required for the drafting and implementation of legislation to obligate corporate entities to report on biodiversity impacts.	See above	
	Further consideration on approaches that ensure there is not a disproportionate burden placed on small businesses or those that do not have a material impact on biodiversity or other natural capital value chains.	
We suggest adding percent or total number here so that it can be measured, as well as biodiversity-related taxation (as included in target 17).		
	Further consideration on approaches that ensure there is not a disproportionate burden placed on small businesses or those that do not have a material impact on biodiversity or other natural capital value chains.	

Target 15. By 2030, eliminate unsustainable consumption patterns, ensuring people everywhere understand and appreciate the value of biodiversity, and thus make responsible choices commensurate with 2050 biodiversity vision, taking into account individual and national cultural and socioeconomic conditions.

15.0.1 Biomass material footprint per capita

15.0.1 If you selected "yes, however requires further work", please describe:	15.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	15.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
	The indicator requires the development of monitoring capacities at the national level	
Change for "Products of biodiversity per capita". The consumption must be associated with biodiversity products that are used. Many of them cannot be associated with biomass.	Change for "Products of biodiversity per capita". The consumption must be associated with biodiversity products that are used. Many of them cannot be associated with biomass.	
N/A	N/A	Possibility of adding a flagship indicator on the number of Parties (and sub-national governments?) that have adopted laws or regulations aimed at

		reducing the impact of consumer products on natural environments or species at the level of production sites or operating, away from places of consumption?
		Recycling rate (SDG indicator 12.5.1)
		A more adequate indicator would be one that reflects the legislations and policies that a government has taken to increase awareness of the products and their impact on nature.
Target 15, should be better aligned with Sustainable Development Goal 12 and its targets, including ensuring that by 2030 all people have the information and knowledge. It should also reflect the joint responsibility of both producers and consumers.	In order to contribute this target, we suggest: By 2030, reduce (%) unsustainable consumption patterns, ensuring people everywhere understand and appreciate the value of biodiversity, and thus make responsible choices commensurate with 2050 biodiversity vision, taking into account individual and national cultural and socioeconomic conditions.	
Yes, but we should go beyond biomass and use consumption footprint	see comments	This should use the consumption footprint (which includes biomass material), see https://publications.jrc.ec.europa.eu/repository/handle/JRC113607

- Indicator name: National biocapacity the capacity of ecosystems to renew biomass Organization: See Wackernagel et al. 2021 in Nature
- Indicator name: Ecological footprint. Organization: Global Footprint Network,
- Indicator name: Per capita food losses and waste (kg/year). Organization: https://flwprotocol.org/ |
| This target does not address the drivers of unsustainable consumption, and puts the burden on consumers to make more sustainable choices. For example, it fails to tackle the topic of accessibility of sustainable alternatives – the most environmentally friendly preference/green products are not accessible, available, or affordable in many countries and for many sectors of society. The understanding is not clear how it twill be developed and the link to Aichi Target 1.

We feel another indicator is needed to monitor the number of states that have put e.g. regulations in place to encourage the use of biodiversity-friendly products (such as organically produced). We deplore that there is no responsibility for States in the target the way it is currently worded. | See above. | |

This indicator should go beyond biomass as consumption deals with other resources, as inorganic ones, which exploitation is also a threat to biodiversity (mining for example).		
I just don't know what the biomass material footprint is		
Interpretation and use disputed, one indicator for a broad target. In the context of enhancing biodiversity, it is important not to define biomass as an ecosystem service. Gap on food waste.		Potential additional indicators on food waste: § Per capita food losses and waste (kg/year), as measured using the Food Loss and Waste Protocol. § 15.1.3. (a) Food loss index and (b) food waste index (SDG indicator 12.3.1).
This indicator can be misleading for small island states so further work on the definitions is needed and capacity building to carry out data collection	Needs capacity building support to track	
The necessity to strengthen the traceability and accounting system that will be implemented in this matter due to prevailing laws and regulation of member state.	It needs work to develop methodology and guidelines	
		This SDG indicator is focused on production. One possible better suited indicator for consumption is SDG indicator 12.3.1 - Global Food Loss and Waste;
		Alternative indicators: - Share of supply of products and services contributing to biodiversity conservation or its sustainable use (i.e. eco-labelled) - Share of consumption of products and services contributing to biodiversity conservation or its sustainable use (i.e. eco-labelled) The name of the organization that maintains it: Each Party Reasons: It should be differentiated from SDG12 "ensure sustainable consumption and production patterns". and thus relationship with biodiversity should be clarified. For that, the indicator should be set to evaluate changes of consumption patterns by consumers, and also of patterns of provision of product by producers. Biomass material footprint cannot directly evaluate impacts on biodiversity nor changes of consumption patterns and product provision patterns.
		Malaysia believes that globalization has made it hard to measure effects of consumption patterns. There is possibility to replace current indicator with water and food footprint per capita.

Although Mexico acknowledges that education and awareness are essential for societies to reduce or avoid unsustainable consumption patterns, it seems that this indicator as well as the target is leaving the responsibility to the final consumers, and it is not very clear what governments are agreeing to do.		
Nécessite plus de précisions		
		unsustainable consumption underlies each of the main drivers of biodiversity loss. Between 2011 and 2016 the ecological footprint has remained at approximately 1.7 times the level of biocapacity. The impacts of consumption and what is considered sustainable will vary between types of resources and products. Actions taken in this context will contribute to many other targets. What would be helpful and instrumental for target 15 is a coherent set of metrics for the effect on ecosystems and biodiversity of land use, water use and material use and environmental pressures such as nutrient emissions.
Capacity building		
		This indicator is difficult to understand – it is not clear what "biomass" means in this context, what is biomass material footprint vs material footprint, and how to calculate this.
It should be noted that biomass is a vague concept, since it doesn't differentiate the origin of the biomass. If the aim is to 'appreciate the value of biodiversity', we should consider 'biomass from native ecosystems' and thus differentiate from the biomass acquired from plantations designed for such.	See above.	
		Component indicators 15.1.1.(a) Food loss index and (b) food waste index (SDG indicator 12.3.1) can be use as a headline indicators to track unsustainable consumption patterns.
More research needed	Capacity needed for research	
HI 15.0.1 on "Biomass' material footprint per capita" seems to be an interesting component or complementary indicator, but does not reflect what the target should really focus on, that governments need to enable / support sustainable consumption through the GBF. If consumers		

are the main target group for this target, an indicator of food waste (Add1 15.1.3 or SDG 12.3.1) can be a good tool to address change and overexploitation of land use. Nevertheless, the indicator should focus on what governments are doing to reduce food waste in the public and private sectors.		
Need to provide metrics for negative and positive consumption patterns	The Secretariat should provide specific and unambiguous standardized guidelines for the metrics which allow straightforward quantitative assessment of consumption patterns and uniformity among the parties	
	It requires to define what types of biomass material are there in each city/country. Because each biomass type contributes differently and was different footprint impact. As well different countries depend on different type of biomass material so we can't have this standardization.	
We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. This indicator could be used as a general benchmark on the scale of impact human consumption is having on biodiversity. However, it is not clear what this is actually measuring. With a growing global population, the per capita value could be decreasing whilst the total human biomass material footprint could be increasing.		Alternative indicator: We suggest the following indicator (currently under development for the UK) could be adapted for use at headline level: overseas environmental impacts of consumption of key commodities. This indicator is based on modelling supply chains as a mechanism to identify where the impacts have occurred. The indicator, as adapted as a headline, should consider three elements; how much of a commodity is being consumed (both directly and embedded within other products) and where it was originally produced; pressures from production of a given volume of the commodity; and how these pressures translate into impacts on the natural environment. Further information can be drawn from: https://hub.jncc.gov.uk/assets/709e0304-0460-4f83-9dcd-3fb490f5e676
		It is not clear to us how biomass material footprint per capita will be measured. We note that the definition or target level of sustainable material footprint is not defined (see SDG Indicator 12.2.1).
We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. This indicator could be used as a general benchmark on the scale of impact human consumption is having on biodiversity. However, it is not clear what this is actually measuring. With a growing global population, the per		Alternative indicator: We suggest the following indicator (currently under development for the UK) could be adapted for use at headline level: overseas environmental impacts of consumption of key commodities. This indicator is based on modelling supply chains as a mechanism to identify where the impacts have occurred. The indicator, as adapted as a headline, should consider three elements; how

capita value could be decreasing whilst the total human biomass material footprint could be increasing.		much of a commodity is being consumed (both directly and embedded within other products) and where it was originally produced; pressures from production of a given volume of the commodity; and how these pressures translate into impacts on the natural environment. Further information can be drawn from: https://hub.jncc.gov.uk/assets/709e0304-0460-4f83-9dcd-3fb490f5e676

Target 16. By 2030, establish and implement measures to prevent, manage or control potential adverse impacts of biotechnology on biodiversity and human health reducing these impacts by [X]

16.0.1 Extent to which necessary legal, administrative, technical and other biosafety measures are in place to prevent, manage and control potential adverse impacts of biotechnology on biodiversity*

16.0.1 If you selected "yes, however requires further work", please describe:	16.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	16.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		The indicator seems to focus only on negative aspects of biotechnology. It should not be biased and only measure impacts of biotechnology, positive, neutral or negative.
Suggested edit: 16.0.1 Extent to which necessary legal, administrative, technical and other biosafety measures are in place to prevent, manage or control potential adverse impacts of biotechnology on biodiversity* It is problematic having "prevent" in its current context. The headline indicator should have language consistent with the target, i.e. should refer to "prevent, manage or control". "Prevent" is acceptable in the "or" context but not acceptable in the "and" context of the headline indicator.		
The target as well as the related indicator should follow the language of the Convention (Art 8 (g)) more closely. The term "biotechnology" is too broad to reflect the intention of Art 8 (g). Therefore it is suggested to formulate the indicator e.g. as "Extent to which necessary legal, administrative, technical and other biosafety measures are in place to prevent, manage and control potential adverse effects associated with the use and release of living modified organisms resulting from biotechnology on the conservation and sustainable use of biological diversity."		

In order to cover both: 1) addressing the potential adverse impacts from LMO based on based on articles 8(g) and 19 of the Convention and 2) the importance of conducting biodiversity/environmental impact assessments, including of all technologies, and application of Article 14 of the Convention, related issues covered in previous COP decisions and LTAM, BE suggests addressing these issues in 2 separate sets of indicators (and this would also better be reflected in having 2 separate targets). Proposed HI: 16.0.1 Extent to which necessary legal, administrative, technical and other biosafety measures are in place to prevent, manage and control potential adverse impacts of LMOs resulting from biotechnology on biodiversity* 16 bis 0.1 Extent to which the necessary legal, administrative, technical, and other measures are in place to avoid and minimize potential adverse impacts of technologies and projects on biodiversity		
	The indicator requires the development of monitoring capacity at the national level	
To date, no adverse impact has been identified by Parties caused by biotechnology in biodiversity. It must be recognized the positive impacts of biotechnology to the biodiversity. Therefore, in addition to the proposed indicator, we suggest other indicators, as follows: 16.0.X Number of countries that have activities to promote cooperation in personnel training and exchange of experts to provide effective participation in biotechnological research. 16.0.X Number of countries that have procedures to promote and advance priority access to the results of benefits arising from biotechnologies based upon genetic resources provided by another country, specially developing countries. 16.0.X Number of countries with access and adoption of innovative biotechnology solutions for sustainable agriculture production.	To date, no adverse impact has been identified by Parties caused by biotechnology in biodiversity. It must be recognized the positive impacts of biotechnology to the biodiversity. Therefore, in addition to the proposed indicator, we suggest other indicators, as follows: 16.0.X Number of countries that have activities to promote cooperation in personnel training and exchange of experts to provide effective participation in biotechnological research. 16.0.X Number of countries that have procedures to promote and advance priority access to the results of benefits arising from biotechnologies based upon genetic resources provided by another country, specially developing countries. 16.0.X Number of countries with access and adoption of innovative biotechnology solutions for sustainable agriculture production.	
As Target 16 aims to reflect CBD Article 8g of CBD and ensure Article 16 of the Cartagena Protocol (risk management) is respected, the scope of the target, its components and the indicators should be restricted to living modified organisms (LMOs) rather than	Measures should be focused on preventing identified risks of adverse impacts where possible. The measures that are addressing potential risks of adverse impacts should be focused on their	This indicator could be reworded, less subjectively than 'extent to which the necessary legal…', as 'Number of Parties with legal, administrative, technical and other measures in place to prevent, manage and control risk associated with the use and

biotechnology. The scope can be living modified organisms resulting from biotechnology, but not biotechnology as a whole. The definition of biotechnology as per the CBD is very broad and would include products of conventional breeding: "Biotechnology" means any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use."	assessment in order to identify those that may plausibly lead to adverse impacts.	release of LMOs that could have potential impacts on biodiversity'.
Number of legal, administrative, technical and other biosafety measures that are adopted to efficiently identify, prevent, manage, control and restore potential adverse impacts of biotechnology on biodiversity and human health"	the result of the practices associated with the use of biotechnology developments rather than the biotechnology development that is being used per se, which makes it even more difficult to identify a particular adverse effect associated with a biotechnology development	
This indicator must conform to the language of the Cartagena Protocol, we propose : "Extent to which necessary legal, administrative, technical and other biosafety measures are in place to regulate, manage and control the risks associated with Living Modified Organism resulting from biotechnology which are likely to have adverse impacts that could affect the conservation and sustainable use of biodiversity".	This indicator must be adjusted in the terms mentioned above. It also requires more work on capacity building, for example, implementation with the annual report of the Cartagena Protocol.	
The history of safe use is not sufficiently taken into account, and that biotechnology can be an important tool to achieve sustainable use. Is not clear how measure the implementation grade, for that reason suggest: Target 16. By 2030, establish and implement measures to prevent, manage or control potential adverse impacts of biotechnology on biodiversity and human health. 16.0.1. Number of legal, administrative, technical and other biosafety measures applied to prevent, manage and control potential adverse impacts of biotechnology on biodiversity	Is high recommended to apply the capacity building plan considering the corresponding financial support in all areas of Cartagena Protocol	
Yes, but to be rephrased. It is unclear how to measure the "Extent". For operability reasons the headline indicator would better focus on LMOs.	Yes, but to be rephrased	Indicator name (rephrased): Number of countries which have established and implement the necessary legal, administrative, technical and other measures to prevent, manage or control potential adverse impacts of LMOs resulting from biotechnology on biodiversity, taking also into account the risks to human health.
The wording should follow CBD article 8 g: Extent to which necessary legal, administrative, technical and other biosafety measures are in place to prevent, manage and	See above.	See also above. New wording: Extent to which necessary legal, administrative, technical and other biosafety measures are in place to prevent, manage

control potential adverse impacts of biotechnology on biodiversity, taking also into account the risks to human health.		and control potential adverse impacts of biotechnology on biodiversity, taking also into account the risks to human health.
FR proposes "biosafety" to be deleted as it does not bring much, and to add "potential adverse impacts of biotechnology on biodiversity and human health."		
The extend must be measurable		
Agregar los "POTENCIALES" impactos negativos al final del indicador		
Italy thinks that the indicator is relevant for assessing the establishment and implementation of "measures to prevent, manage or control the potential adverse impacts of biotechnology on biodiversity", but it isn't relevant to measure the percentage "by [X]" of the reduction of "potential adverse impacts of biotechnology on biodiversity".		
It is unclear how we could define and quantify "potential" adverse impacts.		
		As the indicator is formulated, it does not lead to quantifying the effectiveness of said measures on the potential effects/impacts. Additional indicators: 1) Application of measures to prevent potential adverse effects; 2) the application of measures for the management and control of adverse effects (?)
		The numeric aspect of the target is an issue. Any potential adverse impacts of biotechnology on biodiversity is difficult to be quantified. Moreover, there is no suitable baseline. The initial document CBD/SBSTTA/24/3/Add.2 acknowledged the absence of systematic quantitative information currently available on actual and potential adverse impacts of biotechnology on biodiversity or on reductions of such impacts through biosafety measures. The only source of information quoted in the revised document is Biosafety Clearing House. Indeed Biosafety Clearing House contains a high number of risk assessments, which aim to identify and evaluate potential adverse effects of LMOs on

		biodiversity, for those LMOs that Parties make a decision to import or release. Information on the actual adverse impacts of LMOs to biodiversity remains scarce and no appropriate source is quoted. As a result, it will be extremely difficult to set an ambition level for this target and to monitor the progress of the Parties. The number of Parties that have in place and implement correctly the appropriate measures would be a realistic indicator for monitoring the progress at global level.
Suggest inclusion of 'and human health' at the end of the sentence in line with target.		
Capacity building		
We propose some changes to the text of the indicator: "Extent to which necessary legal, administrative, technical and other measures are in place to prevent, manage and control potential adverse impacts of biotechnology on biodiversity, taking also into account the risks to human health" (for consistency with CBD Art. 8(g) wording).	Useful information is already available on the Biosafety Clearing-House through the National Report on Implementation of the Cartagena Protocol on Biosafety (CPB-NR). However, the information still needs to be treated to allow for instance to identify trends. Additionally, not all Parties fill the CPB-NR not allowing a global view.	
This is already well covered under Cartagena Protocol. We consider the indicator to be relevant if it refers to the scope of the Cartagena Protocol and if we take into account the majority opinion of the Parties expressed in CG that the text "reducing these impacts by [X]" should be deleted in T16 due to the absence of baseline. We advocate use of this indicator in the scope of Cartagena Protocol. However we heard proposals of other parties in the CG discussion and generally agree with their concerns and propose to address them. Firstly, the possible adverse impact of other biotechnologies (e.g. synthetic biology, etc.) on three objectives of CBD could also be addressed under this target. Other technologies (one example mentioned was "underwater mining") should not be addressed under the T.16, but rather under T.14 which covers corporate sustainability. Secondly, we also agree that positive effects of modern biotechnology on biodiversity should benefit all parties in accordance with art. 16 and 19 of the CBD. In our view the best place to agree the modalities for transfer of relevant knowledge to ensure access to biotechnology benefits is under T.18 which is specifically tailored to address capacity building and knowledge transfer and not under T16, which should	We consider the indicator to be relevant if it refers to the scope of the Cartagena Protocol and if we take into account the majority opinion of the Parties expressed in CG that the text "reducing these impacts by [X]" should be deleted in T16 due to the absence of baseline. We advocate use of this indicator in the scope of Cartagena Protocol. However we heard proposals of other parties in the CG discussion and generally agree with their concerns and propose to address them. Firstly, the possible adverse impact of other biotechnologies (e.g. synthetic biology, etc.) on three objectives of CBD could also be addressed under this target. Other technologies (one example mentioned was "underwater mining") should not be addressed under the T.16, but rather under T.14 which covers corporate sustainability. Secondly, we also agree that positive effects of modern biotechnology on biodiversity should benefit all parties in accordance with art. 16 and 19 of the CBD. In our view the best place to agree the modalities for transfer of relevant knowledge to ensure access to biotechnology benefits is under T.18 which is specifically tailored to address capacity building	

only be focused on preventing the negative effects of biotechnology to biodiversity. 16.0.1 If you think this indicator is not relevant, would you suggest an alternative? Please indicate below the exact name of the indicator and the name of the organization that maintains it.	and knowledge transfer and not under T16, which should only be focused on preventing the negative effects of biotechnology to biodiversity. 16.0.1 If you think this indicator is not relevant, would you suggest an alternative? Please indicate below the exact name of the indicator and the name of the organization that maintains it.	
It is difficult to comment on this indicator as it is still under development.	As this is a new indicator it will require capacity-building to ensure its effective implementation, commensurate resourcing will be needed for developing countries both to implement the actual target and to measure effective implementation.	
	This indicator is suitable to measure the overall progress of the target. However, further work or guidance may be needed to harmonize the implementation of the indicator/target at the national level and to standardize the national reports from Parties based on this indicator. In addition, for the sake of the progress/to ensure the achievement of the target, developing countries' capacities may need to be strengthened.	
In theory, it would be possible to use the proposed indicator, based on national reporting according to the Cartagena protocol, and its Nagoya-Kuala Lumpur supplement. The Headline indicator does not measure adverse impacts of biotechnology on biodiversity and risks for human health. There would be uncertainties in the interpretation and aggregation, as different Parties may apply different definitions of "adverse impacts. Thus quantification of the target is not possible and a baseline is missing.		A global accepted definition of adverse effects of biotechnology on biodiversity and human health is required, for the quantification of adverse effects to be possible. This would be difficult to achieve.
As currently written, in our view the target, headline indicator, and component indicators do not align with the text of the CBD and could usefully be reworded to reflect that the scope of the CBD regarding adverse impacts to biodiversity is focused on living modified organisms in the context of 8(g), 16, and 19(3). In addition, we consider that the wording implies that adverse impacts are the only impacts of biotechnology, which is not accurate. We suggest that target 16 and its corresponding indicators be broadened to incorporate a discussion of benefits, or that a new target be incorporated that explicitly acknowledges benefits of biotechnology in the context of CBD Articles 16 and 19.	We note that many countries lack the capacity to develop and administer biosafety measures and could benefit from capacity building in this regard.	

Target 17. By 2030, redirect, repurpose, reform or eliminate incentives harmful for biodiversity, including [X] reduction in the most harmful subsidies, ensuring that incentives, including public and private economic and regulatory incentives, are either positive or neutral for biodiversity

17.0.1 Biodiversity relevant taxes, charges and fees on payments for ecosystem services and on biodiversity relevant tradable permit schemes as a percentage of GDP

17.0.1 If you selected "yes, however requires further work", please describe:	17.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	17.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
This indicator does not provide information on the elimination, redirection or reform of harmful incentives. It merely reflects the creation of (supposedly) positive incentives that could very well exist in parallel of negative incentives. The first indicator for this target should reflect the fact that all harmful incentives have been identified and mapped. This could be based on an assessment of NBSAPS and domestic finance plans. Additional HI Proposal: 17.0.1 bis numbers of countries that have identified and mapped all harmful incentives		
		The relationship between the government support for harmful, neutral and positive incentives
We suggest changing the indicator for: "Payments for ecosystem services and on biodiversity relevant tradable permit schemes as a percentage of GDP".	We suggest changing the indicator for: "Payments for ecosystem services and on biodiversity relevant tradable permit schemes as a percentage of GDP".	
Canada would suggest that headline indicator 17.0.1 be revised in order to more accurately reflect the existing SDG indicator which looks at revenue generated and finance mobilised from biodiversity-relevant economic instruments, defined as revenue generated and finance mobilised from biodiversity-relevant economic instruments, covering biodiversity-relevant taxes, fees and charges, and positive subsidies. To note that, under the SDGs, new on-going work is underway to collect data on payments for ecosystem services and biodiversity offsets -- including the finance they mobilise for biodiversity through the EPOC's PINE database.	N/A	An alternative could be: "17.0.1 Revenue generated and finance mobilised from biodiversity-relevant economic instruments (SDG – 15.a.1/15.b.1)".

Percentage of GDP collection that corresponds to taxes, charges and fees that affect payments for ecosystem services" It is not necessary to include a type of PES such as: systems of tradable permits related to biological diversity , it should be left open to the parties to define what type of instruments they take into consideration	Capacity building on designing and promoting innovative positive incentives.	
Most developing countries do not have substantial studies on this topic.		
This indicator should also be in line with SDGs indicators (15.a.1 / 15.b.1) in order to better reflect the revenue generated and finance mobilized from biodiversity relevant economic instruments.		
The target should reflect progressive measures to eliminate all harmful subsidies and propose incentive mechanisms. Also, the parties need to standardization the methodology to rate the ecosystem services, in order to applied taxes or other schemes of valuate the biodiversity in this contexts	We need more researches, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	
Yes, useful indicators, but to be refined in order to: - remove the terms 'on' which incorrectly link 'charges and fees' with 'payments for ecosystem services and biodiversity relevant tradable permit schemes' - include positive subsidies - remove reference to with limited scope because of link with GDP.	Yes, to be rephrased	Indicator name (rephrased): Number of biodiversity-relevant taxes, fees and charges, tradable permit schemes, positive subsidies, payments for ecosystem services and biodiversity offsets [and the finance each instrument mobilises]. Organization: OECD Indicator name: financial assets at risk due to biodiversity loss. Organization: OECD
	The linking to GDP is problematic, because it may lead to distorted results, in particular in the case of fastgrowing economies	
		The indicator does not address neither subsidies nor incentives
The HI has a limited scope but these elements are currently monitored by the OECD at global level. The word 'on' (before 'payments' and before 'biodiversity relevant tradable permit schemes') should be deleted because it would not make sense to impose taxes on payments for ES. The linking to GDP is problematic (because it may lead to distorted results, in particular in the case of fast growing economies, but also because from a practical point of view the number resulting from the indicator would be extremely small (0,0000000001) and hence very difficult to communicate). This indicator does not provide information on the		

elimination, redirection or reform of harmful incentives. It merely reflects the creation of (supposedly) positive incentives that could very well exist in parallel of negative incentives. Potentially an additional indicator as the first indicator for this target should reflect the fact that all harmful incentives have been identified and mapped. This could be based on an assessment of NBSAPS and domestic finance plans. Thus suggestion: numbers of countries that have identified and mapped all harmful incentives.		
	Needs capacity building support to track	
Need capacity building. In this particular matter, the balance of natural resources that can would be in.		
This OECD indicator should be better defined and focused on biodiversity positive , not only "relevant" taxes and fees.	Requires a clear tagging taxonomy in order to clearly identify biodiversity positive taxes and fees.	
We propose the following amendments on the Headline Indicator 17.0.1, as positive subsidies are not included in the current list of positive incentives, while the Target itself deals with the reduction of subsidies. "17.0.1 Biodiversity relevant taxes, … and on biodiversity relevant tradable permit schemes and biodiversity motivated government support as a percentage of GDP."	"Biodiversity motivated subsidies" has already covered by the OECD PINE database as the elements already included in the 17.0.1.	
This indicator is ambiguous and might be subject to multiple interpretations. This target is key in political terms for the GBF implementation to succeed. Ensure that "chargers and fees" are not regressive		Mexico request to include social and cultural impacts
The key question is how to develop indicators to measure subsidy policy reforms. Reduction of harmful subsidies is key but there is a need for a baseline. Payments and taxes for ecosystem services is just one element of a variety of policy tools that a government might want to use to implement subsidy reform. In this case the goal is to move from harmful to beneficial subsidies. That needs to be encouraged. However, this indicator is limited to one option of MANY. How do you measure and who measures the percentage of GDP? Each government or CDB Secretariat or other UN body? What is the baseline? WTO members must notify the WTO of their subsidy programs. The baseline could start with the WTO or national budgets. However, transparency is a problem and not all WTO Parties relay their subsidies to the WTO. Another avenue is to use the	Nécessite du renforcement des capacités	

WTO Trade Policy Review Mechanism to do build the baseline. CBD could use that type of mechanism to do the analysis either at the WTO or at the CDB or in conjunction.		
List of examples of financial tools could need adjustment to encompass all relevant approaches		
Capacity building on incentive and subsidies to reform incentive harmful		
What does "biodiversity relevant" mean? Harmful to biodiversity? Beneficial for biodiversity? Resulting from biodiversity use? This needs to be clarified.	How should it be calculated, are the data easily available? In addition there is a methodological question: if we calculate % of GDP and both numbers are changing in time, if we take the value of the indicator from two different reports it will be difficult to interpret them.	
The word "on" (before "payments" and "biodiversity") should be deleted because it would not make sense to impose taxes on payments for ES. The proportion between resources mobilised for biodiversity and harmful incentives should be included.	The linking to GDP is problematic, because it may lead to distorted results, in particular in the case of fast-growing economies, but also because from a practical point of view the number resulting from the indicator would be extremely small (0,0000000001) and hence very difficult to communicate.	OECD has a number of indicators deriving from efforts to track economic instruments and finance for biodiversity (https://www.oecd.org/environment/resources/Tracking-Economic-Instruments-and-Finance-for-Biodiversity.pdf)
The key question is how to develop indicators to measure subsidy policy reforms. Reduction of harmful subsidies is key but there is a need for a baseline. Payments and taxes for ecosystem services is just one element of a variety of policy tools that a government might want to use to implement subsidy reform. In this case the goal is to move from harmful to beneficial subsidies. That needs to be encouraged. However, this indicator is limited to one option of many How do you measure and who measures the percentage of GDP? Each government or CDB Secretariat or other UN body? What is the baseline? WTO members must notify the WTO of their subsidy programs. The baseline could start with the WTO or national budgets. However, transparency is a problem and not all WTO Parties relay their subsidies to the WTO. Another avenue is to use the WTO Trade Policy Review Mechanism to do build the baseline. CBD could use that type of mechanism to do the analysis either at the WTO or at the CDB or in conjunction.		
We do not support language suggesting we should target only the 'most' harmful subsidiea		We propose to insert indicator regarding mapping harmful subsidies.

	Measuring and shifting harmful subsidies and the mainstreaming required to create positive incentives is technical work and capacity building and funding will be required to do both the extensive research and coordination required to shift this body of work in the years to come.	
		Potential alternative: indicator on positive incentives.
Very difficult to adopt, information very less , knowledge sharing is essential.	same as above	
The relevance of this indicator is hard to assess. It appears to be incorrectly worded. Does it make sense to impose taxes on payments for ecosystem services, or on biodiversity relevant permit schemes? That would seem to counteract the purpose of the goal. Or, should the indicator be read as "Biodiversity relevant taxes, charges and fees, payments for ecosystem services, and biodiversity relevant tradable permit schemes, as a percentage of GDP"? See OECD (2020): Tracking Economic Instruments and Finance for Biodiversity. Even with such an interpretation, Indicator 17.0.1 covers a very small part of the problem area.		
		The proposed headline indicator 17.0.1 is not suitable for target 17 and should be deleted.

We propose to use:
Biodiversity relevant taxes, fees and charges, tradable permit schemes, positive subsidies, payments for ecosystem services and biodiversity offsets [and the finance each instrument mobilises]. |
| We suggest to adopt the OECD indicators | | |
| | | We are not aware of an agreed measurement of what constitutes a 'biodiversity relevant tax, charge or fee'. We are not confident that measurement 'as a proportion of GDP' is the right divisor: it is conceivable that GDP could contract without there being any corresponding change in the level of biodiversity payment, which could mean that it looks as though the metric is improving when it would not be. |

We suggest removing "reduction in the most harmful subsidies" from the goal. There is a lack of definition for "incentives harmful for diversity" which we believe would make this indicator difficult to measure.	We suggest linkage to implementation of conservation practices identified Parties' relevant national authorities.	
		We are not aware of an agreed measurement of what constitutes a 'biodiversity relevant tax, charge or fee'. We are not confident that measurement 'as a proportion of GDP' is the right divisor: it is conceivable that GDP could contract without there being any corresponding change in the level of biodiversity payment, which could mean that it looks as though the metric is improving when it would not be.

17.0.2 Potentially harmful elements of government support to agriculture, fisheries and other sectors (environmentally harmful subsidies) as a percentage of GDP

17.0.2 If you selected "yes, however requires further work", please describe:	**17.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**17.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
Do we mean 'number of'? Not put it as % of GDP as it can bias the result. An indicator on harmful public incentives could be based on their share (and its progress) in the domestic funding gap (based on national finance plans). HI Proposal: 17.0.2 Number of Potentially harmful elements of government support to agriculture, fisheries and other sectors (environmentally harmful subsidies) as a percentage of GDP		
We understand that this indicator is not currently operational. Also, the intent of this indicator should be to quantify the amount spent by governments on harmful subsidies for biodiversity. Unfortunately most Parties have not yet undertaken any kind of identification of subsidies harmful for biodiversity so this would be new reporting and guidance would be needed on common definitions and parameters. Once Parties have taken steps to identify harmful subsidies, then the quantification of said subsidies will be possible. As a first step, the headline indicator could track the number of Parties that have undertaken national assessments of subsidies harmful for biodiversity as part of their NBSAPs.	N/A	An alternative could be: "17.0.2 Number of Parties that have undertaken national assessments of subsidies harmful for biodiversity as part of their NBSAPs." Target

It requires to agree on a definition of reduction of harmful subsidies for biodiversity.		
We suggest including all sectors already prioritized by COP 13 and 14. It should be more general.	We should take into account the OECD guidelines	
This indicator should reflect the progress of the number of parties that have implemented national policies to tackle harmful subsidies for Biodiversity		
In our country we are not developing this indicator and we need capacity building to use this indicator. The target should reflect progressive measures to eliminate all harmful subsidies and propose incentive mechanisms.	We need how we can enhance standardization and comparability in national reporting. We suggest: Reduce potentially harmful elements of government support to agriculture, fisheries and other sectors (environmentally harmful subsidies) as a percentage of GDP	
Yes, useful indicator, but to be refined in order to specify that we are talking here about 'environmentally harmful elements'. Reference to GDP should be removed.	Yes, to be rephrased	Indicator name (rephrased): Potentially environmentally harmful elements of government support to agriculture, fisheries and other sectors (environmentally harmful subsidies). HI should not link to GDP (because it may lead to distorted results, in particular in the case of fast-growing economies, but also because from a practical point of view the number resulting from the indicator would be extremely small (0,0000000001) and hence very difficult to communicate).Organization: OECD
FR prefers indicators that do not link a change to GDP, as environmentally harmful instruments need to be reduced even in absolute terms.		
I think the indicator should be trend of harmful elements as a % of GDP	Probably the BIOFIN will be useful tool for methodology and capacity development for this issue	
This indicator is not currently available. The unit for this indicator is not clear. Indicator should address the most relevant sectors driving biodiversity loss according to IPBES and GBO-5: food system, energy/ mining, infrastructure, production, though OECD does not monitor such elements (on the contrary to agriculture and fisheries subsidies). HI should not link to GDP because it may lead to distorted results, in particular in the case of fast-growing economies, but also because from a practical point of view regarding the number resulting from the indicator.		

	Needs to be disaggregated at the national level and needs capacity building support to track	
The term "elements" is too generic, maybe this indicator shall refer to governmental subsidies. Furthermore the indicator should not be linked to GDP.		
Considering that the headline indicator should encourage the Parties to identify harmful subsidies as a first step, which has not progressed under the Aichi Target3, wording should avoid any ambiguity. In particular, the word "potential" should not be included. With the same reason, the scope should also be clear, and we suggest replacing "environmentally" with "biodiversity" in line with CBD mandate. Therefore, we propose the following amendments to the 17.0.2 as follows; "17.0.2 Harmful elements of government support to agriculture, fisheries and other sectors (harmful subsidies to biodiversity)as a percentage of GDP"	It is preferable that common method to identify harmful subsidies which is available to all the Parties. Sharing experiences of Parties that have already exercised them under Aichi Target3 could be a good reference, recognizing that the actual effects of subsidies mostly depend on the natural conditions and policy design of each country. It is important that all the parties examine their effects on biodiversity and make efforts to reform them.	
Malaysia suggests to review 'as a percentage of GDP' and requests the CBD to develop an operating definition of harmful subsidies.	Measurement of impact of harmful subsidies on biodiversity.	
		Wording suggestion: Percentage of GDP spent on potentially harmful government support subsidies to agriculture, fisheries, and other sectors
The indicator is relevant but the problem is the baseline and who will do the analysis. Is it up to each government or CDB, the WTO or other UN body, the World Bank, OECD? Baselines can be taken from WTO agriculture and subsidy notification. The World Bank could also be the source. The WTO notifications and transparency need to be improved. Seaaroundus http://www.seaaroundus.org/ (Rashid Sumaila et all 2019https://www.sciencedirect.com/science/article/pii/S0308597X19303677) have global estimates for fisheries subsidies that can be used for the baseline.	If members need to report and do the analysis they will need support and technical assistance and capacity building.	
"Potentially" is not helpful here and should be removed.		We think the reference in the headline indicator to percentage of GDP reflects the lack of ambition also in the target itself, as compared to Aichi target 3. Subsidies harmful to biodiversity should be clearly identified and eliminated.

		We propose: "Potentially harmful elements of government support to agriculture, fisheries and other sectors (environmentally harmful subsidies)."
This needs to be coupled with social safety mechanisms.	This needs to be coupled with social safety mechanisms.	
Capacity building		
Relevance of this indicator will depend on who and how will identify harmful subsidies. This assessment should be based on clear and detailed definition of harmful elements of government support, it should be decided who will collect the data and how to ensure reliable reporting. In the indicator itself "other sectors" should be listed.	See above – harmful subsidies need to be defined and identified; it has to be decided who and how will collect the data.	
The proposed HI is very broad. It should address the most relevant sectors driving biodiversity loss according to IPBES and GBO-5: food system, energy/ mining, infrastructure, production. The word 'potentially' makes identification of elements to measure unclear; this could be rephrased: "Environmentally harmful government subsidies and incentives to agriculture, fisheries and others sectors as a percentage of GDP". Further, GDP will increase if an incentive or subsidy that destroys or degrades biodiversity increases, creating a problem of coupling-accounting, when in fact we should aim to indicators that favour decoupling (see: https://ideas.repec.org/p/ags/iaae09/51740.html).	The linking to GDP is problematic, because it may lead to distorted results, in particular in the case of fast-growing economies, but also because from a practical point of view the number resulting from the indicator would be extremely small (0,0000000001) and hence very difficult to communicate.	OECD has a number of indicators deriving from efforts to track economic instruments and finance for biodiversity (https://www.oecd.org/environment/resources/Tracking-Economic-Instruments-and-Finance-for-Biodiversity.pdf).
Some ministries related to the industry, ocean or agriculture, which require the support from the government, raised a serious concern. We need some measures to reduce those concerns.		
The indicator is relevant but the problem is the baseline and who will do the analysis. Is it up to each government or CDB, the WTO or other UN body, the World Bank, OECD? Baselines can be taken from WTO agriculture and subsidy notification. The World Bank could also be the source. The WTO notifications and transparency need to be improved. Seaaroundus http://www.seaaroundus.org/ (Rashid Sumaila et all 2019https://www.sciencedirect.com/science/article/pii/S0308597X19303677) have global estimates for fisheries subsidies that can be used for the baseline.	If members need to report and do the analysis they will need support and technical assistance and capacity building.	World Bank produces this information https://data.worldbank.org/indicator/GC.XPN.TRFT.ZS OECD also produces some of this information https://data.oecd.org/agrpolicy/agricultural-support.htm

It would also be important to measure positive incentive and not only negative (the target should also include that).	Since with the indicator we cant measure everything in the target - like private funding, we should reconsider it. Also we could include some metric for the positive incentives.	The above ideas could be formulated as several subtargets and would related to goal D, which could be broader, to close the biodiversity finance gap.
	Work into the development of comprehensive resource mobilisation strategies that are costed and benchmarked are in the early stages in much of Africa. Capacity development, such as through the Biofin Programme, will be needed, as will commensurate resources for the development of the research and policy recommendations needed to do this work in sufficient depth.	
Information are scattered. collaborative studies are needed. Time consuming	Same as above	
Indicator 17.0.2 measures government support for environmentally harmful activities, as a share of GDP. SE sees a need to include more sectors than agriculture and fisheries in the indicator, e.g. the energy sector, the mining industry, infrastructure development and the manufacturing industry. SE prefers indicators that do not link a change to GDP, as environmentally harmful instruments need to be reduced even in absolute terms. SE would also welcome an indicator that measures the development of positive instruments.		
		An indicator focused on the nature positive contribution of Government support to these and other sectors.
We are not sure how this could be measured as we note that – based on our experience in fisheries subsides negotiations – defining harmful subsidies, nevertheless "elements" of those, will likely meet an impasse. We note as a cautionary tale that the reason that SDG 14.6 (on eliminating harmful fisheries subsidies) has an indicator completely unrelated to subsidies is because the international community could not agree and deemed it too contentious, resulting in 14.6 having an indicator about IUU fishing instruments instead.	We are not clear how these are defined as it seems that it would be a lot of work for each country to assess.	
		An indicator focused on the nature positive contribution of Government support to these and other sectors.

Target 18. By 2030, increase by [X%] financial resources from all international and domestic sources, through new, additional and effective financial resources commensurate with the ambition of the goals and targets of the framework and implement the strategy for capacity-building and technology transfer and scientific cooperation to meet the needs for implementing the post-2020 global biodiversity framework

18.0.1 Official development assistance, public expenditure and private expenditure on conservation and sustainable use of biodiversity and ecosystems*

18.0.1 If you selected "yes, however requires further work", please describe:	18.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	18.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		The indicator should focus on funds provided by developed countries
Australia would like additional information, in terms of how this indicator would be measured, in particular noting that it would be difficult to account for private expenditure related to conservation and sustainable use.		
With regards to all the resource mobilization goals and targets in general and on T18 in particular, it is important to keep in mind that for resource mobilization even more than for other targets, the text in the current GBF draft is very preliminary. There are several kinds of targets/subtargets that are currently being considered and those will define the indicators needed. The GBF needs to include targets and indicators that encompass all elements of resource mobilization i.a.: - reducing the need (cfr target 17) - mainstreaming - bringing other finance flows, such as climate finance flows, in line with the objectives of the CBD and GBF - financial resources of all resources In this context, other indicators besides the one that is proposed, could be useful and would be: - number of countries with dedicated biodiversity finance plans - a process indicator that gives an idea of how mainstreaming is improved – how economic planning process of governments takes into account assessment of biodiversity and ecosystems at key decision points. Additional HI proposal: 18.1.2 number of countries with dedicated biodiversity finance plans		

The indicator requires a national definition of sustainable use of biodiversity	the indicator requires the development of monitoring capacity at the national level	
		Funds provided by developed countries to developing Parties, in line with Article 20 of the Convention on Biological Diversity It should also be noted that headline indicator 18.0.1 does not capture other relevant aspects of draft target 18, such as capacity building and technology transfer.
Canada understands that this proposed headline indicator is not operational yet. The proposal to include Overseas Development Assistance (ODA) as a separate unit of measure beyond public expenditure is duplicative because ODA is included within public expenditure. As a result, there could be more streamlined headline indicator wording. This information can be pulled from the resource mobilization reports by Parties as well as OECD statistics that capture government expenditure by function (0504: protection of biodiversity and landscapes). While there is a clear need to establish a common framework to assess and track private finance for biodiversity, it is unclear how this indicator will be operationalized, what means are being proposed to capture and collect this information, and if the responsibility falls to Parties to collect and report on this information. If reporting would be through Parties' reports on resource mobilization to the CBD, this indicator could be feasible.	N/A	Alternative wording could be "Public expenditure and private expenditure on conservation and sustainable use of biodiversity and ecosystems".
It should include all national and international sources. we are convinced of the need of having a quantitative element		Efficiency and effectiveness index in the execution of resources for biodiversity
Most developing countries do not have substantial studies on this topic.		
At the end of Target 18 it should be included "especially for developing countries". It is necessary to enhance some mechanisms to allow equitable access to international funds for Parties that have fewer resources. The international cooperation and the financial mechanisms need to improve the ways of support the developing countries and incorporate in this action.	we suggest: 18.0.1 National and international assistance to capacity-building, technology transfer, scientific cooperation and investments or expenditures from many sources on conservation and sustainable use of biodiversity are increased (need some measure unit).	
Yes, to be rephrased. The indicator focuses on Official Development Assistance, while the term used in the context of the CBD financial reporting framework is "international financial resource flows", with a very clear definition accepted by CBD Parties and implemented over the last years. This is the term to be used, i.e. this	Yes, but requires further work in its design	Indicator name (rephrased): Domestic flows and/or [X] countries having done a National Biodiversity Finance Plan. Organization: OECD Use DAC indicators in order to avoid duplications and/or possible contradictions between data

indicator should not single out ODA. The indicator should then integrate 'domestic flows', and possibly an element on countries having done a National Biodiversity Finance Plan.		
The indicator mentions Official Development Assistance, while the term used in the context of CBD financial reporting is ,international financial flows'. This is the term to be used. Focusing on ODA is problematic because Parties should have a broader definition of international flows than just ODA, building upon the current CBD financial reporting framework.		
The indicator should be separated to measure the three different components. Not all countries have the capacity to report on all the elements included in the indicator.	Countries would require the capacity to determine baseline information and the spend in the various categories as that data is not necessarily being captured presently.	
According to paragraph 106 in the CBD/SBSTTA/24/3/add2, domestic sources are far larger than international public finance for biodiversity. The indicator should allow us to assess wider range of international and domestic resource mobilization, such as resources mobilized to areas that relate to indirect drivers and eight 'Transitions to sustainable pathways' identified in the GBO5. Therefore, we propose revising headline indicator 18.0.1 as follows so that the indicator can allow us to assess wider range of international and domestic resource mobilization; "18.0.1 Public expenditure and private expenditure on conservation and sustainable use of biodiversity and ecosystems at international and domestic levels". Furthermore, as pointed out in paragraph 109 of the document and CBD/SBI/3/5, the target and corresponding indicators should reflect the following three pillars in a balanced manner. Therefore, the last pillar (improve the effectiveness of mobilized resources) should be covered by this target and measured by a corresponding headline indicator; - increase mobilized resources from all sources - reform (reduce and phase out) resource mobilization (subsidies and incentives) harmful to biodiversity - improve the effectiveness of mobilized resources		
		This indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative. However, not only the number of resources must be indicated, but also the effectiveness of the use and destination

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		It is suggested the attraction of private sources as well as mixed financings.
All elements of the target should be reflected in the headline indicator to ensure progress can be measured against all elements.		'New', 'Additional', and 'Effective' should be added to capture the scope of the target. The headline indicator would also benefit from including provision to monitor capacity building or technology transfer components of the target.
Capacity building		
Data necessary to calculate this indicator is not available in all countries. There is no methodology of how to calculate expenditures on biodiversity, especially when it comes to private resources.	See above	
The indicator mentions Official Development Assistance, while the term used in the context of CBD financial reporting is "international financial flows". In order to be effective in terms of monitoring transformative change regarding resource mobilization (RM), this indicator needs to be divided into several sub-indicators to address all financial sources (public and private, domestic and international).	See above.	Agenda 2030 Indicator 15.a.1. - Official development assistance on conservation and sustainable use of biodiversity; and (b) revenue generated and finance mobilized from biodiversity-relevant economic instruments; metadata last updated: 20 April 2020; (https://unstats.un.org/sdgs/metadata/files/SDG-indicator-metadata.zip) OECD has a number of indicators deriving from efforts to track economic instruments and finance for biodiversity (https://www.oecd.org/environment/resources/Tracking-Economic-Instruments-and-Finance-for-Biodiversity.pdf).
Target is inconsistent with Goal D. Here we could use subtargets for the Goal D. We need to increase mobilization of ALL resources, including domestic and not just the ones mentioned in the target /indicator.	Need to include ALL sources in the target as means of increasing the financial resources, including domestic ones, otherwise this is not balanced. Indicator does reflect domestic public flows, which is good.	
This indicator is still under development and so is difficult to comment on, however it should be reworded as the proportion of required resources to implement the framework met through official development assistance, public expenditure and private expenditure.	Not yet possible to say as indicator is still under development.	
In order to evaluate this indicator, more methodological information is needed. There is a risk to overlap with indicator D.0.2 National funding for implementation of the Global Biodiversity Framework*. In order to provide with sound and complete information to measure progress in the target, such indicator should cover expenditure form all relevant sources, and not be limited to ODA or other specific limited sources.	In order to evaluate this indicator, more methodological information is needed. There is a risk to overlap with indicator D.0.2 National funding for implementation of the Global Biodiversity Framework*	

very difficult to collect the relevant information	Same as above	
		SE considers it difficult to see what a metric for financial resources (including capacity building measures) could look like. Is the idea that it should be measured in financial means earmarked for the goals and targets in the framework? Official development assistance (ODA), domestic resource mobilization and private sector development are mentioned in the proposed main indicator 18.0.1. These are important resources that should be included in a follow-up, but it is unclear how an indicator would be formulated.
We propose to change the wording as such: All international and domestic public private financial resources for conservation and sustainable use of biodiversity and ecosystems We suggest changing the wording to capture all the relevant financial resources flow and to be precise about the types covered.		
We would need to identify robust and comparable means for identifying which financial flows constitute 'expenditure on conservation and sustainable use of biodiversity and ecosystems.' Tracking private financial flows could, for commercial reasons, be particularly challenging.	Further consideration needed on how private expenditure on biodiversity will be measured.	
		For larger countries or countries with complex economies we consider that this indicator is not feasible. Moreover, we believe that private expenditure would be almost impossible to quantify since there is no required reporting. We note that the OECD has been collecting public biodiversity expenditure information (https://www.oecd.org/environment/resources/biodiversityfinance.htm), but more work is likely needed to standardize the information included.
We would need to identify robust and comparable means for identifying which financial flows constitute 'expenditure on conservation and sustainable use of biodiversity and ecosystems.' Tracking private financial flows could, for commercial reasons, be particularly challenging.	Further consideration needed on how private expenditure on biodiversity will be measured.	

Target 19. By 2030, ensure that quality information, including traditional knowledge, is available to decision makers and public for the effective management of biodiversity through promoting awareness, education and research

19.0.1 Biodiversity information index*

19.0.1 If you selected "yes, however requires further work", please describe:	19.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	19.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		The use of national ecosystem assessment in planning and decision making processes
		Number of biodiversity information data from technical and scientific sources, including citizen science.
Canada is of the understanding that this indicator does not exist yet and therefore would need more information before agreeing as to its utility.	N/A	N/A
It should account for different knowledge systems and information needed to achieve goals and targets. It could integrate the two dimensions: the quality and availability, and the mainstreaming of this information (HI. 19.0.2)	It does not exist, for which it would be necessary to develop clear standards and methodologies so that it can be reported at global and national levels, and capacity building will be needed for data management and analysis so that parties can include this type of information in their information systems	
This indicator has not been developed, so its relevance at the global and national level cannot be determined	This indicator has not been developed, so its relevance at the global and national level cannot be determined	The development of an indicator focused on traditional knowledge is strongly recommended
For our country, Target 19 is subject to financing and scientific and technological transfer from developing countries to achieve convenient information systems, for that reason need a scientific support because is a new way to measure this issues. The things that measure in this indicator should be more share quality information available to public and decision makers.	Is important to strengthen the national information systems to achieve this target in all the levels with capacity building and financial issues	
		We do not really know what this indicator measures. If it measures only the amount of data in databases that would not be enough to make infor-mation available to decision makers.

		Proposed alternative indicators: - number of countries having a Biodiversity Observation Network (BON= based on 100% data matching FAIR & CARE principles). Organization: GEO BON - Aggregated number of Community Based Monitoring and Information Systems (CBMIS) - Growth in species occurrence records accessible through GBIF. Organization: GBIF - Trends in public awareness, attitudes and behavioural change with regard to biodiversity and its values via quantitative surveys. - Presence of biodiversity in the public discourse in traditional and on-line media, including social media
This indicator is based on remote sensing. It does not take other aspects, such as traditional knowledge and cultural and biodiversity awareness into account, and needs to be accordingly extended.	See above.	
Indicator 19.0.1 remains unclear if it encompasses ITK, and which type of information is being monitored.		
I don't know how this indicator is assessed		
No information on this indicator was provided in SBSTTA/24/INF16. What is the relation to other indicators? Target 19 encompasses two targets: availability of information + education & research. Alignment with 8(j) and the new work programme and proposed indicators needed. Could be replaced with a simple indicator documenting the number of countries having a Biodiversity Observation Network based on 100% data matching FAIR & CARE principles. Criteria for a proper coverage by the BON to be addressed. General point on headline indicator for Target 19 for its public awareness/education part: currently focus is only on making information available but fails to address that we need not only awareness but also behavioural change.		Number of countries having a Biodiversity Observation Network based on 100% data matching FAIR & CARE principles. Criteria for a proper coverage by the BON to be addressed. (see also D.0.1.)
Need capacity building to carry out data collection for reporting	Needs to be disaggregated at the national level and needs capacity building support to track	
Es necesario reformular el indicador por algo que se más fácil de reportar/interpretar.		

The component to measure in this index are unclear, they should be on ecosystem, specise and genetic diversity levels.	See above, requires further development	
To which degree information on biodiversity is publicly available is important, though more precise guidance on how to measure this metrics is needed.	Only if our proposal for amendment as described above is reflected in the text of this indicator.	
		This indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative.
Assist countries to put in place an internal framework for data collection.	Build in-house capacity to identify the type of data needed to inform this index and analyze them. Also need to specify the type of data required as this will help country identify funds for collecting information.	
		Target 19 is weak and unclear on actual use and appreciation of traditional knowledge in nature conservation, and the proposed indicators for target 19 do to a too small extent highlight the clear need for greater recognition of the contributions from indigenous and traditional knowledge. Indicators that could rectify this, could be tied to component 19.4, and could be the following:

Trends in full integration of traditional knowledge on free, prior and informed consent of indigenous peoples, and participation of indigenous peoples in national implementation of the global biodiversity framework, NBSAPs and national reporting |
| Capacity building | | |
| | | This indicator is at a very early stage of development, we do not know anything about it so it is difficult to take position. |
| | | Number of countries having a Biodiversity Observation Network based on 100% data matching FAIR & CARE principles.
See Moussy et al. (2021) A quantitative global review of species population monitoring. Conservation Biology https://doi.org/10.1111/cobi.13721
Index of Biodiversity Awareness, e.g. Millard J Gregory RD Jones K & Freeman R. (2021) The species awareness index as a conservation culturomics metric for public biodiversity awareness. |

		Conservation Biology https://doi.org/10.1111/cobi.13701
Not clear where the data is for this indicator and how exactly it would be defined, so its difficult to comment it.		
The concept of an indicator that aggregates species occurrence and available ecosystem extent and condition data records per country is welcome and could be a fairly simple metric to develop. However at present this is not a fully developed indicator with clear methods. A very simple alternative to this index is a count of the number of National, Thematic and Regional Biodiversity Observation Networks or BONS registered with GEOBON.	A clear methodology that, for example, pulls together the number of useful GBIF records and ecosystem map data, and number of species and ecosystem risk assessments would be required to make this indicator a reality. This could be globally computed and then supplemented with national data. The establishment of National BONs requires some capacity development and commensurate resourcing.	A very simple alternative to this index is a count of the number of National, Thematic and Regional Biodiversity Observation Networks or BONS registered with GEOBON.
	We need more information on the methodology used for this indicator, in order to evaluate the possibility of measuring and using it.	Information provided to the Aarhus Convention.
More awareness needed regarding this	Same as above	
SE believes that the indicator 19.0.1 (Biodiversity information index) should be clarified and improved and be clear about how ILK is included. There are several existing indicators on ILK that can be used. SE suggests considering an HI or at least a component indicator for research funding.	SE cannot recommend this HI 19.01 until the intended data sources to feed the indicator is clarified. The INF 16 document does not provide this information. What is the status of the suggested component and complementary indicators in relation to HI 19.01? Also the intended custodian for this indicator would be a useful information.	SE thinks that the suggested component indicator "Share/Number of Community Based Monitoring and Information Systems (CBMIS)" should be included in an HI information index such as 19.01. SE supports an additional HI on traditional knowledge (ILK), such as: • Number of countries that apply CBDs voluntary guidelines on ILK (e.g. 14/12; XIII/18) • Trends in degree to which traditional knowledge and practices are respected through: full integration, participation and safeguards in national implementation of the GBF, national reporting and NBSAPs (decision X/43) – will need to be adapted to the post 2020 GBF • Number of states with (IPLC representatives as) designated national focal points on article 8(j) and related provisions • Number of countries that ensure that "traditional knowledge is valued, given the same respect and considered as useful and necessary as other forms of knowledge" (in line with the principles of the 8(j) PoW

		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels.
We are unclear what this index measures, so we cannot determine whether we think that it would be relevant.		
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels.
19.0.2 Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessments		
19.0.2 If you selected "yes, however requires further work", please describe:	**19.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**19.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
TK		
We miss the link with biodiversity in the indicator, even if based on SDG indicators. It should include the integration of biodiversity. HI proposal: 19.0.2 Extent to which biodiversity is included in (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, and are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessments.		
The indicator needs further clarification on how it will be measured.	The indicator needs further clarification on how it will be measured.	
This is tangible and would help measure progress on awareness of the values of biodiversity.	Further capacity would be needed to implement this indicator.	"Trends in which indigenous and local knowledge, innovations, practices, and technologies are respected through their full integration, safeguards and the full and effective participation of Indigenous peoples and local communities in the national implementation of the Global Biodiversity Framework*" (which would be more relevant re: decision XIII/28).

	Generate mechanisms to incorporate IPLC's in this processes, as well as in its implementation	
In our country we are not developing this indicator and we need capacity building to use this indicator and Extent is not a measurable way, requires a measure unit, in order to quantify the progress.	As mentioned, need more clarification how measure the progress and is important to standardizing the methodology of obtain data to achieve the target, i.e: number of politics, plans, syllabus and others.	
		Impossible to address indicator without addressing target itself Suggested to have an indicator on science/research. There are indicators of the share of biodiversity in the research budget (Rio markers, and their performance), but possibly not as headline indicator
Yes, but with some modifications: Include business schools..		
		See 19.0.1
The indicator looks quite complicated		
The link with biodiversity is missing in the indicator, even if based on SDG indicators. It should be formulated to: "Extent to which biodiversity is included in (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, and are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessments".		
The extend must be measurable		
	Needs capacity building support to track	
Hay que enmarcar el indicador en "Biodiversidad", tal como esta parece que aborda otros elementos que van más allá de la Meta y del CDB.		
		The index seems unrelated to the target. Education measures for this target should be focused on biodiversity
The indicator seems to be focused mainly on school education and it doesn't foresee any monitoring of educational and informative programs for decision	Data population for this indicator requires further work on capacity-building of National Authorities, in	

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makers. Furthermore, no reference is made to the monitoring of formal/informal educational programs specifically aimed at the spreading of awareness and information among adult stakeholders.	order to build or improve standardized and comparable data collection systems.	
Although education for managers and employees in the private sector is essential for implementing production and business activities with consideration for biodiversity, such aspect is not clearly reflected. Hence, we suggest to add another element to this indicator, such as "Extent to which … and (e) management education and employee education of private companies".	Only if our proposal for amendment as described above is reflected in the text of this indicator.	
Suggests further work to make the indicator more streamlined. Malaysia reports progress on education for sustainable development to the United Nations.		Malaysia requests further clarification on individual elements of the indicator.
Although communication, outreach, and information gathering or research are closely related, it is hard to have all these elements in one single target and then try to measure progress. Traditional knowledge is missing.		
	Capacity building required.	
We would like to see Traditional Knowledge reflected in this Headline indicator		We propose: "Extent to which traditional knowledge is acknowledged in legislation and policies relevant to biodiversity"
This indicator should refer to education on biodiversity or that includes issues related to biodiversity and not education as such – this issue should be clearly underlined. It should also be clarified what is meant by extent to which certain elements are mainstreamed in the education system and how it should be measured.	This indicator has to be clear and understandable, with explanation of what and how should be measured and how the value of indicator should be calculated. Additionally introduction of this indicator at the national level would require substantial capacity building outside the nature protection sector as it would require involvement of the sector of education, including training etc.	
Biodiversity should be mentioned: "Extent to which (i) global citizenship education, including on biodiversity, and […]"	See above.	
		It is not relevant and there are too many headline indicators, indicator 19.01 is sufficient.
Very complicated indicator . It should be simple and understandable	Need more awareness and capacity building to use this indicator	

	SE thinks there is a need for mechanisms to secure that education for sustainable development builds on the most up-to-date knowledge base on biodiversity and that it addresses potential trade-offs as well as synergies between SD and the protection and sustainable use of biodiversity.	
		This indicator does not measure the overall progress of the target, and we think this indictor may extend beyond the convention mandate
We are not clear how would this be measured, and what "extent to which" means in this context.		

Target 20. By 2030, ensure equitable participation in decision-making related to biodiversity and ensure rights over relevant resources of indigenous peoples and local communities, women and girls as well as youth, in accordance with national circumstances

20.0.1 Land tenure in the traditional territories of indigenous peoples and local communities

20.0.1 If you selected "yes, however requires further work", please describe:	20.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	20.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
Suggested edit: 'Extent of indigenous peoples and local communities' lands that have some form of recognition, or over which they have some control, by type'. It is important to recognise that land tenure is not the only, nor necessarily the most meaningful, way that Indigenous peoples are able to exercise self-determination over their traditional lands, although it is a critical starting point.		
Canada is very supportive of the intent of this indicator and technically has no concerns with it but notes that it only captures one aspect of Target 20 in addressing land tenure rights and does not address participation.	Capacity building would be needed both to report on this indicator and implement this target.	More evaluation would be needed in terms of which other rights might be relevant and if they can be measured for this target. An indicator on participation also needs to be considered.
		The issue of land tenure rights exceeds the framework of the CBD
Acknowledgement of traditional systems	Acknowledgement of traditional systems. Generate mechanisms to incorporate IPLC's in this processes, as well as in implementation	
Should be aligned with decision X/43 (land-use change and land tenure in the traditional territories of indigenous and local communities). Alignment with 8(j) and the new		

work programme and proposed indicators uner WG8j is needed.. This target is not only about IPLCs		
In our country we are not developing this indicator and we need capacity building to use this indicator.	We need more researches, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	
Needs to take into account the principles of the programme of work on article (8j).		
Lacks elements on free, prior and informed consent (FPIC) of Indigenous peoples and local communities.	See above.	
Participation in decision-making is related not only to land tenure. As I understand, this is something like when the IPLCs have right by law to participate in decision-making e.g. through public hearings, etc.		
Should be aligned with decision X/43 (land-use change and land tenure in the traditional territories of indigenous and local communities). Alignment with 8(j) and the new work programme and proposed indicators needed. This target is not only about IPLCs. What about an HI on first part of target (equitable participation in decision making related to B).		
	Needs to be disaggregated at the national level and needs capacity building support to track	
Tenencia o "Reconocimiento de Derechos sobre la Tierra". La tenencia de las tierras en países subdesarrollados, como Guatemala, es un verdadero problema, por ej. los registros de la propiedad de la tierra son incompletos. Paralelo se trabaja en "Acuerdos de permanencia" "áreas concesionadas para el uso sostenible de diversos tipos de servicios ecositémicos" etc., que bien pueden aportar a esta Meta, siempre y cuando el indicador lo reconozca.		
Land tenure might be not the only or the most relevant measure of access to relevant resources	See above	
The indicator is unconsolidated and lacks coverage on a global scale, being available only in some countries. However, even with these limits and restrictions, it is necessary to focus on this indicator, because there is a need to populate indicators that refer to the targets of the 13-20 group and to give completeness to the entire global		

biodiversity framework and to the Theory of Change of the Framework. Even if it is a unconsolidated indicator, countries will be incentivized to make efforts to develop them thanks to the help of science and competent institutions, both international and national.		
Malaysia suggests replacing land tenure with acknowledgement of land		Malaysia suggests using following indicator "Acknowledgement of land rights in the traditional territories of IPLC".
What is the expected meaning of the indicator: that it should grow, decrease or increase?		
It is unclear what this indicator is trying to measure. Need to include more information.	It is unclear what this indicator is trying to measure. Need to include more information.	It is unclear what this indicator is trying to measure. Need to include more information.
Capacity building on land tenure assessment and monitoring		
	This indicator is not relevant for all countries.	
The HI should be aligned with decision X/43 (land-use change and land tenure in the traditional territories of indigenous and local communities).	See above.	
SE supports HI 20.0.1 (Status and trends in land-use change and land tenure in the traditional territories of indigenous and local communities) adopted by CBD Decision X / 43.		
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. Further work is required to identify relevant and appropriate indicators in relation to IPLCs, their rights, ownership and access to land and resources within the monitoring framework.
We are not certain how land tenure can be assured – do we mean that it is legally guaranteed or required? In our view this indicator would need to take into account traditional forms of land rights and inheritance and respect the role of indigenous laws and practices as self-determining communities.		
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. Further work is required to

		identify relevant and appropriate indicators in relation to IPLCs, their rights, ownership and access to land and resources within the monitoring framework.
20.0.2 Population with secure tenure rights to land		
20.0.2 If you selected "yes, however requires further work", please describe:	**20.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**20.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		It isn't clear how this indicator is different to 20.0.1.
Include environmental defenders right in the indicator		
As with the other target 20 proposed headline indicators, Canada supports the intent of this indicator in focusing on secure tenure rights to land and being inclusive in capturing different groups including Indigenous peoples and also local communities. However, in terms of being one headline indicator to capture the intent of the whole target, it does not work at the moment as it does not capture all rights (only land rights) and does not address participation.	Capacity building would be needed both to report on this indicator and implement this target.	More evaluation would be needed in terms of which other rights might be relevant and if they can be measured for this target. An indicator on participation also needs to be considered.
		Number of mechanisms for consultation and social participation for environmental decision-making, planning and territorial and sectoral ordering. No. of instances of effective participation based on the right to a healthy environment, consultation and participation, generating the conditions conducive to advancing in local organizational processes
	Generate mechanisms to incorporate IPLC's in this processes, as well as in implementation	
We need to know how we can enhance standardization and comparability data	We need more researches, collect information, design and to know how we can implement this indicator. We need to know how we can enhance standardization and comparability in national reporting.	
		The link between tenure rights to land and biodiversity conservation is not established.
again, there may be a decision-making on something else that the land tenure. e.g.		

		The proposed HI is not very relevant for biodiversity. HI links with short version of the SDG indicator. The original SDG indicator is referring to land use/agriculture: Indicator 5.a.1 - (a) Percentage of people with ownership or secure rights over agricultural land (out of total agricultural population), by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure.
Needs to be disaggregated at the national level and needs capacity building support to track	Needs needs capacity building support to track	
Con mejorar el indicador 20.0.1 es posible prescindir de este indicador		
See comments on previous indicator		
The indicator is unconsolidated and lacks coverage on a global scale, being available only in some countries. However, even with these limits and restrictions, it is necessary to focus on this indicator, because there is a need to populate indicators that refer to the targets of the 13-20 group and to give completeness to the entire global biodiversity framework and to the Theory of Change of the Framework. Even if it is a unconsolidated indicator, countries will be incentivized to make efforts to develop them thanks to the help of science and competent institutions, both international and national.		
Indicator needs to respond to the target which lists women, girls, etc. Population needs to qualified.	The indicator will have to take into account that there are different regimes for land tenure in different countries.	
What is the expected meaning of the indicator: that it should grow, decrease or increase?		Needs more work
Capacity building on land tenure assessment and monitoring		
		SDG Indicator 5.a.1 - (a) Percentage of people with ownership or secure rights over agricultural land (out of total agricultural population), by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure
The target component 20.2 should secure the participation of women in decision making related to the conservation and sustainable use.		

		There are too many headline indicators, 20.01 is sufficient here.
The target component 20.2 should secure the participation of women and girls in decision making related to the conservation and sustainable use, as well as their access to relevant resources. This is not clearly targeted in this suggested indicator 20.0.2. Better targeted indicators on participation in relevant decision making processes and rights to a safe, clean, healthy and sustainable environment are needed, such as UNHCR indicators. "Number of countries that recognise the right to a healthy environment through their constitutions, legislation or as parties to legally binding regional treaties" (see UNHCR Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, David R. Boyd. (A/75/161).)		
We suggest to use the indicator SDG 5.a2: Proportion of countries where the legal framework(including customary law) guarantees secure rights to land ownership and/or control		
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or complementary levels. It is not clear who this indicator is for, and whether this is for IPLCS, and whether it includes freehold / leasehold property, or covers tenant farmers. Further work is required to identify relevant and appropriate indicators in relation to IPLCs, their rights, ownership and access to land and resources within the monitoring framework.
We are not clear whether this is meant to refer to everyone or just specific populations and this could usefully be specified to add clarity. In addition, we recommend this indicator be disaggregated by gender. We believe it would be useful to take into account traditional forms of land rights and inheritance, and to respect the role of indigenous laws and practices as self-determining communities in ensuring secure tenure rights to land.	We anticipate that capacity building will be needed to ensure that traditional forms of land rights and inheritance, and respecting the role of indigenous laws and practices as self-determining communities are taken into account.	
		We do not consider this indicator to be appropriate as a headline indicator, but feasibility of this indicator could be further assessed at the component or

| | | complementary levels. |
| | | It is not clear who this indicator is for, and whether this is for IPLCS, and whether it includes freehold / leasehold property, or covers tenant farmers. Further work is required to identify relevant and appropriate indicators in relation to IPLCs, their rights, ownership and access to land and resources within the monitoring framework. |

20.0.3 Extent to which indigenous peoples and local communities, women and girls as well as youth participate in decision-making related to biodiversity*

20.0.3 If you selected "yes, however requires further work", please describe:	20.0.3 If you selected "yes, however requires further work on capacity-building or other work", please describe:	20.0.3 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
This target is not only about IPLCs. What about an HI on first part of target (equitable participation in decision making related to B) HI Proposal: 20.0.3 Trends in equitable participation in decision-making related to biodiversity.*		
the indicator requires a national definition for decision-making process related to biodiversity	the indicator requires the development of monitoring capacity at the national level	
		We suggest the exclusion of this indicator, because it is not measurable.
Canada notes that this proposed headline indicator is not operational yet. Canada supports the intent of this proposed indicator to capture the rates of participation of IPLCs, youth and women in decision-making but, as a new indicator being proposed, Canada has doubts about its overall measurability.	It is unclear as to what information would be used and how Parties would report against this indicator. The indicator also does not address both rights and decision-making, if only one headline indicator is to be used. If these aspects could be clarified, Canada would be supportive of this indicator in principle.	As an alternative headline indicator that would capture participation in decision-making, Canada could propose the existing SDG indicator 16.7.2 that measures the percentage of population who believe decision making is inclusive and responsive. This indicator can be disaggregated by sex, age, and population group (SDG indicator 16.7.2) and therefore provide insight into the experiences and views specifically of women, youth and IPLCs. The wording is: "20.0.3 Alt Percentage of population who believe decision making is inclusive and responsive, by sex, age, disability and population group (SDG indicator 16.7.2)."
A more efficient way of measuring, would be the improvement in the mechanisms and platforms available for the participation of IPLCs, women, girls and youth,		

both in accessibility and quality of the participation mechanism.		
According the annex I, this indicator should be reviewed for a group of technical experts on indicators for the global framework of biodiversity post 2020. Extent is not a measurable unit, we can think in number of policies, plans and others.	The use of this indicator depends on the analysis and result of the work carried out by the group of technical experts on indicators for the post-2020 global biodiversity framework. Extent is not a measurable unit, we can think in number of policies, plans and others.	
Need for addressing a qualitative rather than quantitative focus of the indicator. E.g. by using wording such as "full and effective" or "equitable" participation and as such focus on the possibility to influence outcomes.		
Yes but the rights of youth and future generations / intergenerational equity are not reflected in the headline indicator or any other proposed indicator. Safe participation in decision-making is not reflected (protection of environmental defenders and stakeholders).		
Will need reference to the quality of participation "are able to fully and effectively participate...": Extent to which indigenous peoples and local communities, women and girls as well as youth in the are able to fully and effectively participate in decision-making related to biodiversity.

Meaningful indicators on youth participation & rights are crucial, but might likely not yet be operationalized. These will have to be developed with the full & effective participation of youth through a separate process such as through the work of the expert group on indicators. | See above. | |
| HI should bring more guarantee than "extent to which" | | |
| Difficult to assess extent, what do we mean under that | | |
| The rights of youth and future generations / intergenerational equity are not reflected in the headline indicator or any other proposed indicator. Safe participation in decision-making is not reflected (protection of environmental defenders and stakeholders). Options:
§ Trends in equitable participation (to comply with first part of the target)
§ Number of countries that recognize IPLCs and ILK in their NBSAPs (see LBO). | | |

The extent must be measurable		
The indicator is unconsolidated and lacks coverage on a global scale, being available only in some countries. However, even with these limits and restrictions, it is necessary to focus on this indicator, because there is a need to populate indicators that refer to the targets of the 13-20 group and to give completeness to the entire global biodiversity framework and to the Theory of Change of the Framework. Even if it is a unconsolidated indicator, countries will be incentivized to make efforts to develop them thanks to the help of science and competent institutions, both international and national.		
The indicator needs to be more inclusive and should be expanded to include men, boys and other disadvantaged groups. Participation needs to be equitable. Alternatively it could be worded "Extent to which indigenous peoples and local communities, women and girls as well as youth participate have increased their consistent participation in decision-making related to biodiversity".		
We support for such a headline indicator, though more precise guidance on how to measure this metrics is needed.		
Mexico thinks it is key to have relevant stakeholders included in the GBF, but we are worried to mention some of them and maybe leave out others. We also wonder if we should specifically include stakeholders in one target, or should they be an integral and transversal part of the GBF? It seems important to include them in every goal/target and have indicators to follow up on their inclusion/participation in many cases		This indicator has not been developed and would be useful to have the elements and information, and baselines that will use for its construction before giving a suggestion or alternative
Need an advanced set of criteria to be able to quantify		
		Number of countries that recognize IPLCs and ILK in their NBSAPs (see LBO)
Attributes need to be identified to collect information on this target	Same as above	
A component that should be included in the scope is to protect "human rights and environmental defenders", as full and effective participation is only possible if people		

can express their interests in related processes without feeling threatened or harmed. Relevant indicator: Proportion of environmental human rights defenders reporting having personally felt discriminated against or harassed in the recognition of rights over relevant resources in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law (modified according to SDG indicator 10.3.1). The participation and recognition of IPLC rights requires its own headline indicator e.g. Number of countries that recognize IPLCs and ILK in their NBSAPs (see LBO-2). SE supports that all relevant indicators about human population should be gender-disaggregated to measure the progress of and in line with the CBD's Gender Plan of Action. SE wants to flag that the rights of young people and future generations are not reflected in the headline indicators or any other proposed indicator. SE supports the development of an indicator in intergenerational equity.		
This an important issue which requires further consideration within the monitoring framework. It is not clear how this indicator will be quantified, and better clarity is required of the different terms, and whether girls can be included in youth.	It is not clear whether this indicator is aimed at local, national or international levels, or all levels.	
In our view, the term "extent to which" seems unclearly defined and difficult to measure. Unless there is a proposed way for measuring different types of participation, we would recommend "Participation of indigenous peoples and local communities, women and girls as well as youth in accordance with national circumstances." We also note that it may be useful to seek to include community elders, who are often the knowledge-holders.	We anticipate that capacity building would foster effective use of this indicator, including participation of indigenous peoples and local communities, women, girls, youth, and elders.	
This an important issue which requires further consideration within the monitoring framework. It is not clear how this indicator will be quantified, and better clarity is required of the different terms, and whether girls can be included in youth.	It is not clear whether this indicator is aimed at local, national or international levels, or all levels.	

This information is provided in a preliminary and constructive manner. The list of headline indicators should be significantly reduced if it is intended to receive information on all of them by all Parties. Indicators should be finalized once the goals and targets of the GBF are finally adopted.

A demanding set of headline indicators can lead to less ambitious national targets and commitments

no

We believe there is an overabundance of headline indicators and would prefer to reduce their number in order to make them simpler and clearer, which we think would benefit their monitoring and compliance.

The technical recommendations that Costa Rica raises in this survey do not necessarily represent acceptance of the current Goals and Targets, nor the general structure of articulation between goals, targets and indicators.

Add1 proposed the focus of indicators proposed for the goals is on outcomes and the focus of indicators proposed for the targets is to monitor the actions taken to reach the targets and their impacts. However, this criteria has not been applied in the current proposal of headline indicators.
A structured alignment with SDG indicators woudl be beneficial

The current set of headline indicators constitutes too many for mandatory reporting by parties. Thus, there is a need to reduce the number of proposed HI. Prioritization among HI is needed.

Data must be disaggregated by age, sex, and indigenous status wherever possible and relevant, so that the current and future indicators can monitor outcomes for youth, women, Indigenous peoples and local communities.

There is a key gap in the target, as it fails to harness as a strategy the transformative role that formal, non-formal and informal education can play in addressing many underlying drivers of biodiversity loss. Add.2/Rev.1 clearly mentions that Article 13 of the convention on public education and awareness is not sufficiently addressed by targets 15 and 19; and that values are only partially addressed by target 13.

Current targets therefore fail to recognize the wide consensus identifying education as a key enabler for sustainability and as a leverage point for transformative change. This is identified by landmark reports, including the IPBES Global Assessment and the Dasgupta Review.

While Target 19 mentions education, there is a clear gap, as this target only refers to availability of information. We believe that education plays critical roles beyond this in terms of shaping values and behaviours, and having great potential to address continued disconnection from nature. This dimension is currently not captured by any of the current targets. We strongly believe that education should be given the level of attention and importance that experts believe it deserves.

The data used for the calculation of LPI is poorly curated for many nations. We are aware of many high-quality data that have not been incorporated to the Living Planet Database
• Due to the problems with interpreting the index, no clear meaning or use of the index can be formulated.
• LPI is not nationally relevant, due to low data availability and lack of national curation of the data.
• The LPI data is practically about vertebrate populations, and these are already covered by Red Lists and Red List Indices.
• It is better to have few salient indicators that are well aligned with the goals. In this respect, we support building more capacity to develop IUCN Red Lists and Red List Indices for wider geographic and taxonomic reach, and for national scales everywhere.
The Headline Indicators should monitor the 3 dimensions of biodiversity, the 3 objectives of the Convention, and the 5 direct drivers as well as the main indirect drivers of biodiversity loss.

Additionally, given that HI are meant to be mandatory in terms of national reporting, it would be much advised to establish a short list of HI that covers the most important aspects/issues of the post-2020 goals and targets, covering the full scope of the framework, in order to meet three objectives: 1) generate political commitment and serve communication purposes, 2) assess progress on the outcomes and actions at national, regional and global level and enable aggregation of national data in a global stocktake, 3) ensure accountability. It is of crucial importance that the limited set of HI covers all issues related to biodiversity, and that components and country specific indicators should contribute to HI. We have to make sure, with this limited set of HI, that an improvement in all HI lead to an effective positive outcome for biodiversity, allowing its sustainable use and the access and benefit sharing of it. Thus, headline indicators would allow for consistent, standardized and scalable tracking of global goals and targets.

HI should include, as much as possible, indicators that are currently available for monitoring at global, regional and national level under Agenda 2030 and relevant Multilateral Environmental Agreements, or that would be feasible to develop (and to mobilise data for) in the near future.

Germany (DE) considers it crucial to ensure that a limited number of Headline Indicators are adopted at COP15 to assess progress towards goals and targets and communicate widely about the outcomes collectively agreed to be reached by 2030 and 2050. DE supports defining the full set of indicators at COP15, and the missing indicators to be developed by COP16 at the very latest. We support adopting the monitoring framework of the GBF as an annex to the COP decision.

DE considers equally important to identify a set of indicators to ensure Parties' and all relevant stakeholders' accountability on the action targets collectively agreed to be reached by 2030. This framework should be consistent with the mechanisms for monitoring, reporting and review of implementation (SBI-3 Agenda Item 9), especially with regard to tracking progress on implementation.

Indicators should be closely interconnected with related goals and targets and reference period(s) or other appropriate methods for monitoring changes in biodiversity.

Indicators should be aligned as much as possible with those developed by other relevant Multilateral Environmental Agreements (MEAs), including biodiversity-related conventions, the Rio conventions, hazardous chemicals and wastes conventions, relevant organizations and their programmes including regional organizations, e.g. regional seas conventions, and other relevant processes.

The monitoring framework and indicators should also be in line with SDGs and regional agreed indicators, as appropriate. The monitoring of environmental status especially of the marine ecosystems should be coordinated by Regional Seas Conventions and headline indicators should be harmonized among regions. Other regional indicators should also be considered.

DE also supports having an ad hoc technical expert group on the monitoring framework which should conclude its work preferably before COP16. It needs to be involved in keeping the Monitoring Framework under review.

The Headline Indicators must be 'SMART'

There are key components in the goals and targets for which headline indicators are currently missing, especially for Goal A: connectivity, integrity, genetic diversity.

The number of headline indicators should be reduced. Given that it is intended that all Parties should be able to report on these indicators, their development must take into account the different capacities of Parties and the availability/capacity to collect baseline information in particular for indicators that are under development. The indicators should be clear and methodologies provided for all. The availability of the methodologies for the indicators would have aided in the review.

Japan is of the view that biodiversity issues can be divided into two categories; one is those that should be addressed by adding up global efforts by Parties, and the other is local issues that should be addressed based on regional characteristics. Hence, indicators and the monitoring method should be different depending on the characteristics of goals and targets.

Specifically, headline indicators could be applied only to those goals and targets that have numerical aspects and that require global efforts and ratcheting-up of such efforts (Goals A, C, and Targets 1, 2, 5, 12, 14, 17). This is because, indicators for the following issues in the current draft documents could meet the criteria mentioned above, for instance; e.g., the number of endangered species, percentage of land covered by landscape scale land-use plans, the area of protected areas, trends of invasive alien species, (possibly) the percentage of benefits allocated for conservation and sustainable use of biodiversity from the utilization of genetic resources, negative impacts from supply chains, reduction of harmful subsidies.

On the other hand, progress towards Targets 3, 6, 8, 9 and 11 can be significantly varied depending on locality, and ratcheting-up of efforts is not easy.

Headline indicators and ratcheting-up could be possible for other remaining goals and targets, (Goals B, D, and Targets 4, 7, 10, 13, 15, 16, 18, 19, 20), though the currently proposed indicators require modifications, as aforementioned in our response.

We need technical reflection meetings to better understand the details and feasibility of the indicators

Data scarcity is a concern. If no data is available, parties should be given the flexibility to use other data or other resources to measure the required headline indicator data.

Mexico believes that this survey duplicates the efforts made by UNEP-WCMC in collaboration with the Biodiversity Indicators Partnership and incorporating inputs from peer review (CBD/SBSTTA/24/INF/16). We would have thought that developing a survey regarding the national relevance of indicators, the existence of information at national/local levels and the needs of capacity development to ensure data gathering or requirements to develop indicators at national level
There is definitely a need for further clarifications on a lot of these indicators. These clarifications will also help inform whether these are really applicable and feasible at the country/national levels especially for developing countries and small island states, with limited capacity and resources on the ground. If collection of these indicators are to be required, then proper support systems need to be facilitated and put in place to assist countries in meeting global commitments, but more importantly national priorities of sustainable development and biodiversity management and protection.
No any

1.
6.1.1. Hazardous waste generated per capita; and proportion of hazardous waste treated, by type of treatment (SDG indicator 12.4.2) should be promoted to headline indicator.

2.
All biodiversity-relevant Tier I SDG indicators should be considered as candidates for headline indicators

3.
Undeveloped/non-existent indicators (marked with *) that require a demanding/lengthy development phase should not be considered for headline indicator status
We consider that it would be appropriate to have only one main indicator for each objective and goal; and in the case that a country cannot apply the main indicator, then have the flexibility to use another as supplementary indicators.

No, Thanks you

1. Headline indicators will play fundamental role in reporting on the implementation of GBF post 2020 therefore they have to be clear, understandable, leaving no space for individual interpretation. In particular all terms that are used have to be defined.
2. Indicators used to monitor progress in implementation of targets have to fulfill the RACER criteria – they must be Relevant, Accepted, Credible, Easy and Robust.
3. Relevance of indicators depends on their measurability. It must be ensured that only those indicators are selected, for which data is already collected and easily available at the national level; otherwise reporting by the Parties will be impossible or will constitute unnecessary burden. As a result Parties will be forced to focus on collecting data rather than on implementation.
4. It must be clearly stated which organizations are responsible for which headline indicators and where to get the data from. It must be also ensured that global indicators can be disaggregated to the national level.
5. It must be also clear how to calculate concrete indicators.
Headline Indicators are the core of the Monitoring Framework that will enable the assessment of progress towards goals and targets to be agreed within the Post-2020 GBF. As such, it would be relevant to look further to the set of HI as an integrated and global system of indicators and assess it through a DPSIR model approach.
The Headline Indicators should monitor the 3 dimensions of biodiversity, the 3 objectives of the Convention, and the 5 direct drivers as well as the main indirect drivers of biodiversity loss.
Additionally, given that HI are meant to be mandatory in terms of national reporting, it would be much advised to establish a short list of HI that covers the most important aspects/issues of the post-2020 goals and targets, covering the full scope of the framework, in order to meet three objectives: 1) generate political commitment and serve communication purposes, 2) assess progress on the outcomes and actions at national, regional and global level and enable aggregation of national data in a global stocktake, 3) ensure accountability. Thus, headline indicators would allow for consistent, standardized and scalable tracking of global goals and targets.
HI should include, as much as possible, indicators that are currently available for monitoring at global, regional and national level under Agenda 2030 and relevant Multilateral Environmental Agreements, or that would be feasible to develop (and to mobilise data for) in the near future.

The monitoring of environmental status especially of the marine ecosystems should be coordinated by Regional Seas Conventions and headline indicators should be harmonized among regions. Other regional indicators should also be considered.

Thank you for organizing this survey.

Many of the indicators are very difficult to monitor for SIDS and developing countries in general due to resource constraints and data deficiency. Many of the indicators are also maintained by an external organisation, which lacks data for these countries as well. These constraints should be considered when designing these indicators so that they can be monitored by ALL countries.
Overall, we consider that the proposal of 48 headline indicators is not technically or practically feasible. The use of a smaller number of headline indicators would have higher public resonance, would communicate overall progress more effectively and have potential for national implementation by most Parties, according to capacity and capabilities. Furthermore, a list of headline indicators determined just on technical criteria would be unbalanced, have gaps in some key areas and would not meet the need for clear communication of global priorities. To address these issues, we suggest that targets are clustered under the four goals, and three or four headline indicators are chosen for each cluster (providing 12 to 16 headline indicators overall - see below).

Goal and target cluster - Goal A & Milestones A1 & A2 - Conservation (ecosystems, species, genes): Target 1; Target 2; Target 3; Target 5; Target 6. Headline Indicators: Extent/ integrity of natural and semi-natural ecosystems; Extent/ coverage and quality of Protected areas and OECMs; Threat status of species; Abundance of (vertebrate) species; Genetic diversity of wild species.

Goal and target cluster - Goal B & Milestones B1 & B2 Sustainable Use (& Ecosystem Services): Target 4; Target 7; Target 8; Target 9; Target 10; Target 11; Target 14; Target 15; Target 16. Headline Indicators: Water stress; Carbon sequestration/ carbon standards & audits; Illegal wildlife trade; Sustainable fishing; Environmental impacts of consumption of key commodities.

Goal and target cluster - Goal C & Milestones C1 & C2- Access & Benefit Sharing of Genetic Resources: Target 12. Headline Indicators: Certificates of compliance; Adoption of legislative, administrative and policy frameworks; Others to be identified.

Goal and target cluster - Goal D & Milestones D1 & D2 - Means of Implementation & Enabling Conditions: Target 13; Target 17; Target 18; Target 19; Target 20. Headline Indicators: Finance mobilised from domestic public expenditure (and private and international finance); Funding to promote the development, transfer of environmentally sound technologies; Mainstreaming biodiversity; Engagement with stakeholder groups in decision making; Others to be identified.

In our view component and complementary indicators are also important parts of the monitoring framework, providing coverage for all goals and targets, but there should be more flexibility to use these or other indicators at the national level according to national circumstances. Some of the proposed headline indicators would be better considered as component or complementary indicators. We have indicated this in our survey response, but we also provide a list of these indicators below. Headline indicators which, with further development, we consider are better suited at the component/ complementary levels: 1.0.1; 6.0.1; 6.0.2; 6.0.4; 9.0.1; 11.0.1; 13.0.1; 15.0.1; 19.0.1; 20.0.1; and 20.0.2.
Overall, we believe that there are too many headline indicators. We support the proposal to group targets under each goal and choose a few high-level headline indicators for each goal. We consider that this will help avoid redundancy in headline indicators between targets and reduce the reporting burden for parties.

yes

We would like to thank the Secretariat for the opportunity to respond and provide comments on the headline indicators and the suggested approach.
Overall, we consider that the proposal of 48 headline indicators is not technically or practically feasible. The use of a smaller number of headline indicators would have higher public resonance, would communicate overall progress more effectively and have potential for national implementation by most Parties, according to capacity and capabilities.
Furthermore, a list of headline indicators determined just on technical criteria would be unbalanced, have gaps in some key areas and would not meet the need for clear communication of global priorities.
To address these issues, we suggest that targets are clustered under the four goals, and three or four headline indicators are chosen for each cluster (providing 12 to 16 headline indicators overall). We have identified in the table below key elements that could be covered by headline indicators under each cluster.
In our view component and complementary indicators are also important parts of the monitoring framework, providing coverage for all goals and targets, but there should

be more flexibility to use these or other indicators at the national level according to national circumstances. Some of the proposed headline indicators would be better considered as component or complementary indicators. We have indicated this in our survey response, but we also provide a list of these indicators below.

2050 VISION By 2050, biodiversity is valued, conserved, restored and wisely used, maintain ecosystem services, sustaining a healthy planet and delivering benefits essential for all people 2030 MISSION To take urgent action across society to put biodiversity on a path to recovery for the benefit of planet and people

Goal and targets cluster

Headline Indicators Goal A & Milestones A1 & A2 Conservation (ecosystems, species, genes)

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T1 – Ecosystems
T2 – Protected Areas
T3 – Species conservation
T5 – Invasive Alien Species
T6 – Pollution
• Extent/ integrity of natural and semi-natural ecosystems
• Extent/ coverage and quality of Protected areas and OECMs
• Threat status of species
• Abundance of (vertebrate) species
• Genetic diversity of wild species Goal B & Milestones B1 & B2 Sustainable Use (& Ecosystem Services)

T4 – Sustainable use of species
T7 – NbS & EbA for climate change & disaster risk reduction
T8 – Sustainable species management
T9 – Sustainable use of ecosystems
T10 – NbS & EbA for air quality, hazards, and water
T11 – Green and blue spaces
T14 – Sustainable production and supply chains
T15 – Sustainable consumption
T16 – Biotechnology
• Water stress
• Carbon sequestration/ carbon standards & audits
• Illegal wildlife Trade
• Sustainable fishing
• Environmental impacts of consumption of key commodities Goal C & Milestones C1 & C2 Access & Benefit Sharing of Genetic Resources

T12 – Access and benefit sharing
• Certificates of compliance
• Adoption of legislative, administrative and policy frameworks
• ? Others to be identified

Goal D & Milestones D1 & D2 Means of Implementation & Enabling Conditions

T13 – Mainstreaming
T17 – Incentives & Subsidies
T18 – Resources
T19 – Knowledge
T20 – Participation
• Finance mobilised from domestic public expenditure (and private and international finance)
• Funding to promote the development, transfer of environmentally sound technologies.
• Mainstreaming biodiversity

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• Enagement with stakeholder groups in decision making
• ? Others to be identified

We have listed below those headline indicators which, with further development, we consider are better suited at the component/ complementary levels:

• 1.0.1 Percentage of land covered by landscape scale land-use plans for terrestrial, freshwater and marine ecosystems

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• 6.0.1: Proportion of water with good ambient water quality (freshwater and marine)
• 6.0.2: Plastic debris density
• 6.0.4: Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal solid waste generated by cities
• 9.0.1: Proportion of agricultural area under productive and sustainable agriculture
• 11.0.1: Average share of the built-up area of cities that is green/blue space for public use for all.
• 13.0.1 Extent to which national targets have been adopted for integrating biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies and accounts at all levels, ensuring that biodiversity values are mainstreamed across all sectors and integrated into assessments of environmental impacts
• 15.0.1: Biomass material footprint per capita
• 19.0.1 Biodiversity information index
• 20.0.1: Land tenure in the traditional territories of indigenous peoples and local communities
• 20.0.2: Population with secure tenure rights to land

Comments received from Observers on the survey on Headline Indicators

Goal A. The area, connectivity and integrity of natural ecosystems increased by at least [X%] supporting healthy and resilient populations of all species while reducing the number of species that are threatened by [X%] and maintaining genetic diversity

A.0.1 Extent of selected natural ecosystems (forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)

A.0.1 If you selected "yes, however requires further work", please describe:	A.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	A.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
The indicator has the potential to be disaggregated to mountain relevant scales and as such can account for ecosystem-specific impacts of global change drivers in mountains. To be of high value, the indicator A.0.1 calls for progress in remote sensing of mountains. Remote sensing combined with models offers new avenues for globally standardized characterization and monitoring of mountain ecosystems and critical boundaries, such as the treeline. Representation of mountain ecosystems in this indicator will be critical for its effectiveness for monitoring mountain biodiversity.		
Extent (Quantity) of all natural ecosystems must be monitored, not just a few selected ones, as well as quality – we suggest to monitor the extent of all ecosystems that are in a good conservation status. Also, the list of mentioned ecosystems is not complete.	By using an aggregate area measure, one conceals areas lost and areas restored. It is very important to keep track of those. As by losing ecosystems and restoring elsewhere, one loses a lot of quality of the ecosystem. So this indicator needs to be disaggregated: area maintained area lost area restored In each of these, there should also be an indication of the quality of the ecosystem.	
The phrase "Extent of" should be further clarified		
Nature can quickly restore itself once certain measures are put in place	Some of the measures to be taken in order to safe guard the environment may differ form country to country which may lead to some capacity buliding.	
		Extent of natural ecosystems areas within both public and private land per country.

		[Besides the work on the indicators, we suggest a adjustment on the description on the Goal A, such as: "The area, connectivity and integrity of natural ecosystems achievied globally, equitably among Parties, by at least 30% supporting healthy and resilient populations of all species while reducing the number of species that are threatened by [X%] and maintaining genetic diversity."]
The challenge (less with the indicator and more with the target) is due to the finite nature of area and thus, a gain in one natural ecosystem could come at a loss of another. Thus, the target and indicator should be defined more in terms of increase in natural ecosystem cover at the expense of non-natural/fully converted systems. This can be done with existing classified remotely sensed data (e.g. ESA CCI for terrestrial; although many national products are more accurate in classification and thus preferred). Investments in basic landcover mapping at the national scale would strengthen the accuracy and local validation of this indicator.	Generally speaking, ecosystem cover mapping at the global scale is more straightforward in terms of accurate disaggregation at the national scale but again, due to nuances/unique circumstances at the national scale that, in part, relate to errors in classification of global products, investments in national land/sea cover extent mapping would best ensure locally/nationally valid results.	
We would need to provide a definition of "connectivity and integrity of natural ecosystems".	We would need to specify compared to which standpoint or year we want to obtain such results.	
A lot of information needs to be generated to report this indicator. Specific sub-indicators must be generated beforehand.		
		Indicator: Degree of to which Earth's indigenous/local biodiversity survives/regenerates or is kept undermined in each area under its current use or management. CBD parties and institutions have to maintain such ecosystem/ biodiversity related indicators as required by the Convention. (the reality is not that areas would be either well measured "natural" areas or non-natural areas but that the indigenous/local biodiversity survives/regenerates in different degrees in different areas.)
This headline indicator is of high importance, though we see the necessity for its extension. In line with IPBES, we stress the importance of being able to interpret trends within the reference period of post-2020 monitoring (e. g. starting in 2020) in the context of historical baselines. We	The headline indicator is relevant for global and national reporting and is of importance for enhancing standardization and data integration, thus resulting in compatibility both, between national reports as well as ecosystem categories.	

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propose to choose appropriate baselines that are capable of reflecting the true degree of biodiversity loss on earth. This would be crucial for the detection of the anticipated trend reversal, and would be of high relevance for SDGs and Aichi Targets as well.

Baselines for the original state of biodiversity should be closely linked with and backed by data obtained from analyses of preserved specimens in natural history collections worldwide. Such data is for example provided by our member institutions to GBIF or BOLD.

Several global models of ecosystems and habitat types full-fill the requirements set out for the data basis and methodology of proposed indicators, among them are, for example, the IUCN-based global classification of ecoregions and alternative systems integrated into the UN Biodiversity Lab platform.

To achieve the statistical objectives of global standardization and comparability, basic scientific-technical prerequisites have to be met: a) agreement on the use of a shared global classification model and the specific model used; b) agreement about the scale of classified area unit (e. g., 1 km2); and c) the extent and procedures for validation on the ground of the global classification model, which might be based e. g. also on remote sensing data.

With regard to the validation of local ecosystem classifications (see c)), natural history collections contribute by preserving and managing voucher specimens of dominant and/or characteristic species and associated data. This is especially of importance when time series have formed after decades of monitoring and previous classifications need to be re-evaluated. Furthermore, an integrated digital extended data infrastructure for integrating validation samples and records (e. g. photos) into FAIR work environments currently is developed by the alliance for biodiversity knowledge under the auspices of GBIF, together with the international collections community, and a wide range of stakeholders.

Most importantly, to achieve standardization, comparability and scalability, we propose the integration of all indicators reporting on Goal A into a unified modeling and reporting framework, which will have in-depth and far-reaching analytical and statistical advantages (cp. the work by the IPBES Scenarios and Models Task Force). The foundation of such an integrated framework will be provided by the decision for one single classification model (see a)) across all ecosystem types, regions and administrative units of the planet. Such a methodological approach would provide the consistent data basis for evaluations of

e. g. relative contributions of the different indicators to observed trends and change. Thereby the approach achieves a reliable basis for drawing conclusions and subsequent applied decisions. Most importantly, an integrated modeling and indicator framework for Goal A enables versatile analyses and interpretations in response to as yet unknow and unexpected questions and objectives.

The proposed AHTEG on indicators as well as the IPBES Scenarios and Models Task Force can provide advice and proposals about how to take advantage of already existing datasets and time series from regional to global sources and processes (e. g., FAO Global Forest Resources Assessment, Ramsar Convention on Wetlands, etc.). These might need to be adapted before they can be integrated into the classification system of the unified framework.

The integrated modeling framework for the post-2020 monitoring process not only achieves consistency across ecosystem and habitat types, but at the same time also ensures that measured and reported biodiversity components of the three levels (ecosystem, species and genetic diversity) are compatible. In a unified modelling framework, the different levels of biodiversity represent different components of the overall model, which inform on each other. In this way, for example, the ecosystem and habitat classification used to evaluate indicator A.0.1 will be the same and will have the same model foundation as the ecosystem classification employed in the Species Habitat Index (A.0.4) and in similar indicators at the species- and (population-) genetic-level of biodiversity (indicators A.0.2 – A.0.5).

The proposed approach of an integrated framework would have huge advantages for scientific development and associated capacity building and technology transfer, especially in developing countries. It will amplify existing programs for overcoming the taxonomic impediment in these countries and promote in-country development of biodiversity science and informatics, data science and statistics (see the recommendations of the ATHEG on 'DSI' under item III and the IPBES Scenarios and Models Task

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	Force). Such scientific development and its associated capacity building can be guided by the work of the proposed AHTEG and the IPBES Scenarios and Models Task Force. It should to be closely accompanied by the UN Statistical Commission and nationally appointed statisticians, representatives of all stakeholders, specifically IPLCs, youth and women, as well as biodiversity experts of observer organizations to ensure integration into national reporting systems, practical feasibility and acceptance at the global, national and subnational levels. Once an overall integrated modeling framework spanning all three levels of biodiversity has been developed, countries have at hand a clear, unified approach, which they should be able to more easily communicated to the global public, national constituencies and stakeholders. Likely, once developed the integrated approach will require less national capacity overall by improving workflows. The global framework would be easily (dis-)aggregatable by country and across all formal and informal administrative units, by ecosystem type, species and species groups. The involvement of stakeholders in on-the-ground validation, sampling and observations can also provide information about the involvement of and contributions by IPLCs, women and youth to the conservation of biodiversity of different habitats, species and populations based on their participation in research, ownership, decision processes and management.	
In respect of the "natural ecosystems" part of the Goal, the current indicator only addresses the increase in area. It would need to be improved to address the missing elements i.e. connectivity and integrity.		Proposed indicator: "Trends in ecosystem and habitat fragmentation". It is a composite meta-indicator reflecting various indices of ecosystem and habitat fragmentation which address the corollary of "reduced connectivity". The indices covered by this indicator are those proposed as complementary indicators for the Goal, being: ž Trends in mangrove forest fragmentation ž Forest Fragmentation Index ž Relative Magnitude of Fragmentation ž River Fragmentation Index ž Dendritic Connectivity Index ž Connectivity Status Index

Increases in a certain ecosystem type mathematically require decreases in one or several other ecosystem types. Indicators to capture such dynamics and to assess trends in natural ecosystems should address the regional/global status of specific ecosystem types and the inherent spatiotemporal dynamics of most ecosystem distributions. Availability of global annual data time-series (since 1992) for scalable indicators is given for ecosystem types corresponding to IUCN species habitat classes (Remelgado & Meyer, under review.). Specific indicators still in conceptual development phase.	See response to Question 1.	
a) Integrity and connectivity need a clear definition b) There is no global definition of what constitutes natural ecosystem at country level. Different experts will debate what we mean by "natural" and the need for active intervention to sustain that. With changes in habitat quality as well as species behaviour caused by changing climate, aided by human activities this becomes particularly fraught. Alien species, defaunation, novel ecosystems etc c) The extent of natural ecosystems does not provide any information about their quality (integrity). Of particular concern here is the extent of defaunation d) The extent of natural ecosystems does not provide any information about the connectivity within fragmented ecosystems (e.g. forest) or between ecosystems.	There is a need for common and applicable definitions of ecosystem classification that sufficient people find acceptable (we know this is fraught for forests and grasslands etc.)	It is well understood and documented that secondary forests, forest fragments and agroforests are important for wild species foraging and breeding, extent of selected natural ecosystems does not provide any indication of the connectivity between fragments; For this we need indicators that a. provide information about species movement, seed dispersal and genetic exchange between fragments and or b. indicators that measure how friendly the managed ecosystems in between the natural ecosystems are with respect to wild species movement, e.g. measures of landscapes complexity
Goal A currently has five proposed headline indicators, only one of which addresses natural ecosystem extent, and none which address the connectivity and integrity of natural ecosystems. Moreover, the headline indicator focused on ecosystem extent -A.0.1- is limited to selected natural ecosystem types, rather than all ecosystem types, thus eliminating the potential to monitor restoration progress. Where possible, we encourage consideration of already established indicators which are in use or under development by other intergovernmental processes/multilateral agreements, in order to maximize synergies, reduce burden in national reporting while leveraging available funding and capacity building already in place. For example, to address terrestrial ecosystem area and integrity, the tier 1 SDG indicator 15.3.1, which is used to monitor land degradation, should be considered.	To address terrestrial ecosystem area and integrity, the tier 1 SDG indicator 15.3.1, which is used to monitor land degradation, should be considered. This indicator has been shaped by a collaborative effort among countries and Earth observation organizations through the Group on Earth Observation (GEO) LDN Initiative as well as a GEF-funded enabling activity called the Global Support Programme which provides in-country capacity development support as well as a series of regional workshops.	To address terrestrial ecosystem area and integrity, the tier 1 SDG indicator 15.3.1. The custodian agency is the UNCCD. To address ecosystem integrity, we recommend "Trends in ecosystem and habitat fragmentation", a composite meta-indicator reflecting various indices of ecosystem and habitat fragmentation which address the corollary of "reduced connectivity". If it is necessary to capture ecosystem area, integrity and connectivity in a single headline indicator, SDG 15.3.1 and this ecosystem fragmentation index could be integrated.
Quantity of all natural ecosystems must be monitored, not just a few selected ones. We suggest to monitor the	Quantity of all natural ecosystems must be monitored, not just a few selected ones. We	

extent(quality) of all ecosystems that are in a good conservation status.	suggest to monitor the extent of all ecosystems that are in a good conservation status.	
The definitions of each ecosystem need to be provided. The classification should be developed based on the assumption that satellite imageries are to be used. This is important for periodic and timely monitoring. Thematic and spatial resolutions have to be in line with how the data are to be used. Appropriate balance between accuracy and precision needs to be determined.		A standardized classification scheme will enable centralized monitoring, which will eliminate, or reduce significantly, the need of building capacity in individual Party. Parties might be asked to provide supervision data, but in-country capacity building should not be necessary for the purpose of indicator monitoring.
There is a need to justify clearly why the listed natural ecosystems were selected. It should not only be confined on those listed in the indicator only. Additionally, the term "natural ecosystems" needs to be clearly elaborated.	Baseline is the main issue here because it relates to the availability of data at the relevant scale for reporting at both the global and National reporting.	
According to the ICCA Consortium Flagship Report (2021) on Territories of Life, it is estimated that IPLC's are conserving more than 20% of the world's key biodiversity areas and at least 20% of the world's lands. Thus any indicator focused on the extent of "natural" ecosystems (which very often overlap with territories, lands and waters of IPLCs) should include effective governance as part of the headline indicator. As a minimum, the indicator should include the extent of territories governed by IPLC's and overlapped with "natural" systems. Furthermore, the extent (Quantity) of all natural ecosystems must be monitored, not just a few selected ones, as well as managed ecosystems with conservation status, including lands, territories and waters governed or managed by IPLCs. Conservation effectiveness must also be monitored. Global monitoring should be complemented by Community-based monitoring and information (CBMIS) with IPLCs on state of biodiversity outcomes.	Parties, rights holders and stakeholders will require support in measuring this. Furthermore, existing maps require overlay with lands and territories of IPLCs	
Selected area should be with the participation of local and indigenous communities, especially women		
The headline indicator "Extent of ..." needs to be broadened to cover connectivity and ecosystem integrity, not only "extent" (as pointed out by many Parties). · The list of ecosystems is not exhaustive and should be elaborated further, or the word "including" should be inserted before the list of ecosystems. This headline indicator also requires agreement of "natural	Capacity building efforts on indicators in general, including on this topic, should be made available for Parties who request and need this. Parties will require assistance to measure functional connectivity and ecosystem integrity.	

ecosystems". It is also not clear precisely which indicator would be used to measure the extent of each ecosystem. For example, for forest ecosystems, the Forest Landscape Integrity Index (FLII; www.forestintegrity.com, currently included as a.26 and t1.12 in SBSTTA/24/3/Add.1) includes an extent/area layer (based on updated Hansen et al. forest cover data), but goes further to provide a continuous metric of forest integrity and connectivity. This helps capture the multiple dimensions of forest ecosystems using globally standardized data that are freely available to governments for verification and can easily be used in national reporting. From a Rights-based Approach perspective, governance of the natural ecosystems (which largely also overlap with territories, lands and waters of IPLC) should also be part of a headline indicator for Goal A. As a minimum (a proxy), the indicator should include the size of territories governed by IPLC and overlapped with natural systems.		
leyes mas drásticas, que protejan a los Ecosistemas Naturales, evitando su depredación y contaminación.		está bien.
	Relevant and links to the following national environmental indicators in the Pacific islands: Tree cover, Wetland area, and Coral cover. All Pacific island countries need improved access to high resolution remote sensing products to track area of natural ecosystems over time.	
The list of ecosystems is not exhaustive. It excludes montane habitats, naturally arid habitats, marine sand banks, sea vents, etc. And "wetlands" might not be understood to include standing water bodies. We suggest either provide a more comprehensive list or insert "including" after the first bracket before "forests". We note that current headline indicators proposed are not addressing connectivity. Despite connectivity being a crucial part of Goal A, Target 1 and Target 2, there is no headline indicator on connectivity. The Convention on Migratory Species has been convening an inclusive process - within which WWF is part - to develop the ideal headline indicator on connectivity, which should be refined soon. We suggest including as an additional monitoring element a reference to deep sea ecosystems, including cold water areas (below 200m) and vulnerable marine ecosystems.	Many Parties will require assistance in measuring this	

Suggested indicators for deep sea ecosystems, should include the degree of implementation by States and competent organisations of: (i) UNGA resolutions on VMEs (resolutions 61/105, 64/72, 66/68, 71/123, and posterior reviews); (ii) the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas; (iii) the CBD Voluntary specific workplan on biodiversity in cold water areas within the jurisdictional scope of the Convention; (iv) as well as the degree of which non fisheries bodies are taking measures to also avoid impacts on VMEs (in accordance with UNGA resolution 71/123, para 184) . From a Rights-based Approach perspective, governance of the natural ecosystems (which largely also overlap with territories, lands and waters of IPLC) should also be part of a headline indicator for Goal A. As a minimum (a proxy), the indicator should include the size of territories governed by IPLC and overlapped with natural systems.		
Indicator formulation, availability, and maintenance unclear. a) Integrity and connectivity need a clear definition b) There is no global definition of what constitutes natural ecosystem at country level. Different experts will debate what we mean by "natural" and the need for active intervention to sustain that. With changes in habitat quality as well as species behaviour caused by changing climate, aided by human activities this becomes particularly fraught. Alien species, defaunation, novel ecosystems etc "Natural" need definition as "an ecosystem having good level of ecological integrity as defined by their structure, function and composition being intact". c) The extent of natural ecosystems does not provide any information about their quality (integrity). Of particular concern here is the extent of defaunation d) The extent of natural ecosystems does not provide any information about the connectivity within fragmented ecosystems (e.g. forest) or between ecosystems. "Extent" is a vague term. In order to measure it, it might be phrased in a more quantifiable way in both spatial and qualitative terms, e.g. "geographical area in km2 and quality of the ecosystem".	Indicator formulation, availability, and maintenance unclear. Area extension, per se does not say much about real progress in conservation. There is a need to connect extension and real biodiversity benefits. "Extent" per se is not suitable for standardization and comparison on a global level. There is a need for common and applicable definitions that sufficient people find acceptable (we know this is fraught for forests and grasslands etc.)	Red List Index of Ecosystems, Ecosystem Area Index and Ecosystem Health Index, all derived from Red List of Ecosystems, would be appropriate for incorporation here as global data become available over coming years (Rowland et al. 2020 Conserv Lett https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/conl.12680) It is well understood and documented that secondary forests, forest fragments and agroforests are important for wild species foraging and breeding, extent of selected natural ecosystems does not provide any indication of the connectivity between fragments; For this we need indicators that a. provide information about species movement, seed dispersal and genetic exchange between fragments and or b. indicators that measure how friendly the managed ecosystems in between the natural ecosystems are with respect to wild species movement, e.g. measures of landscapes complexity
Extent (Quantity) of all ecosystems must be monitored, not just a few selected ones, as well as quality – we suggest to monitor the extent of all ecosystems that are in a good conservation status.	Extent (Quantity) of all ecosystems must be monitored, not just a few selected ones, as well as quality – we suggest to monitor the extent of all ecosystems that are in a good conservation status.	

The headline indicator (HI) should include the integrity and connectivity of ecosystems-especially in the case of marine ecosystems. The indicator should read "Extent and integrity of selected natural ecosystems", with one key indicator per selected ecosystem (rather than listing biomes in parentheses). For example, for forest ecosystems the Forest Landscape Integrity Index (see a.26 and t1.12 in SBSTTA/24/3/Add.1) includes an extent/area layer, and provides a continuous metric of forest integrity and connectivity. For coral reef ecosystems the key indicator could be either "live coral cover" or "hard coral cover and composition" as listed a.13 and a.14 in Add.1/Rev.1, or "Cover of live [or hard] coral and other key benthic groups [in coral reef ecosystems]", using the Global Coral Reef Monitoring Network to facilitate reporting.	Capacity building efforts will be required to support Parties in reporting against all indicators, and not just those proposed here.	
This indicator needs to be specific and aspirational. Also, this indicator does not imply the need for increased ecosystem connectivity. We believe that the components of connectivity and integrity there should be separated indicators. For the connectivity component, the ultimate goal ought to be to have the different (forest and agriculture and urban and water) ecosystems connected.		Change A.0.1 to 'Annual increase in extent (in hectares) of well represented ecosystems (e.g. forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats) to reach at least 30% by 2030 and 50% by 2050.' New indicators: A.0.x: 'Proportion of ecosystems connected with climate-resilient corridors and/or buffers inter and intra other ecosystems, enabling species dispersal, genetic transfer and to increase resilience to future threats. A.0.x: 'Extinction risk, as indicated by the Red List Ecosystems, decreases annually by {xx}% for all listed species'
Extent (Quantity) of all natural ecosystems must be monitored, not just a few selected ones, as well as managed ecosystems with good conservation status, including lands, territories and waters governed or managed by IPLCs. Quality should also be monitored. Global monitoring should be complemented by Community-based monitoring and information (CBMIS) with IPLCs on state of biodiversity outcomes.	Extent (Quantity) of all natural ecosystems must be monitored, not just a few selected ones, as well as managed ecosystems with good conservation status, including lands, territories and waters governed or managed by IPLCs. Quality should also be monitored. Global monitoring should be complemented by Community-based monitoring and information (CBMIS) with IPLCs on state of biodiversity outcomes.	

The headline indicator "Extent of selected natural ecosystems (forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, sea grass, macroalgae and intertidal habitats)" could provide information on one element of Goal A "area" of the ecosystems (note: terminology of "extent" and "area" should be standardized, preferably as extent). However, it will not provide information on the integrity and connectivity of ecosystems, which have also been supported by Parties as critical elements of this Goal and fundamental to support nature's benefits to people (or ecosystem services). Furthermore, Parties have already flagged that marine ecosystems are evaluated in terms of integrity or condition, and not extent. Finally, it is also not clear precisely which indicator would be used for each ecosystem. One proposal to address these concerns and to enable measure of extent and integrity (at a headline level) could be to add specificity in the indicator to read "Extent and integrity of selected natural ecosystems," and then selecting one key indicator per selected ecosystem (rather than listing biomes in parentheses). As another example, for coral reef ecosystems a headline indicator could be "live coral cover" or "hard coral cover and composition" (currently listed a.13 and a.14), which are functionally the same, address aspects of both extent and integrity, and have been approved by BIP, GOOS, and used as leading indicators in previous CBD global assessments (including GBO-5). An alternative, and potentially more effective formulation could be "Cover of live coral and other key benthic groups [in coral reef ecosystems]," which would take advantage of existing efforts by the Global Coral Reef Monitoring Network (GCRMN) to report on coral reef ecosystems around the world, and would effectively combine current indicators a.13, a.14, a.20 and a.21 (thereby simplifying the monitoring framework significantly and comprehensively address a flagship ecosystem).	There will be capacity building efforts required to support Parties in reporting against all indicators; not just those proposed here.	See above, and repeated below. One proposal to address these concerns and to enable measure of extent and integrity (at a headline level) could be to add specificity in the indicator to read "Extent and integrity of selected natural ecosystems," and then selecting one key indicator per selected ecosystem (rather than listing biomes in parentheses). As another example, for coral reef ecosystems a headline indicator could be "live coral cover" or "hard coral cover and composition" (currently listed a.13 and a.14), which are functionally the same, address aspects of both extent and integrity, and have been approved by BIP, GOOS, and used as leading indicators in previous CBD global assessments (including GBO-5). An alternative, and potentially more effective formulation could be "Cover of live coral and other key benthic groups [in coral reef ecosystems]," which would take advantage of existing efforts by the Global Coral Reef Monitoring Network (GCRMN) to report on coral reef ecosystems around the world, and would effectively combine current indicators a.13, a.14, a.20 and a.21 (thereby simplifying the monitoring framework significantly and comprehensively address a flagship ecosystem).
We need to explicitly include the degree to which IPLCs, women, peasant farmers and those who live closest to biodiversity are properly involved in ensuring the integrity of natural ecosystems and maintaining genetic diversity. Otherwise this and other indicators risk excluding their role in ensuring this.	As noted above we need far more work on the inter-relationships between IPLCs, women peasant farmers with biodiversity, including agricultural biodiversity and ecosystems, their cultures and knowledge and how these contribute to the overall aim. This must be carried out in close collaboration with them and according to their own processes.	

Its not just the extent, but the health and quality of these ecosystems		
To reflect goal text, each component (area, connectivity, integrity) should logically have a headline indicator with clear baselines. A.0.1 focusses on the 'area' component. Crucially, to fully understand the health and resilience of the forest ecosystem, a measure of 'functional diversity' should be used. This allows us to consider the functional roles of the wildlife species present in the habitat, and how their changing abundance and diversity will impact upon the functions they play in the maintenance of critical ecosystem processes. This allows the consideration of the relative importance of the loss of functionally unique species compared to functionally redundant species, and the monitoring of ecosystem health and resilience – elements that are crucial to an ecosystem's integrity. Fragmentation of a forest ecosystem can be measured via satellite imagery of habitat cover and patterns of habitat and land use change. However, ensuring ecosystem connectivity is not only about preventing fragmentation of habitats, but also about improving connectivity between sub-habitats on a larger scale. The quality/integrity of a forest ecosystem depends both on the intactness of the habitat and the composition, abundance and diversity of the flora and fauna species present. The composition, abundance and diversity of the flora present in a forest ecosystem can be monitored via periodic botanical surveys on the ground and/or normalised difference vegetation index analysis. The composition, abundance and diversity of the fauna species of a forest ecosystem can be monitored via periodic on-the-ground surveys (transect/camera trapping/mist netting, etc., as required). The Forest Landscape Integrity Index accepted by the Biodiversity Indicators Partnership and recommended in INF/16 should be considered. There should also be indicators on the state of ecosystems, such as to measure ecosystem collapse risk.		
The headline indicator (HI) should include the integrity and connectivity of ecosystems-especially in the case of marine ecosystems.	Capacity building efforts will be required to support Parties in reporting against all indicators, and not just those proposed here.	

The indicator should read "Extent and integrity of selected natural ecosystems", with one key indicator per selected ecosystem (rather than listing biomes in parentheses). For example, for forest ecosystems the Forest Landscape Integrity Index (see a.26 and t1.12 in SBSTTA/24/3/Add.1) includes an extent/area layer, and provides a continuous metric of forest integrity and connectivity. For coral reef ecosystems the key indicator could be either "live coral cover" or "hard coral cover and composition" as listed a.13 and a.14 in Add.1/Rev.1, or "Cover of live [or hard] coral and other key benthic groups [in coral reef ecosystems]", using the Global Coral Reef Monitoring Network to facilitate reporting.		
The headline indicator "Extent of selected natural ecosystems (forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)" could provide information on one component of Goal A – the "area" of the ecosystems (note: terminology in the use of "extent" and "area" should be standardized; we recommend "extent" instead of "area"). However, the proposed indicator "Extent of selected natural ecosystems" will not necessarily provide information on the integrity and/or connectivity of ecosystems, which have been supported by many Parties as critical elements of this Goal, fundamental to support nature's benefits to people (or ecosystem services), and fundamental to the core objectives of the CBD. Furthermore, some Parties have flagged that marine ecosystems are primarily evaluated in terms of integrity or condition, but not extent (which is less relevant for many marine ecosystems). Finally, it is also not clear precisely which indicator would be used to measure the extent of each ecosystem. One proposal to address these concerns and to enable measure of extent and integrity (at a headline level) could be to add specificity in the indicator to read "Extent and integrity of selected natural ecosystems," and then selecting one key indicator per selected ecosystem that can capture both aspects (rather than listing biomes in parentheses). For example, for forest ecosystems, the Forest Landscape Integrity Index (FLII; www.forestintegrity.com, currently included as a.26 and t1.12 in	There will be capacity building efforts required to support Parties in reporting against all indicators, and not just those proposed here. Those we have recommended are in the peer-review literature and will not be particularly difficult to include in capacity building efforts.	

SBSTTA/24/3/Add.1) includes an extent/area layer (based on updated Hansen et al. forest cover data), but goes further to provide a continuous metric of forest integrity and connectivity. This helps capture the multiple dimensions of forest ecosystems using globally standardized data that are freely available to governments for verification and can easily be used in national reporting. As another example, for coral reef ecosystems a headline indicator could be either "live coral cover" or "hard coral cover and composition" (currently listed a.13 and a.14 in Add.1/Rev.1), which are functionally the same, address aspects of both extent and integrity, and have been approved by BIP, GOOS, and used as leading indicators in previous CBD global assessments (including GBO-5). An alternative, and potentially more effective formulation could be "Cover of live [or hard] coral and other key benthic groups [in coral reef ecosystems]," which would take advantage of existing efforts by the Global Coral Reef Monitoring Network (GCRMN) to work with national governments and other stakeholders to facilitate reporting on coral reef ecosystems around the world, and would effectively combine current indicators a.13, a.14, a.20 and a.21 in Add.1 (thereby simplifying the monitoring framework significantly and comprehensively addressing a flagship ecosystem). This recommendation is coherent with the International Coral Reef Initiative's recommendation on key coral reef indicators for the GBF (www.coralpost2020.org).		
Regarding Goal A's reference to "natural ecosystems", the currently proposed indicator addresses the increase in area covered by the respective "selected natural ecosystems". It does not explicitly consider "connectivity" (See definitions for "ecological connectivity", "functional connectivity", "structural connectivity")(https://portals.iucn.org/library/sites/library/files/documents/PAG-030-En.pdf)) or "integrity" (See definition "the ability of an ecological system to support and maintain a community of organisms that has species composition, diversity, and functional organization comparable to those of natural habitats within a region" (https://academic.oup.com/bioscience/article/53/9/851/311604) and could therefore be supplemented with specific headline indicators for "connectivity" and "integrity".		Propose different indicator: "Trends in ecosystem and habitat fragmentation" as a composite meta-indicator reflecting various indices of ecosystem and habitat fragmentation that address the corollary "reduced connectivity" and contribute toward efforts to increase area and integrity, including currently proposed "complementary indicators": ž Trends in mangrove forest fragmentation (Goal A, A.1.1.10; https://doi.org/10.1038/s41598-020-63880-1) ž Forest Fragmentation Index (Goal A, A.1.1.25; FAO and European Joint Research Centre: State of the World's Forests Report; http://www.fao.org/documents/card/en/c/ca8642en) ž Relative Magnitude of Fragmentation (RMF) (Goal A, A.1.1.31; Geobon;

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		https://portal.geobon.org/ebv-detail?id=4) ž Ecoregion Intactness Index (https://doi.org/10.1111/conl.12692) ž River Fragmentation Index (Goal A, A.1.1.37; World Resources Institute, European Environment Agency, etc; https://iopscience.iop.org/article/10.1088/1748-9326/10/1/015001) ž Dendritic Connectivity Index (Goal A, A.1.1.38; https://pubmed.ncbi.nlm.nih.gov/23387118/) ž Connectivity Status Index (Free flowing rivers - Corollary to « River Fragmentation Index »; Target 1, 1.1.1.16; https://www.nature.com/articles/s41586-019-1111-9)
Will benefit from more a comprehensive set of ecosystems and clarity on sources	Will benefit from national validation and extensions	
The headline indicator "Extent of selected natural ecosystems (forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)" could provide information on one component of Goal A – the "area" of the ecosystems (note: terminology in the use of "extent" and "area" should be standardized; we recommend "extent" instead of "area"). However, the proposed indicator "Extent of selected natural ecosystems" will not necessarily provide information on the integrity and/or connectivity of ecosystems, which have been supported by many Parties as critical elements of this Goal, fundamental to support nature's benefits to people (or ecosystem services), and fundamental to the core objectives of the CBD. Furthermore, some Parties have flagged that marine ecosystems are primarily evaluated in terms of integrity or condition, but not extent (which is less relevant for many marine ecosystems). Finally, it is also not clear precisely which indicator would be used to measure the extent of each ecosystem. One proposal to address these concerns and to enable measure of extent and integrity (at a headline level) could be to add specificity in the indicator to read "Extent and integrity of selected natural ecosystems," and then selecting one key indicator per selected ecosystem that can capture both aspects (rather than listing biomes in parentheses).	There will be capacity building efforts required to support Parties in reporting against all indicators, and not just those proposed here. But for those indicators based on the peer-review literature, they will not be particularly difficult to include in capacity building efforts.	One proposal to address these concerns and to enable measure of extent and integrity (at a headline level) could be to add specificity in the indicator to read "Extent and integrity of selected natural ecosystems," and then selecting one key indicator per selected ecosystem that can capture both aspects (rather than listing biomes in parentheses). For example, for forest ecosystems, the Forest Landscape Integrity Index (FLII; www.forestintegrity.com, currently included as a.26 and t1.12 in SBSTTA/24/3/Add.1) includes an extent/area layer (based on updated Hansen et al. forest cover data), but goes further to provide a continuous metric of forest integrity and connectivity. This helps capture the multiple dimensions of forest ecosystems using globally standardized data that are freely available to governments for verification and can easily be used in national reporting. The Wildlife Conservation Society (WCS) has committed to providing this data to Parties for reporting through 2030. It has been accepted by the Biodiversity Indicators Partnership and recommended in INF/16. As another example, for coral reef ecosystems a headline indicator could be either "live coral

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For example, for forest ecosystems, the Forest Landscape Integrity Index (FLII; www.forestintegrity.com, currently included as a.26 and t1.12 in SBSTTA/24/3/Add.1) includes an extent/area layer (based on updated Hansen et al. forest cover data), but goes further to provide a continuous metric of forest integrity and connectivity. This helps capture the multiple dimensions of forest ecosystems using globally standardized data that are freely available to governments for verification and can easily be used in national reporting. The Wildlife Conservation Society (WCS) has committed to providing this data to Parties for reporting through 2030. It has been accepted by the Biodiversity Indicators Partnership and recommended in INF/16. As another example, for coral reef ecosystems a headline indicator could be either "live coral cover" or "hard coral cover and composition" (currently listed a.13 and a.14 in Add.1/Rev.1), which are functionally the same, address aspects of both extent and integrity, and have been approved by BIP, GOOS, and used as leading indicators in previous CBD global assessments (including GBO-5). An alternative, and potentially more effective formulation could be "Cover of live [or hard] coral and other key benthic groups [in coral reef ecosystems]," which would take advantage of existing efforts by the Global Coral Reef Monitoring Network (GCRMN) to work with national governments and other stakeholders to facilitate reporting on coral reef ecosystems around the world, and would effectively combine current indicators a.13, a.14, a.20 and a.21 in Add.1 (thereby simplifying the monitoring framework significantly and comprehensively addressing a flagship ecosystem). This recommendation is coherent with the International Coral Reef Initiative's recommendation on key coral reef indicators for the GBF (www.coralpost2020.org).		cover" or "hard coral cover and composition" (currently listed a.13 and a.14 in Add.1/Rev.1), which are functionally the same, address aspects of both extent and integrity, and have been approved by BIP, GOOS, and used as leading indicators in previous CBD global assessments (including GBO-5). An alternative, and potentially more effective formulation could be "Cover of live [or hard] coral and other key benthic groups [in coral reef ecosystems]," which would take advantage of existing efforts by the Global Coral Reef Monitoring Network (GCRMN) to work with national governments and other stakeholders to facilitate reporting on coral reef ecosystems around the world, and would effectively combine current indicators a.13, a.14, a.20 and a.21 in Add.1 (thereby simplifying the monitoring framework significantly and comprehensively addressing a flagship ecosystem). This recommendation is coherent with the International Coral Reef Initiative's recommendation on key coral reef indicators for the GBF (www.coralpost2020.org).
This indicator should also assess the quality or integrity of habitats in addition to the extent. We recommend adding a measure for riverine health as a function of lateral and longitudinal connectivity, flow and sediment transport processes. We suggest using the global Connectivity Status Indicator (Grill et al 2019), which addresses connectivity and flow as an indicator for riverine health.	Condition and integrity assessments may require capacity building support at the national level.	
Suggest including "integrity, health, and extent" and not just "extent" in indicator, as this addresses the goal of the target more directly	This requires standardization and convergence on best practices for data collection, processing of observations or samples, and standardized data formatting and information management	The indicator has very significant gaps. It does not address higher trophic levels in marine ecosystems or habitats that provide natural capital, for example fish, seabirds, reptiles,

		marine mammals, and many critical benthic and planktonic invertebrates in waters deeper than a few meters. It does not address convergence of standardized data collection and management, which requires collaboration and capacity development.
The term "natural" could have a connotation of being "people out" ecosystems, when many ecosystems with high biodiversity are often under the stewardship of Indigenous peoples and local communities. There will be a need to define "natural" so as to not exclude these areas. Furthermore, measures of integrity and connectivity are not captured by this indicator, which are crucial qualitative measures.		
The headline indicator "Extent of selected natural ecosystems (forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)" could provide information on one component of Goal A – the "area" of the ecosystems (note: terminology in the use of "extent" and "area" should be standardized; we recommend "extent" instead of "area"). However, the proposed indicator "Extent of selected natural ecosystems" will not necessarily provide information on the integrity and/or connectivity of ecosystems, which have been supported by many Parties as critical elements of this Goal, fundamental to support nature's benefits to people (or ecosystem services), and fundamental to the core objectives of the CBD. Furthermore, some Parties have flagged that marine ecosystems are primarily evaluated in terms of integrity or condition, but not extent (which is less relevant for many marine ecosystems). Finally, it is also not clear precisely which indicator would be used to measure the extent of each ecosystem.

One proposal to address these concerns and to enable measure of extent and integrity (at a headline level) could be to add specificity in the indicator to read "Extent and integrity of selected natural ecosystems," and then selecting one key indicator per selected ecosystem that can capture both aspects (rather than listing biomes in parentheses).

For example, for forest ecosystems, the Forest Landscape Integrity Index (FLII; www.forestintegrity.com, currently included as a.26 and t1.12 in SBSTTA/24/3/Add.1) includes an extent/area layer (based on updated Hansen et al. forest cover data), but | There will be capacity building efforts required to support Parties in reporting against all indicators, and not just those proposed here. Those we have recommended are in the peer-review literature and will not be particularly difficult to include in capacity building efforts. | Note: Text below is copied from above as it is not clear which section was most appropriate.

One proposal to address these concerns and to enable measure of extent and integrity (at a headline level) could be to add specificity in the indicator to read "Extent and integrity of selected natural ecosystems," and then selecting one key indicator per selected ecosystem that can capture both aspects (rather than listing biomes in parentheses).

For example, for forest ecosystems, the Forest Landscape Integrity Index (FLII; www.forestintegrity.com, currently included as a.26 and t1.12 in SBSTTA/24/3/Add.1) includes an extent/area layer (based on updated Hansen et al. forest cover data), but goes further to provide a continuous metric of forest integrity and connectivity. This helps capture the multiple dimensions of forest ecosystems using globally standardized data that are freely available to governments for verification and can easily be used in national reporting. The Wildlife Conservation Society (WCS) has committed to providing this data to Parties for reporting through 2030. It has been accepted by the Biodiversity Indicators Partnership and recommended in INF/16.

As another example, for coral reef ecosystems a headline indicator could be either "live coral cover" or "hard coral cover and composition" (currently listed a.13 and a.14 in Add.1/Rev.1), |

goes further to provide a continuous metric of forest integrity and connectivity. This helps capture the multiple dimensions of forest ecosystems using globally standardized data that are freely available to governments for verification and can easily be used in national reporting. The Wildlife Conservation Society (WCS) has committed to providing this data to Parties for reporting through 2030. It has been accepted by the Biodiversity Indicators Partnership and recommended in INF/16. As another example, for coral reef ecosystems a headline indicator could be either "live coral cover" or "hard coral cover and composition" (currently listed a.13 and a.14 in Add.1/Rev.1), which are functionally the same, address aspects of both extent and integrity, and have been approved by BIP, GOOS, and used as leading indicators in previous CBD global assessments (including GBO-5). An alternative, and potentially more effective formulation could be "Cover of live [or hard] coral and other key benthic groups [in coral reef ecosystems]," which would take advantage of existing efforts by the Global Coral Reef Monitoring Network (GCRMN) to work with national governments and other stakeholders to facilitate reporting on coral reef ecosystems around the world, and would effectively combine current indicators a.13, a.14, a.20 and a.21 in Add.1 (thereby simplifying the monitoring framework significantly and comprehensively addressing a flagship ecosystem). This recommendation is coherent with the International Coral Reef Initiative's recommendation on key coral reef indicators for the GBF (www.coralpost2020.org).		which are functionally the same, address aspects of both extent and integrity, and have been approved by BIP, GOOS, and used as leading indicators in previous CBD global assessments (including GBO-5). An alternative, and potentially more effective formulation could be "Cover of live [or hard] coral and other key benthic groups [in coral reef ecosystems]," which would take advantage of existing efforts by the Global Coral Reef Monitoring Network (GCRMN) to work with national governments and other stakeholders to facilitate reporting on coral reef ecosystems around the world, and would effectively combine current indicators a.13, a.14, a.20 and a.21 in Add.1 (thereby simplifying the monitoring framework significantly and comprehensively addressing a flagship ecosystem). This recommendation is coherent with the International Coral Reef Initiative's recommendation on key coral reef indicators for the GBF (www.coralpost2020.org).
This should also include managed ecosystems, not only "natural ecosystems".		
The headline indicator (HI) "Extent of selected natural ecosystems…" provides information on one component of Goal A – the "area" of the ecosystems. (Recommend using "extent" instead of "area" in the language of Goal A for consistency). However, the proposed indicator will not provide necessary information on the integrity and/or connectivity of ecosystems, which are critical elements of this Goal as they are fundamental to support nature's benefits to	Capacity building efforts will be required to support Parties in reporting against all indicators, and not just those proposed here. Those we recommend are in the peer-review literature and will not be particularly difficult to include in capacity building efforts.	

people (or ecosystem services).
This is especially the case for marine ecosystems since these are primarily evaluated
in terms of integrity or condition, but not extent (which is less relevant for many marine
ecosystems).

It is also unclear which indicator would be used to measure the extent of each
ecosystem.

To address these concerns, the indicator (at a headline level) should read "Extent and integrity of selected natural ecosystems", and then allow Parties to select one key indicator per selected ecosystem that can capture both aspects (rather than listing biomes in parentheses).

For example, for forest ecosystems, the Forest Landscape Integrity Index (FLII; www.forestintegrity.com, currently included as a.26 and t1.12 in SBSTTA/24/3/Add.1) includes an extent/area layer (based on updated Hansen et al. forest cover data), but goes further to provide a continuous metric of forest integrity and connectivity. This helps capture the multiple dimensions of forest ecosystems using globally standardized data that are freely available to Parties for verification and can easily be used in national reporting. This approach has been accepted by the Biodiversity Indicators Partnership (BIP) and recommended in INF/16.

As another example, for coral reef ecosystems the key indicator could be either "live coral cover" or "hard coral cover and composition" (which are functionally the same), as listed a.13 and a.14 in Add.1/Rev.1. This would address aspects of both extent and integrity, and have been used as leading indicators in previous CBD global assessments (including GBO-5). An alternative, and potentially more effective formulation could be "Cover of live [or hard] coral and other key benthic groups [in coral reef ecosystems]," which would take advantage of existing efforts by the Global Coral Reef Monitoring Network (GCRMN) to work with national governments and other stakeholders to facilitate reporting on coral reef ecosystems around the world, and would effectively combine current indicators a.13, a.14, a.20 and a.21 in Add.1 (thereby simplifying the monitoring framework significantly and comprehensively addressing a flagship ecosystem). This recommendation is coherent with the International Coral Reef Initiative's recommendation on

key coral reef indicators for the GBF (www.coralpost2020.org).		
The list of ecosystems does not include many key ecosystems. We suggest this more general but clear breakdown: terrestrial, freshwater and marine/coastal ecosystems that avoids missing key relevant ecosystems and is used in other parts of the documents The particular types of ecosystems could be included if more detail is required in each category.	In order to be relevant for global reporting is important to use existing indicators from the SDGs as indicator 6.6.1 "change on the extent of water-related ecosystems" for which the Ramsar Convention on Wetlands and UNEP are co-custodian, providing national validated data from Contracting Parties' National reports. Contracting Parties report in three categories: marine and coastal wetlands, inland/freshwater wetlands and human made wetlands. This data feeds directly into the SDG database contributing to the achievement of the 2030 sustainable development agenda, while avoiding duplication and reducing the reporting burden of Contracting Parties. This indicator fulfil with the criteria outlined in document CBD/SBSTTA/24/3/ADD1 for headline indicators.	
A.0.2 Living Planet Index		
A.0.2 If you selected "yes, however requires further work", please describe:	**A.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**A.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
The indicator is relevant	certain measures to be taken to safe guard the environment may differ from country to country so capacity building is necessary	
		We suggest the exclusion of this indicator (biased baselines)
	It depends on that for what kind of standardization it is used	
Please see also our comments and suggestions for indicator A.0.5

The Living Planet Index (LPI) is an indicator for within-species status and a proxy of within-species genetic diversity. It has an extraordinary data basis, which provides already today time series data covering decades for many vertebrate species. It also is continuously expanding its applications.

Ideally, the LPI will develop the methodologies for reporting on trends in abundance for species from across | Measuring and interpreting trends in abundance in species that are not well known, requires specialized expertise. Often only a small number of experts exists globally for many taxonomic groups. The taxonomic impediment has been addressed by CBD parties in the past. In addition, the need for further capacity building has been addressed in many National Biodiversity Strategies and Action Plans (NBSAPs) of CBD Parties. This need has recently been underlined by taxonomists and biodiversity researchers in the meeting of the Global Taxonomy Initiative in 2020. Commitments | |

the Tree of Life, especially invertebrates, fungi and microorganisms in general represent dominant fractions of our planet's biodiversity, providing fundamental ecosystem services (e. g. pollination and soil formation) of essential bio-economic importance to human societies. The progress on Aichi Target 19 (cf. Global Biodiversity Outlook 5) indicated that enhancing the LPI data should be feasible and that emerging technologies would greatly enhance the capacity to explore and understand biodiversity. The use of environmental DNA (eDNA) and metagenomic sampling enables monitoring across the Tree of Life and data aggregators (e. g. GBIF, INSDC, BOLD) would be suitable data sources and basis for such analytical approaches. LPI data and analyses should be aligned with, e. g., the IUCN-based global classifications of ecoregions. This would allow unified modeling and comparison of biodiversity data and its indicators across all levels of biodiversity. Thereby, the LPI will expand within-species information on local or habitat-specific presence-absence data (based on samples and/or observations) by abundance information. Such information on abundance should be georeferenced to a specific location or reference area.	to expand taxonomic expertise need to be intensified globally, nationally and locally, to build the required communities of experts and trained workforces especially in developing or biodiversity-rich countries.	
		Proposed indicator: "Conservation status of terrestrial and aquatic migratory species, as a proxy indicator of connectivity." This indicator is based on the disaggregated sub-sets of the existing global species indices being considered for the framework (Red List Index, Living Planet Index, Wild Bird Index), providing a proxy measure for the status of connectivity of natural ecosystems as it affects these species. Given that migratory species by definition are a connection between places, a change in status of these species can itself represent a change in the quality of the connection. The Strategic Plan for Migratory Species 2015-2023 adopted exactly this approach. The Living Planet Index (LPI) for migratory species would show trend in the abundance of migratory species of all taxonomic groups. As migratory species are better conserved (including improved connectivity) and populations increase, the index goes up. As

		their abundance declines (and ranges shrink and are less well connected), the index goes down.
We wish to emphasize the importance of connectivity, and thus would encourage disaggregated subsets of this indicator. Given that migratory species by definition are a connection between places, a change in status of these species can itself represent a change in the quality of the connection. Thus ensuring disaggregation of The Living Planet Index (LPI) for migratory species would show trend in the abundance of migratory species of all taxonomic groups. Providing a proxy measure for the status of connectivity of natural ecosystems as it affects these species would be essential.As migratory species are better conserved (including improved connectivity) and populations increase, the index goes up. As their abundance declines (and ranges shrink and are less well connected), the index goes down.	The challenges of disaggregation would need to be incorporated into capacity development work in support of national reporting.	
We need to work on more species, not just vertebrates as the living planet index. Also plants, mushrooms and another groups.	To fill the gaps of another groups inclusion	
Living Planet Index can be overlaid with a map of linguistic diversity to capture inter-linkages with cultural diversity and territories of IPLCs as mentioned in A.0.1.	The integrity of social-ecological systems and the interlinkages between biological diversity and cultural diversity need to be captured.	
		Equilibrio en los procesos naturales del Planeta
Would be useful to have an index for invertebrates as well, as the population trajectories may be different from vertebrates. Also appears to be few monitored species from the Pacific so this needs to be increased.	Yes support for Pacific countries, for developing list of Pacific species to be monitored. Most species in the Pacific Islands region have not been assessed or not been assessed recently which limits the power of this indicator.	
Restricted to populations of vertebrate species only, needs to be complemented by similar indices covering other taxa (or needs to be expanded to cover other taxa)		
Serious problems in terms of grain as well as in terms of helpfulness when considering the action needed. See Leung et al. (2020 Nature; https://www.nature.com/articles/s41586-020-2920-6) for serious limitations to this indicator. Taxonomically and geographically limited; needs to be made much explicit (Living Vertebrate Index). Because of the data demands to describe trends, the places where the datasets that can be used come from are inevitably self-selecting and limited. LPI is not highly responsive. It requires further	Indicator not applicable at national levels. The principles make sense, but the taxonomic and geographic constraints mean that its ability to reflect the aspects that it is intended to measure is limited – this is important globally. Nationally, sufficient data could be generated to capture representative elements of biodiversity (taxonomy, habitats etc) in a relatively few countries.	Wild Bird Index (https://www.bipindicators.net/indicators/wild-bird-index)

work on determining confidence intervals and using consistent groups of populations in a given region. The LPI data base does not have coverage for all countries		
	National capacity building and investment may be needed to implement monitoring schemes to mobilise sufficient data to allow national indices to be developed. Recent examples for monitoring birds in Uganda, Kenya and Botswana show this can be achieved at low cost in many cases.	
Living Planet Index is a tool to assess the status of species populations. It does not currently consider plant or marine species.	The indicator needs to articulate what it is the LPI will measure to achieve Goal A. By selecting 'all listed vertebrate species' the indicator would encourage governments to be aspirational. By specifying 'positive population trends' It would also enable clear monitoring and tracking of progress and comparison against previous assessments conducted by the LPI. Capacity-building is required for governments which have limited technical and financial capacity to collect adequate data on vertebrate species populations.	Change A.0.2 to 'All listed vertebrate species on the Living Planet Index are showing positive annual population trends compared to the 1970 - 2016 baseline.'
Living Planet Index can be overlaid with a map of linguistic diversity to capture inter-linkages with cultural diversity and territories of IPLCs as mentioned in A.0.1.	The integrity of social-ecological systems and the interlinkages between biological diversity and cultural diversity need to be captured.	
We need to explicitly include the degree to which IPLCs, women, peasant farmers and those who live closest to biodiversity are involved in ensuring the integrity of natural ecosystems and maintaining genetic diversity. Otherwise this and other indicators risk excluding their role in ensuring this.	As noted above we need more work on the interactions between IPLCs, women peasant farmers with biodiversity and ecosystems and how these serve the overall aim. This must be carried out with these people.	
		The LPI is to higher level of assessment to provide the necessary level of granularity reflect changed in biodiversity
Wild Animals are sentient beings, whose well being should be addressed as an essential part of the index		
It does not explicitly consider "connectivity". LPI can be applied for tracking trends in species in specific habitats, biomes, ecosystems, etc. to better understand the status of biodiversity.		Propose different indicator: "Conservation status of terrestrial and aquatic migratory species" as an overall proxy indicator of connectivity of natural ecosystems and based on the disaggregated sub-sets of the existing global species indices (Red List Index, Living Planet Index, Wild Bird Index). In this regard, the "Living Planet Index for migratory species".

		LPI is based on a geographically very variable and incomplete/biased subset of data and is not comparable across regions. Suggest use of model-supported EBV-based indicators that offer more representative, comparable information, e.g. the GEOBON Species Habitat Index which supports estimates of trends in both range and population size.
This indicator only addresses "vertebrates" but standardized observations are required on: plants, algae, microbes including phytoplankton (the base of the food chain) and invertebrates (benthic, pelagic/planktonic). Many of these are foundational and keystone species.	If the CBD adopts this indicator, it should require including standardized observations for time series on: plants, algae, microbes including phytoplankton (the base of the food chain) and invertebrates (benthic, pelagic/planktonic).	The LPI does not directly address ANY of the selected natural ecosystems (forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats) listed in A.0.1. It does not address area, connectivity, or integrity of natural ecosystems. If the CBD adopts the LPI as an indicator, the LPI should be modified to include standardized observations for time series on: plants, algae, microbes including phytoplankton (the base of the food chain) and invertebrates (benthic, pelagic/planktonic).

A.0.3 Red list index

A.0.3 If you selected "yes, however requires further work", please describe:	A.0.3 If you selected "yes, however requires further work on capacity-building or other work", please describe:	A.0.3 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
Also needs to use the national Red list indicator		
The Red List index currently is of no use for monitoring mountain biodiversity. Making the indicator usable for monitoring mountain biodiversity calls for mountain range and/or system-level assessments of Red List status for mountain species. The disaggregation of RLI to single countries is considered problematic. Low temporal frequency of assessments causes this indicator to have limited sensitivity.		
As the hard-working community behind the RLI will say, there's a huge effort required in continual assessments and the assessments to date are highly biased towards vertebrates and plants whereas important taxonomic groups such as invertebrates etc. need much better coverage. Still the RLI is a good indicator at the global scale overall despite some underpinning data coverage challenges.	The challenge is with the disaggregation of the global RLI to national scales - it can and has been certainly done but can produce biased results that do not accurately reflect national circumstances. for instance in South Africa, the global RLI disaggregated to this scale produces results that do not align with South Africa's own red list data/assessments. The issue of whether a country	

	has highly imperiled species such as corals and cycads, can result in greatly biased results. Thus suggest that national Red Lists be encouraged and supported to provide more locally valid results when feasible.	
We need to identify what should be in the red list as one species may be in a red list in a given country but not in another one. How do we count bacteria and other species not discovered yet?	One species may be in a red list in a given country but not in another one.	
	Since all human activity which makes a species endangered need to be equally considered and addressed in assessing how endangered a species is, this may not be adequately the case in prevailing modes of standardization. comparability and reporting	
The Red List Index (RLI) is the only listed headline indicator currently reporting on the species-level of biodiversity.

The RLI is well established, with a continuously widening basis of taxonomic groups. Still, the indicator is for some taxonomic groups incomplete because of the existing taxonomic impediment and the lack of taxonomic expertise in specific groups and geographic regions. RLI initiatives are underway to extend the taxonomic coverage to more groups from across the Tree of Life and more habitats and ecosystems. In addition, technological advances, including eDNA and metabarcoding can back RLI evaluations with available molecular data.

This would also help to fill existing gaps of the RLI, which is limited in some geographic areas, and would foster capacity building as envisaged in NBSAPs to increase the knowledge, expertise and resources for carrying out species assessments that follow the IUCN standards and criteria. Sequencing data can be particularly helpful to establish, develop, update and maintain Red Lists in biodiversity-rich countries.

A first step towards globally standardized RLI applications is a species-level indicator reporting on the "Completeness of the world's species catalogue", proposed by the Consortium of European Taxonomic Facilities in their submission August 2020. Such a global species catalogue is a prerequisite for the standardization and comparability of any monitoring approach and indicator at the species level. | Expansion and intensification of capacity building and technology transfers are necessary to establish and deepen specialized taxonomic expertise and to build, maintain and invest in required in-country collection, genomic, biochemical, imaging and biodiversity informatic facilities. Such capacity building and technology transfer is especially necessary to support the reporting on the comprehensive species list indicator, the RLI and all additional indicators at the species and genetic levels by developing countries, small countries, island states and biodiversity-rich countries.

The Global Taxonomy Initiative has been established to build and enhance such expertise through education and collaboration. Its goals include access to and sharing of data, knowledge and expertise to build required communities of experts and trained workforces globally, nationally and locally, especially in developing or biodiversity-rich countries. | |

Data resources for the proposed species catalogue can include global aggregators, cp. GBIF, INSDC, BOLD. This indicator can be reported at the global, national and subnational levels and disaggregated by habitat and ecosystem, as well as species group. The importance of a comprehensive species catalogue has been indicated repeatedly, e. g. see CBD-decisions to overcome the taxonomic impediment. The catalogue would be of crucial importance for, e. g., the proposed complementary indicators reporting on phylogenetic diversity (cp a.40, b.1; see IUCS SSC Phylogenetic Diversity Task Force) and on "the number of threatened species by species group" (a.41).

The global species catalogue would be a crucial standard that is of essence for all (headline) indicators at the species-and genetic diversity levels (cp. A.0.2-A.0.5). It is a key element in an integrated modeling framework for biodiversity and its indicators specifically under Goal A. Furthermore, NBSAPs and National Biodiversity Reports will strongly benefit from the catalogue's data.

Building on a standardized global species catalogue, the RLI will add to its information by providing evaluations for each species within the catalogue of the species' habitat availability, abundance and threat status using the standardized IUCN approach. Such evaluations are based on and refer to within-species knowledge, data and interpretations. Thus, the RLI's evaluations are closely related to the population and genetic diversity level.

Thereby, the RLI will integrate into a unified modeling framework for biodiversity and its indicators across all levels of biodiversity. Similarly to the LPI, the RLI will expand within-species information on local or habitat-specific presence-absence data (based on samples and/or observations) by evaluations considering abundance and time-series information. The information provided by the RLI should be georeferenced to a specific location or reference area.

Red list indices are only available for some regions and some species or species groups, thus they might we one tool countries could choose to apply if it applicable	Red list indices are only one tool, and only applicable by some countries and only meaningful for certain species groups; there is need for additional indicators, e.g. certain indicator species or highly protected animals or plants that can be applied. In addition, for maintaining healthy genetic diversity the total area or the # of habitats being	

	connected is quite different for invertebrates vs certain mammals (.e.g. the Puma).	
		Proposed indicator: "Conservation status of terrestrial and aquatic migratory species, as a proxy indicator of connectivity." This indicator is based on the disaggregated sub-sets of the existing global species indices being considered for the framework (Red List Index, Living Planet Index, Wild Bird Index), providing a proxy measure for the status of connectivity of natural ecosystems as it affects these species. Given that migratory species by definition are a connection between places, a change in status of these species can itself represent a change in the quality of the connection. The Strategic Plan for Migratory Species 2015-2023 adopted exactly this approach. The Red List Index for migratory species would show trends in survival probability (the inverse of extinction risk) for migratory species (currently birds and mammals; fish being added). As migratory species are better conserved (including improved connectivity) and populations recover, the index goes up. As they deteriorate in status and populations decline and ranges shrink (and are less well connected), the index goes down.
While the Red list index remains an essential indicator to assess the status and trends of species populations, it has the caveat that information is only available for a limited number of taxa/taxonomic groups. Researchers at iDiv recently assessed the conservation status of approx. 14,000 orchid species using a deep learning algorithm and were able to identify the risk status with high (>84%) accuracy even when data availability was low. The method could be applied to other taxa and could contribute to significantly accelerating and upscaling of assessment processes (Zizka et al. 2020, Conservation Biology, https://doi.org/10.1111/cobi.13616).		
The red list index is a biased sample, with the bias being introduced by sampling effort as well as ecological expertise available. To make the indicator stronger we need both incentives and finances to build stronger global capacity and more rigorous sampling, especially in the wet tropics. At the moment the existing baseline	The global red-list often does not correspond to regional or locally endangered species. We need a better resolution that provides information of the threats to species at local ecosystem level.	

information are not adequate to measure progress in the next 20 years.		
The relationship between threatened species and the spatial extent of all ecosystems, including managed ecosystems by IPLC that provide good outcomes for species should be addressed (see e.g. Schuster, R., Germain, R.R., Bennett, J.R. (2019) 'Vertebrate biodiversity on indigenous-managed lands in Australia, Brazil and Canada equals that in protected areas'. Environmental Science & Policy 101).	The relationship between threatened species and the spatial extent of all ecosystems, including managed ecosystems by IPLC that provide good outcomes for species should be addressed (see e.g. Schuster, R., Germain, R.R., Bennett, J.R. (2019) 'Vertebrate biodiversity on indigenous-managed lands in Australia, Brazil and Canada equals that in protected areas'. Environmental Science & Policy 101).	
	Requires funds for capacity building and inclusive/gender access to knowledge and technology	
Red list index is a good measure but it may not be representative across taxa and it is a slow measure of change as reviews only occur every few years. Lots of work (and cost) is required to update populations and trends and there are many species which remain data deficient.	Gap analysis of taxa where largest gaps in knowledge exist so that biodiversity is well represented across the taxa and region, plus investment in these gaps. Pacific species poorly assessed overall.	
	Parties will require assistance to measure functional connectivity and ecosystem integrity	
Indicator is robust, published (Butchart et al. 2007 PLoS ONE https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0000140), globally applicable across all countries, and serves as a current official indicator for SDG 15. This remains one of the strongest indicators. That said, it seems increasingly important to increase the taxonomic coverage of the Red List so that the number and breadth of the comprehensively assessed groups is more representative of overall biodiversity.	It is important for those countries that compile their own Red Lists to be able to develop RLIs from those datasets and compare them with RLIs derived from the disaggregated global Red List.	In time, the Red List Index will be complemented by tracking changes in the STAR metric (Mair et al. 2021 Nature Ecol Evol https://www.nature.com/articles/s41559-021-01432-0), to allow explicit documentation of the extent to which threat abatement and restoration actions under Targets 1-7 contribute towards the overall species biodiversity goal
It would be particularly useful to compose Red List index data for a sub-set of all species in use and trade, to monitor the temporal changes in the status of those species in relation to active management (including through sustainable use approaches), and changes in the pressures of exploitation. This could focus on the Biodiversity for Food and Medicine indicator, methodology for which is established, see: https://www.traffic.org/site/assets/files/7300/biodiversity-for-food-and-medicine-english.pdf		

	National capacity building and investment may be needed to implement assessments and mobilise sufficient data. Note that a few countries with well-developed monitoring schemes may also have more sensitive metrics available for tracking status of threatened species nationally. National red list indices require multiple, frequent red list assessments across a broad group of taxa to be respresentative and sensitive to change.	
The Red List Index is a tool, not an indicator in and of itself. The indicator needs to describe what the Red List Index seeks to achieve to meet Goal A. RLI is available for five taxonomic groups only (those in which all species have been assessed at least twice): birds, mammals, amphibians, cycads and warm-water reef-forming corals. It does not include plants or extensively cover marine or freshwater species.	Additional resourcing would need to be provided to IUCN red list teams to update the RLI on a regular basis and to incorporate other taxonomic groups. At the country level developing countries will need technical, financial and capacity building support to be able to collect, aggregate and analyse data on species.	Change A.0.3 to 'Extinction risk, as indicated by the Red List Index, decreases annually by {xx}% for all listed species'
The relationship between threatened species and the spatial extent of all ecosystems, including managed ecosystems by IPLC that provide good outcomes for species should be addressed (see e.g. Schuster, R., Germain, R.R., Bennett, J.R. (2019) 'Vertebrate biodiversity on indigenous-managed lands in Australia, Brazil and Canada equals that in protected areas'. Environmental Science & Policy 101).	The relationship between threatened species and the spatial extent of all ecosystems, including managed ecosystems by IPLC that provide good outcomes for species should be addressed (see e.g. Schuster, R., Germain, R.R., Bennett, J.R. (2019) 'Vertebrate biodiversity on indigenous-managed lands in Australia, Brazil and Canada equals that in protected areas'. Environmental Science & Policy 101).	
We need to explicitly include the degree to which IPLCs, women, peasant farmers and those who live closest to biodiversity are involved in ensuring the integrity of natural ecosystems and maintaining genetic diversity. Otherwise this and other indicators risk excluding their role in ensuring this.	As noted above we need more work on the interactions between IPLCs, women peasant farmers with biodiversity and ecosystems and how these serve the overall aim. This must be carried out with these people.	
The existing red list does not cover all species and therefore needs to be expanded		
Animal welfare of individuals should also be included as a part of the index. Through our experience, individual animal welfare is often related to the conservation of the whole species		
We support monitoring elements for 3 measures for conservation: trends in species extinctions, trends in species extinction risk (Red List) and trends in species population abundance (Living Planet) and distribution.

However, with the current approach, there is a risk of enshrining some level of extinctions as acceptable, which | | |

could initiate a process of choosing which species are allowed to go extinct, whereas the objective is to halt human-induced extinctions.

There needs to be measures of species diversity and functional, social, cultural integrity of populations. It is essential to measure species traits, relating to the structural, chemical, physiological and social characteristics of organisms, as they will determine how the ecosystem is able to respond to perturbation and environmental change.

Many species are classified by the IUCN Red List of Threatened Species as Data Deficient, are overdue for assessment, or have not been assessed at all. The Red List Index is useful for identifying long-term trends but is entirely based on what has or has not been assessed/reassessed for Red List categories. Often, higher taxa are assessed/reassessed together, which could give a skewed view. In addition, Red List assessments are periodic and slow. Any use of the Red List should also account for the species trend, not just the category in which the species is placed. Note that of 2,117,421 species described, only 134,425 (6%) are anticipated to have been evaluated by 2021.

In order to complement the Red List Index, we suggest using the conceptual framework developed by the IUCN Red List Committee's Task Force on Species Conservation Success since 2012, which is due to be officially launched at the IUCN World Conservation Congress later this year. Once operational, the framework, or 'IUCN Green Status of Species' should provide an indicator for species recovery. It uses four practical indices aimed at demonstrating conservation successes and the degree of species' recovery, rather than threat status. It considers the impacts of past conservation, what would happen if all current conservation ceased, expected gains from conservation action, and how close to 'fully recovered' a species can get with effective conservation action. Full recovery is defined as one that is viable and that fulfils its ecological roles in the ecosystems throughout its native range.

It does not explicitly consider "connectivity". The Red List currently shows trends in extinction risks. Instead, the inverse is desired to show trends in survival probability via conservation - including maintained, enhanced, and		Propose different indicator: "Conservation status of terrestrial and aquatic migratory species" as an overall proxy indicator of connectivity of natural ecosystems and based on the disaggregated sub-sets of the

restored connectivity – and recovery or deterioration, decline, shrinkage – including loss of connectivity.		existing global species indices (Red List Index, Living Planet Index, Wild Bird Index). In this regard, the "Red List Index for migratory species"
		The Red List Index does not support cross-national comparisons (disaggregation to country), is only usable for 5-10 year, not annual comparisons, is unable to readily adopt national data sources. More directly EBV-supported indicators are able to overcome these limitations.
The index should provide some nuance, such as number of species threatened relative to the total number of species in a habitat or jurisdiction. An indicator should also be based on the number of threatened species relative to the number of species expected in an area for a particular trophic level or group of species in order to be meaningful (e.g., a country may report 0 threatened species, if the species have been eradicated from this area). The indicator should therefore also include a reference or baseline.	Understanding the number of threatened species requires capacity development in standardized and converge methods (data collection, management) and baseline information to understand relevance to Target A.	The index should provide some nuance, such as number of species threatened relative to the total number of species in a habitat or jurisdiction. An indicator should also be based on the number of threatened species relative to the number of species expected in an area for a particular trophic level or group of species in order to be meaningful (e.g., a country may report 0 threatened species, if the species have been eradicated from this area). The indicator should therefore also include a reference or baseline.

A.0.4 Species habitat index

A.0.4 If you selected "yes, however requires further work", please describe:	**A.0.4 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**A.0.4 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
This indicator can work IF AND ONLY IF it gets disaggregated for permanent intact areas areas lost areas restored	This indicator can work IF AND ONLY IF it gets disaggregated for permanent intact areas areas lost areas restored	
		We suggest the revision on this kind of indicator to adjust its biased baselines.
Needs further information on the methodology and published results.		
As the habitat areas change along the time and most of the areas of the world are potential habitats to many species which do not currently live there but may have earlier lived there and may also in future again live there, these changing conditions and the role of the diverse	The role of cultural values in determining habitats and their needs of conservation would need to be reflected better. If for example hundreds of millions of human lungs	

human impacts on them would need to be better reflected in them.	are currently most 'natural' habitat for variety of different Covid-19 viruses, as far as the determination of how human lungs shall not be treated primarily as such Covid-19 viruses' habitats, which have to be protected as such habitats to protect the diversity of Covid-19 viruses, comes from some cultural values, how will different cultural values treated equally in determination of different habitats of different species?	
Please see our comments and suggestions for indicator A.0.5		
This indicator needs extra guidance for natural ecosystems vs managed ecosystems	This will be difficult to compare among national reporting, as targets for integrity for e.g. more "pristine" ecosystems such as the Amazon and the Siberian forests and Tundra are totally different to e.g. open landscape ecosystems in Europe, that have been dominated by agriculture (with an adapted Fauna & Flora) over the past 1000 years. Reporting should have established more context (locally relevant) indicators	
Recent research (Chase et al. 2020, https://doi.org/10.1038/s41586-020-2531-2) has shown that smaller habitat fragments often contain fewer individuals, species and species communities than would be expected from larger habitat fragments, due to altered demography of the remaining species, a phenomenon termed «ecosystem decay». Due to this effect it is impossible to accurately assess changes in threat-levels to species populations from changes in area of habitats or species distribution alone. More realistic projections of biodiversity loss could be obtained by including demographic effects in projections of biodiversity loss. These effects should be incorporated in Species habitat indices. A.0.4 Do you think this indicator is relevant for global reporting and for enhancing standardization and comparability in national reporting?		
Habitat conditions that are optimal for some species might be sub-optimal for others. Will there be a standardized set of species to be included in the computation of the index for comparability? Will the indicator be computed for individual counties or as a single global indicator for the assessment at the Convention level?	Habitat conditions that are optimal for some species might be sub-optimal for others. Will there be a standardized set of species to be included in the computation of the index for comparability? Will the indicator be computed for individual counties or as a single global indicator for the assessment at the Convention level?	

Requires funds for capacity building and inclusive/gender access to knowledge and technology		
		We recommend using the "Ecosystem Intactness Index" (currently included in Add.1 as "a.32 Ecoregion Intactness Index") to measure the integrity of all terrestrial ecosystems through one metric that builds off of the Human Footprint Index. The Ecosystem Intactness Index is approved by the BIP Secretariat, peer reviewed [https://conbio.onlinelibrary.wiley.com/doi/pdf/10.1111/conl.12692], and measures the relative integrity, or intactness, of natural ecosystems by using global datasets on anthropogenic pressures that cause a loss in area or quality of terrestrial ecosystems, including through their connectivity, degradation and fragmentation. The index is validated and data are standardized globally via the generation of the human footprint processes and can be disaggregated to national or ecoregional scales to identify progress towards national or global ecosystem conservation objectives on natural ecosystem/habitat loss, degradation and fragmentation.
	Relevant and links to the following national environmental indicators in the Pacific islands: Status of threatened, endemic and migratory species (trend in population size or occupancy of selected species) Few monitoring programs in place for any species in the Pacific Islands region. Capacity and lack of resources are the main barriers. Support for Pacific species habitat assessments required.	
Indicator does not appear to be available; unclear additional value to existing indicator suite	not available	
		We recommend using the "Ecosystem Intactness Index" (currently included in Add.1 as "a.32 Ecoregion Intactness Index") to measure the integrity of all terrestrial ecosystems through one metric that builds on the Human Footprint Index. The Ecosystem Intactness Index is approved by the Secretariat of the Biodiversity Indicators Partnership

		[https://conbio.onlinelibrary.wiley.com/doi/pdf/10.1111/conl.12692].
		Replace with the Forest Structural Condition Index (FSCI) (Hansen et al 2019) which measures vegetation structure within forest based on canopy cover, height, and time since disturbance- as a measure to track ecosystem integrity under Milestone A1. Available for tropical moist forests but being extended to all forest worldwide. It was developed by Montana State University (https://www.nature.com/articles/s41597-019-0214-3).
Species habitat index is a tool and not an indicator by itself. Alternative indicator:		Change A.0.4 to 'No further decline in [connected with high integrity] habitats, both on land and in water, and an increase in the proportion of suitable intact habitats, using indices such as the Species Habitat Index.'
The relationship between habitats and the spatial extent of all ecosystems, including managed ecosystems by IPLC that provide good outcomes for habitats should be addressed.	Existing maps and indices require overlay maps with territories of IPLCs.	
We need to explicitly include the degree to which IPLCs, women, peasant farmers and those who live closest to biodiversity are involved in ensuring the integrity of natural ecosystems and maintaining genetic diversity. Otherwise this and other indicators risk excluding their role in ensuring this.	As noted above we need more work on the interactions between IPLCs, women peasant farmers with biodiversity and ecosystems and how these serve the overall aim. This must be carried out with these people.	
We recommend using the Ecosystem Intactness Index, approved by the Biodiversity Indicators Partnership.		
		We recommend using the "Ecosystem Intactness Index" (currently included in Add.1 as "a.32 Ecoregion Intactness Index") to measure the integrity of all terrestrial ecosystems through one metric that builds on the Human Footprint Index. The Ecosystem Intactness Index is approved by the Secretariat of the Biodiversity Indicators Partnership [https://conbio.onlinelibrary.wiley.com/doi/pdf/10.1111/conl.12692].
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<td>Developing this index will require substantial work to include marine species and habitat extent.</td>
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not habitat extent information and the index is probably biased by largely including only terrestrial habitats.		Because most marine species are not included, there is not habitat extent information and the index is probably biased by largely including only terrestrial habitats.
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		ecosystem/habitat loss, degradation and fragmentation.

A.0.5 The proportion of populations maintained within species*

A.0.5 If you selected "yes, however requires further work", please describe:	A.0.5 If you selected "yes, however requires further work on capacity-building or other work", please describe:	A.0.5 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
Unclear - proportion of what ? is there a qualifier, a totality? Further question is: which species? Those which are cute or have functionality for the human economy? Or are we measuring all species which have importance for ecosystem functioning? We hope the latter!	Unclear - proportion of what ? is there a qualifier, a totality? Further question is: which species? Those which are cute or have functionality for the human economy? Or are we measuring all species which have importance for ecosystem functioning? We hope the latter!	
The phrase "The proportion of populations maintained " needs to be further clarified	The proportion of populations maintained	
	relevant data should be collected timely to ensure the progress of the indictor so capacity building is very important	
The indicator proposal is very extensive; requires clarification of which populations in which environments will be monitored.	The indicator proposal is vague and very extensive; requires clarification of which populations in which environments will be monitored.	The proportion of natural populations maintained within key species for each ecosystem.
	What about migrating species? How do the national reports account for them without showing duplicate figures?	
Populations depend on various conditions which are not related only to 'natural ecosystems' and thus it can not be said that population as such would indicate just increase of the area, connectivity and integrity of natural ecosystems. Some species have wide populations even outside their 'natural ecosystems' (in meat or fur production factories, etc.)	Population is relevant for reporting and standardization but as such indicates wider totality of conditions, which allow the survival of population and is not determined only by the area, connectivity and integrity of 'natural ecosystems'.	
Several indices of within-species (population-) genetic diversity form a cluster of closely related indices. These focus on different aspects and proxies of within-species	See our comments and suggestions for indicator A.0.1	

genetic diversity, however share similar data requirements. This cluster includes the Living Planet Index (LPI), the Species Habitat Index (SHI), the Comprehensiveness of conservation of socioeconomically as well as culturally valuable species Index (CCSCVSI), and the Proportion of populations maintained within species Index (PPMWSI), see also the In situ and ex situ records-based index of within-species genetic diversity (RBGDI) proposed by Statistical Genetics in their submission August 2020. Hence, these indices can be combined, and integrated into a unified modeling framework for the post-2020 monitoring (see our comments and suggestions for indicator A.0.1, and indicators A.0.2 and A.0.3).

The SHI evaluates, if suitable habitat area for a species is present and if, thus, the environmental foundation exists for the occupation by a species and its populations. In an integrated modeling framework habitat classification should follow the global classification model employed under A.0.1, potentially further resolved into finer subcategories.

The CCSCVSI, PPMWSI and RBGDI record and summarize the presences/absences of populations or individuals of a species within geographic areas, habitat types and/or of habitats at specific locations, in part taking into account monitoring efforts (see also LPI). The LPI and PPMWSI refine presence records by resolving them into abundances.

We propose to integrate headline indicators A.0.2, A.0.4 and A.0.5 into a single module for within-species genetic diversity, which is part of a unified and integrated global model of biodiversity across all levels. Within the module of within-species genetic diversity they represent different aspects of measuring within-species genetic diversity.

For the purpose of monitoring, quantifying and documenting species and genetic level biodiversity, a records- and collections-based approach is necessary for many species and taxa, which cannot be unambiguously identified or easily "found" in the field, but require samples be taken back into a collection and lab to be analyzed, e. g., anatomically-morphologically, biochemically or genetically. Such samples, in addition, build the basis for reproducibility (cp. re-identification of the species after revisions of a taxonomic group) and reuse for additional, still to be developed analyses of traits in the future (eg.

non-destructive genomic, biochemical or image-giving analyses). In this way, extensive high-quality collection-based datasets give rise to continuing time series, similar to those already existing for vertebrate species monitored by the LPI. The importance of well-managed and long-term preserved collections of voucher samples for within-species approaches to the inventorying and monitoring of global within-species genetic diversity has been recognized and implemented for building population-genomic reference datasets to be used for applications in human medicine, cp. Cann et al. (2002) Science 296 (5566): 261-262 and e. g. the UK Biobank approach. Prerequisites for global standardization and thus comparability of evaluations of all these within-species, population-level indicators are comprehensive, agreed-upon national species catalogues, which adhere to a comprehensive global species catalogue (see Headline Indicator A.0.3), and a shared ecosystem and habitat foundation provided by a locally and globally validated model of the world's ecosystems (see Headline Indicator A.0.1). None of the currently proposed headline, component and complementary indicators measure within-species genetic diversity directly. They all remain at analyzing proxies. The coming years and their advances of genomic technologies should be used to develop the infrastructures, workflows and analytical foundations, as well as the required reference datasets for the direct monitoring of genetic biodiversity and its associated phenotypes. Steps towards these goals are underway in the form of the development of an integrated digital extended data infrastructure with associated work environments by the alliance for biodiversity knowledge under the auspices of GBIF, together with the international collections community, and a wide range of stakeholders.		
What does species mean? Is this about an enigmatic species driving a specific responsibility by a country, or is this about habitat required by e.g. pollinators? (Just an example of many others that could have been chosen).		It needs more differentiation of what species populations and their species specific need for # of meta populations to maintain an overall state of the species in a country/region.
This is really an indicator of the genetic within species genetic diversity which may also be reflected by the size of populations or the environmental niche space across which a continuous population exists. It is also difficult to	Not all countries have the technical capacity to collect, analyse and interpret the data well. There are many technical problems with determining variation within and among taxa. We need	

see how the index will not be distorted by species distribution patterns, especially point endemics.	standard methods for interpreting these differences at a taxon basis	
The total amount is unclear. We need to talk about proportion of what we are talking about	We need to measure "populations in good/favorable status of total populations"	
		Not sure what this indicator is intended to measure. Will the proportion be assessed by the number of individuals or by the number of populations (number of groups of individuals in distinctive locations)? What does "maintained" mean?
The genetic diversity is an effective indicator in the analysis of health populations studies and could be included as an indicator	The genetic diversity is an effective indicator in the analysis of health populations studies and could be included as an indicator	
It needs to include criterioum and knowledge of IPLC		
	There is high endemism in Pacific Island countries but many species are still poorly described especially differences between island endemics. Support needed to define populations and species diversity.	
This indicator will need some measure of genetic diversity		
A valuable basis established for this indicator by Hoban et al. (2020 Biol Conserv https://www.sciencedirect.com/science/article/pii/S000632 0720307126), but data availability unclear. Presumably not all populations will be equal – it is possible, for example, to lose several small, marginal populations and that could appear worse than losing one substantial population. In fisheries, populations are fundamental and trends in populations at global level is a mainstreamed activity.	Not yet a functioning indicator. Would be very limited to a small subset of species with these kind of data. A valuable basis established for this indicator by Hoban et al. (2020 Biol Conserv https://www.sciencedirect.com/science/article/pii/S 0006320720307126), but data availability unclear. This is the level of detail that we really do need to get to, but there are significant constraints at present, on the ability to gather representative data, curate an manage it and then a analyse and report.	
Unclear - proportion of what ? is there a qualifier, a totality? Maybe measure "populations in good/favorable status of total populations"?	Unclear - proportion of what ? is there a qualifier, a totality? Maybe measure "populations in good/favorable status of total populations"?	Five headline indicators for goal A is plenty – if the overall number of HI needs to be reduced, one or two (not the first one) could be dismissed form this goal
		The HI is unclear. It needs to clarify the proportion of the population being referred to, and what is meant by "maintained" populations. It is better to refer to populations whose status is good/favourable.

		The existing headline indicators A.0.1-3 alongside the inclusion of the FSCI would be sufficient to track progress towards Goal A.
The current population status of most species globally is dire (see Red list index and Living Planet Index referenced in above indicators). The indicator should not be to maintain current populations but rather to increase and restore indigenous populations within species and increase connectedness between disparate populations to enable genetic transfer and dispersal to cope with future stresses, principally climate change.	Gathering population data on species can be particularly challenging. It is likely that indicator species will need to be used. However, care should be taken in the selection of these indicator species so that they do not bias particular taxonomic groups or miss key ecosystem functions. Increased technical, financial, training and capacity building will all be required to identify appropriate species to sample, train in monitoring techniques, collect and analyse data and reporting to successfully demonstrate achievement against this indicator.	Change A.0.5 'The proportion of indigenous populations is increasing and restoring within species and populations.'
		Five headline indicators for goal A are plenty – if the overall number of HI needs to be reduced, one or two (but not the first two) could be dismissed from this goal.
We need to explicitly include the degree to which IPLCs, women, peasant farmers and those who live closest to biodiversity are involved in ensuring the integrity of natural ecosystems and maintaining genetic diversity. otherwise this an other indicators risk excluding their role in ensuring this.	As noted above we need more work on the interactions between IPLCs, women peasant farmers with biodiversity and ecosystems and how these serve the overall aim. This must be carried out with these people.	
Question on whether sufficient data is available to make this level of data.		
Wellbeing should also be addressed instead of population alone. So both quality and quantity.		
This indicator needs further refinement and clarification: proportion of what populations? Further, merely measuring numbers will not be sufficient to monitor and achieve the 'healthy and resilient' aspects of the Goal. Functional and behavioural diversity and the conservation status of species (aiming for favourable) need to be accounted for here.		
		The HI is unclear. It needs to clarify the proportion of the population being referred to, and what is meant by "maintained" populations. It is better to refer to populations whose status is good/favourable.
Will need careful empirical development	Will need careful regional engagement to support calculation for sufficient species and regions.	

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Not a comprehensive measure across taxonomic groups.		
This index needs to be defined clearly so that appropriate data may be collected in a standardized manner and reported in standard formats. At present it is not clear what number is to be normalized against what standard to derive a proportion	This index needs to be defined and clearly so that appropriate data may be collected in a standardized manner and reported in standard formats. At present it is not clear what number is to be normalized against what standard to derive a proportion	This index needs to be defined clearly so that appropriate data may be collected in a standardized manner and reported in standard formats. At present it is not clear what number is to be normalized against what standard to derive a proportion
To be more accurate the indicator should be revised as follows: A.0.5. "The proportion of distinct populations of wild species and breeds, landraces or varieties for agricultural species maintained" (Reference: https://www.sciencedirect.com/science/article/pii/S0006320720307126#) Another possible headline indicator for measuring genetic diversity of wild species, would be A.0.6: "Number of populations within species with effective population size (Ne) above 500 versus those with Ne below 500" (Reference: https://www.sciencedirect.com/science/article/pii/S0006320720307126#)	This indicator would require capacity building on the importance of genetic diversity for population viability, ecosystem functioning and adaptive capacity, given that this is a new type of indicator.	
The focus of the Goal is about ecosystems, but all of the indicators are only species indicators. Something is needed for the broader ecosystems, connectivity, etc.		

Goal B. Nature's contributions to people have been valued, maintained or enhanced through conservation and sustainable use supporting global development agenda for the benefit of all people

B.0.1 Population benefiting from ecosystem services*

B.0.1 If you selected "yes, however requires further work", please describe:	B.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	B.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
		This proposed goal and indicator are not aligned with the CBD. There is no definition of "nature" in the CBD, and this goal and indicator

		will not necessarily support the implementation of the objectives of the CBD. There is no undisputed scientific evidence that the proposed indicators would be an indication of improved biodiversity status. Nature is being put "in the service of" the economy. While we have to make sure the economy respects nature. At the same time, there is much too little attention for IPLCs and rightsholders who really live in harmony with nature, and therefor don´t "utilise" it, but give and take in a balanced way.
May be some quantifiable properties should be included in the indicator. For example; a open area should have at least 5% cover of natural vegetation	All countries should be aware of the importance of sustainable environment and it should be maintained	
		Population [%] acessing drinking water; [pottentially adding a new indicator that could reflect access to ecosytems benefits , such as: "Population [%] living in benefited localities near legally public or private protected areas."]
	We need to enhance the access by the most vulnerable populations. Without such disctinction, the risk is to have a good score while only privileged populations are benefiting from ecosystem services.	
		Indicator: People living by the regeneration of the ecosystems in ways which fulfill their human rights. CBD institutions have to maintain its ecosystem/ biodiversity related indicators (Most of people benefit from ecosystems and ecosystem functions but the usual totality of the significance of the expression "ecosystem services" consists of many aspects of commercial utility connotations which distort the understanding on ways how people benefit from ecosystems.)"
An evaluation if use and management of wild and managed species are sustainable over the long-term, specifically under at an evolution-relevant time scale comparatively rapidly changing environmental and climate conditions, requires a solid understanding of the resilience and adaptability of wild and managed species, both in natural populations as well as in agricultural,	The necessary sample collections, datasets and their associated standardized data infrastructures and analytical work environments do not exist today. Still, over the coming years, capacity building efforts can focus on providing international concerted progress towards the realization and implementation of such resources and	

aquacultural, fisheries and forestry management systems. Well-designed, distribution range-wide reference datasets within species will provide the information-rich genomic and phenotypic (trait) data for reliable statistical evaluations and conclusions. Such collections of samples and trait data can be continuously extended to provide scale-independent results of sufficient statistical power and reliability. In turn, these datasets support versatile application, for example, they will inform simultaneously on Goals A, B and D and several of their targets.	functionality. Efforts towards this goal are already underway in the form of the development of an integrated digital extended data infrastructure with associated work environments by the alliance for biodiversity knowledge under the auspices of GBIF, together with the international collections community, and a wide range of stakeholders. Once developed, these datasets, data management infrastructures and work environments, including reporting modules can be integrated into and directly support national reporting systems. Indicators based on such capacity will be relevant and provide the necessary basis for standardization, comparability and reporting across all scales, from global to national to subnational reporting. The proposed AHTEG on indicators might provide scientific-technical advice and guidance for such capacity building.	
Will extremely complex to report on	More guidance is required for e.g. how a "population benefiting" is calculated. This is extremely difficult for example for countries that are main producers of agricultural produce for export vs those countries that are receiving the produce (the net importers).	
With this indicator, we would be monitoring the demand for ES (i.e. the beneficiaries of ES), but not the supply of ES by nature. This means that we cannot use this indicator to monitor how nature is providing ES to people, but to monitor how many people depend on ES, as it will just show an increase as population grows. A surrogate of this is being used in a recent publication from Chaplin Kramer et al. (https://www.biorxiv.org/content/10.1101/2020.11.08.3610 14v1): - Access to nature (local recreation and gathering): Count of people within 10 km of natural and semi-natural habitat		
		This indicator will reflect the human population distribution more than the maintenance of ecosystem services. In fact, it might actually increase if population increases in sensitive areas (though population growth or migration) so I think this could be very misleading.
This proposed goal and indicator are not aligned with the CBD. There is no definition of "nature" in the CBD, and this goal and indicator will not necessarily support the		

implementation of the objectives of the CBD. There is no undisputed scientific evidence that the proposed indicators would be an indication of improved biodiversity status.		
		We need a goal that does not put benefits at center and use that as a measuring stick, because that is an incentive to increase production, which ultimately creates more pressure in biodiversity. We need a target that looks at the % of use that is sustainable – according to art.2 of the convention, if use is sustainable, this would ensure long term benefits. The target also would be the indicator, % of use across all sectors that is done sustainably.
		The description is too vague. What ecosystem service will this indicator deal with? Is there anyone who can survive a day without receiving the benefit of ecosystem service? How will it be determined if people are "benefiting"?
There is a confusion between nature's contribution to people (NCP) and ecosystem services. Although both are conceptually similar, there is a need to describe both terms especially since NCP is a term coined by IPBES. Some Parties are not legally capable to endorse NCP but can do so with ecosystem services. Additionally, NCP and ecosystem services concepts are not embraced fully (or none at all) by some Parties.	As above.	
Is so general, we need to be more specific. Also, the term nature contributions to people is broader than ecosystem services. The proposal could be in the sense of using the first term "NCPs".		
Suggested change to this Indicator could be: "Population benefiting from ecosystem services and equitable distribution of ecosystem services - to IPLCs and most vulnerable people" (resource and governance security for IPLC, women, rural and fisher communities, supported by disaggregated data). The global agenda prioritizes the needs of the most vulnerable, and the CBD in Article 10 has a specific focus on customary sustainable use. This needs to be captured in a global indicator.	Capacity building for parties on tools and data collection, importance of participatory approaches for effective disaggregated data collection with IPLC, civil society, relevant stakeholders	
This headline indicator is too anthropecentric and market-oriented, it does not call for people's responsibility to take care of the Mother Nature and the respective ecosystems. Therefore, all the indicators should be complemented with	Run the risk that this indicator can show biased indicators: showing only a group of privileged population benefiting from ecosystem service	

an incator of reciprocity: Population taking care of the ecosystems.		
We suggest the following adjustments: "Population benefiting from ecosystem services and equitable distribution of ecosystem services -to IPLCs and most vulnerable people" (resource and governance security for IPLC, women, rural and fisher communities, supported by disaggregated data)	Capacity building for parties on tools and data collection, importance of participatory approaches for effective disaggregated data collection with IPLC, civil society, academics, gender, generation	
	Limited data exists within the Pacific islands region	
this indicator is highly context-dependent, not all parts of a population will benefit from ecosystem services equally.	needs further work to allow for aggregation across different types of ecosystem services	
WWF proposes to amend the headline indicator to: "Population benefiting from ecosystem services and equitable distribution of ecosystem services - to IPLCs and most vulnerable people" (resource and governance security for IPLC, women, rural and fisher communities, supported by disaggregated data)	Capacity building for parties on tools and data collection, importance of participatory approaches for effective disaggregated data collection with IPLC, civil society, academics	
Indicator is appropriate, but formulation and maintenance, and data availability unclear. "Population" is a vague term and not measurable. Better to use "part of the population" or "communities" or "people"	see above	
		We need a goal that does not put benefits at center and use that as a measuring stick, because that is an incentive to increase production, which ultimately creates more pressure in biodiversity. We need a target that looks at the % of use that is sustainable – according to art.2 of the convention, if use is sustainable, this would ensure long term benefits. The target also would be the indicator, % of use across all sectors that is done sustainably.
		Sustainability (not benefits) should be at the centre of any Goal (otherwise this Goal will incentivize Parties to increase production and exploitation of natural ecosystems). We need a Goal that focusses first on the extent or % of use of nature that is sustainable – according to Article 2 of CBD, if use is sustainable then long term benefits can be maintained. Indicators could measure:

		(i) "population benefitting from sustainable ecosystem services"; and (ii) % of use of natural ecosystems by each sector that is sustainable (reporting across all sectors)
Populations' benefits from ecosystem goods may be possible to measure - benefits from ecosystem services such as clean air, flood mitigation, carbon sequestration may not be possible to measure if the benefit is linked to a specific set of people. There is need to think through how best benefits of ecosystem services can be measured and reported on.		
This indicator is risking measuring and encouraging overexploitation of nature. As the term ecosystem services does not imply high levels of biodiversity, nor includes the many different, interconnected functions of ecosystems or biodiversity that do not directly serve people.		We would argue for merging this indicator with goal A, where benefits from ecosystems to humans could be a subtarget. However, if this goal were to be maintained, we propose 'Percent of ecosystems that contribute to provision of resilient ecosystem services that benefit biodiversity and people {as well as contribute to climate change mitigation and adaptation} as a total of land and ocean ecosystems.'
All people benefit from nature. The global agenda prioritizes the needs of the most vulnerable, and the CBD in Article 10 has a specific focus on customary sustainable use. This needs to be captured in a global indicator.	Benefits for IPLCs, women and youth and other vulnerable groups need to be captured and given special focus.	
Too many of the indicators are purely quantitative. We need to examine who is benefiting and how, otherwise we do not address over-consumption and its impacts on ecosystems and IPLCs etc. As previously noted, we need to explicitly include the degree to which IPLCs, women, peasant farmers and those who live closest to biodiversity are able to maintain and interact with biodiversity by having their rights, their knowledge and their lands recognised nationally and internationally. As noted above we need more work on the interactions between IPLCs, women peasant farmers with biodiversity and ecosystems and how these serve the overall aim. This must be carried out with these people.	As described above, we need to disaggregate this indicator in order to understand who and what is having the main positive and negative impacts on biodiversity and IPLCs. The capacity of governments and populations other than IPLCs etc needs building urgently	
Would need to define the beneficiaries of the ecosystems and is this all ecosystem services? How do you define 'benefiting'?	as above	

Add "humane" before "sustainable use supporting global development agenda"		
		B.0.1 is not a measure of sustainability. We would suggest incorporating the value of biodiversity into national accounting systems, as per recommended in the Dasgupta Review (https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review).
		Sustainability (not benefits) should be at the centre of any Goal (otherwise this Goal will incentivize Parties to increase production and exploitation of natural ecosystems). We need a Goal that focusses first on the extent or % of use of nature that is sustainable – according to Article 2 of CBD, if use is sustainable then long term benefits can be maintained. Indicators could measure: (i) "population benefitting from sustainable ecosystem services"; and (ii) % of use of natural ecosystems by each sector that is sustainable (reporting across all sectors)
		While numbers of people benefitting from a particular natural area is an attractive indicator, it is very difficult to estimate because allocating services to people depends on the level of dependency an individual or a population has on the service (direct vs peripheral). Further, field verification of population benefitting is challenging due the high cost of conducting household surveys. In addition, for some of nature's contributions to people, the benefits should not be limited to a subset of the global population because of how essential the need is for things like clean drinking water or climate stabilization services. Therefore, we suggest instead an alternative headline indicator: Indicator: Trends in extent and condition of places most important for delivering regulating, provisioning, and nonmaterial ecosystem services, and trends in flows of benefits from those places. Organization: Recent scientific advances allow

| | | us to map the global distribution of places that can be considered "high performing" in terms of delivering ecosystem services or "Nature's Contributions to People", per IPBES. Conservation International and partners with the Natural Capital Project, Stanford University, University of Minnesota, King's College London and many additional data providers have mapped the places globally that provide the highest levels of a range of multiple ecosystem services. Advances in remote sensing capabilities and geospatial analysis techniques support the measuring of ecosystem extent and in some cases, condition on spatial and temporal resolutions that are meaningful for national-level annual monitoring programs. Flows of ecosystem services can be estimated from spatial data on ecosystem extent and condition using modelling techniques and, ideally, verified with direct observation at the national or subnational level. The collaborators listed above are working on a methodology that will allow for regular updates to the data and mapping products that would support national monitoring programs.

Additionally, the headline indicator for Goal A (Extent of selected natural ecosystems (forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)) could be utilized as a starting point for data analysis for the indicator we have proposed above.

Lastly, we recommend that wherever possible and appropriate, drawing on the UN SEEA for indicators to monitor progress towards goals and targets related to NCPs. |
|---|---|---|
| Ecosystem services need to be specified | Ecosystem services need to be specified | |
| | | The other proposed indicators for this goal are more useful. Everyone in the world benefits from ecosystem services. |
| Population should be defined as "human" or "All species including humans" - otherwise this indicator is vague. Is | Population should be defined as "human" or "All species including humans" - otherwise this indicator is vague. Is the word 'Population' | As written, it is not clear what to measure or how the indicator is to be interpreted. Population should be defined as "human" or "All |

the word 'Population" referring to a name (taxonomy) or is it a number?	referring to a name (taxonomy) or is it a number? Definition needs to include population size, distribution, etc.	species including humans" - otherwise this indicator is vague. Is the word 'Population" referring to a name (taxonomy) or is it a number? Definition needs to include population size, distribution, etc.
		This indicator as stated now might create perverse incentive to increase production and overexploitation of material benefits, increasing pressure on biodiversity. Furthermore, all people benefit from a wide range of ecosystem services, and all people should. A preferable alternative could focus on measuring means to ensure these contributions can continue to be provided (e.g. on sustainable food systems, on ecosystem integrity, customary sustainable use). Ex: From the Indigenous navigator (https://indigenousnavigator.org/): Trends in consumption of diverse locally-produced food, disaggregated by sex, age, and indigenous status If benefits themselves are to be measured, because access to nutrition, food security, livelihoods & wellbeing are all human rights, indicators should aim to measure provision of these to all people, especially the most vulnerable. Therefore, indicators for these elements could be closely aligned with the SDG Indicators (eg. SDG2 - No hunger, SDG3 - Good health and well-being, SDG6 - Clean water and sanitation) and other human rights indicators, towards taking a rights-based approach. Data must then also be disaggregated by sex, age, ethnicity & indigenous status to monitor that benefits are reaching the most vulnerable; and must ensure the full and effective participation of IPLCs, women, and youth. Other alternatives could focus on the intrinsic value of nature, use within planetary boundaries, ecological footprint, or % use that is sustainable.
Literally every person benefits from ecosystem services.		

B.0.2 Value of all final ecosystem services (Gross Ecosystem Product)*		
B.0.2 If you selected "yes, however requires further work", please describe:	**B.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**B.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
		It is an unproven hypothesis that ecosystem accounting will lead to protect nature. We actually believe this is: a complete distraction of resources, and the efforts of experts. this can lead to the adverse effect, when economic projects are deemed more profitable than the "value" of nature. We urge to ask IPBES to make a study verifying/denying this hypothesis, before we build a whole multi-decade strategy on it.
		Ecosystem Services Valuation is not straight forward and there isn't a consensus in the accademia on how to measure it. We propose another indicator that its wording shoulf reflect that the country is including ecosystem services in its normative framework, such as "National regulations of ecosystem services".
	A lower score in a developing country might prevent make investors reluctant to invest or impact the interest rate of their national debt.	
		Indicator: Ability of the ecosystems to sustain life in its diversity. CBD institutions have to maintain its ecosystem/ biodiversity related indicators as required by the CBD. (The ways of understanding the values of ecosystems for life, can be understood more coherently in terms by which diverse peoples and life-heritages have understood the values of lands, waters and forests in living and sustaining Earth's life than in terms of

		"ecosystem services (Gross Ecosystem Product)")
This indicator has the problem of accounting mostly for marketable services (provisioning services like food, timber, meat production) but misses all non-marketable or immaterial services (flood regulation, climate regulation, control of soil erosion, and most cultural services such as inspiration or aesthetic value). In addition, using this indicator would benefit "industrialized" countries focused on the provisioning/marketable services, but would yield low values for countries that contribute to regulating or immaterial ES.		
There will be a need to build consensus on standards to do this. Products used by the poorest people often have low market values but high significance for livelihoods—we need ways to reflect this.	Needs standard on estimating values' specially for commercially undervalued products	
		Same issue as with B.0.1. We need a goal that does not put benefits at center and use that as a measuring stick, because that is an incentive to increase production, which ultimately creates more pressure in biodiversity. We need a target that looks at % of use that is sustainable – which also would be the indicator.
		Seek clarification on what is mean by "be valued." Does this mean monetary valuation or to have each and every NCPs recognized and appreciated in relevant context (region, stakeholder groups, etc.)? If former, we should be more critical about its utility. Nature's values have been expressed in dollar terms, but has not really mobilized any action accordingly. The goal (and its indicators) has to look at outcome, rather than the process. For businesses (powerful stakeholders, highly influential to biodiversity), the guidance of valuation (not necessarily monetary valuation, but the recognition of the importance of nature) is provided in Natural Capital Protocol. The number of companies that have performed corporate-wide natural capital assessment per Natural Capital Protocol with regular reporting of the outcome, can be a meaningful indicator.
	A need to have a common methodology.	

Include: "incorporated into national accounting"	Yes through natural capital accounting efforts like UNSD ecosystem experiential accounts	
To include some indicators related to the no economic benefits. Such perception of local people.	CDB experts could think in a broader standard that includes values, etc. not just gross production.	
Headline indicator should more clearly measure sustainable use (including customary sustainable use) and sustainable development (SDGs indicators would be relevant)		
		market-oriented and profit making indicator. We need to include a right-based indicator
Headline indicator should more clearly measure sustainable use (including customary sustainable use) and sustainable development (SDGs indicators would be relevant)	Many Parties will require assistance to measure this at the national level	
	Limited data or capacity in the Pacific region presently on this approach, however capacity development related to this would be useful	
Headline indicator should more clearly measure sustainable use (including customary sustainable use) and sustainable development (SDGs indicators would be relevant)	Many Parties will require assistance to measure this at the national level	
Formulation, maintenance, and data availability unclear. Which ecosystem services? Carbon capture and storage and water are the obvious ones	Formulation, maintenance, and data availability unclear	There is growing evidence that conserving the Tree of Life is an effective strategy for maintaining nature's contributions to people (for example, see Molina-Venegas et al., 2020, Botanical Journal of the Linnean Society, 194:397; Molina-Venegas et al., 2021 Nature Ecology and Evolution, 5:583–588). In particular, NCPs from biodiversity can be measured using the Phylogenetic Diversity indicator
		Same issue as with B.0.1. We need a goal that does not put benefits at center and use that as a measuring stick, because that is an incentive to increase production, which ultimately creates more pressure in biodiversity. We need a target that looks at % of use that is sustainable – which also would be the indicator.
		Same issue as with B.0.1. Target and indicators should look at % of use that is sustainable.

It is not clear how Parties can practically report on this, when many countries are so far away from implementing natural resource valuation and ecosystem services accounting and reporting.	Capacity building and support provided for Parties that have not yet effectively implemented natural resource valuation and ecosystem services accounting and reporting.	
		This indicator, along with all other indicators proposed for Goal B and associated targets, does not capture the diversity of Nature's Contributions to People (NCPs) as recognized by IPBES. There is growing evidence that conserving the Tree of Life is an effective strategy for maintaining nature's contributions to people (for example, see Molina-Venegas et al., 2020, Botanical Journal of the Linnean Society, 194:397; Molina-Venegas et al., 2021 Nature Ecology and Evolution, 5:583–588). In particular, NCPs from biodiversity can be measured using the Phylogenetic Diversity indicator, and IPBES has adopted this indicator to monitor trends in NCPs (listed by IPBES for NCPs 18: maintenance of options; 14: resource provision; and 15: learning and inspiration; full details here: https://www.biorxiv.org/content/10.1101/2021.03.03.433783v1). As the PD indicator tracks trends in NCPs and the status of the tree of life, it is therefore indicative of the extent to which we are making use of biodiversity that provides, or has the potential to provide, benefits to humans. This indicator is suitable to monitor biodiversity's continued capacity to provide benefits now and into the future, and is unique in linking the conservation status of biodiversity (in Goal A) to the maintenance of nature's contributions to people (in Goal B), and bolstering intergenerational equity. The indicator is the expected loss of Phylogenetic Diversity (IPBES Phylogenetic Diversity indicator), and production and reporting at global and national levels has been committed to by the IUCN SSC Phylogenetic Diversity Task Force and partner institutions including ZSL. The expected loss of Phylogenetic Diversity indicator is also suited for use as an indicator for Target 8, which also currently lacks a biodiversity-focused indicator to monitor the

		provision of NCPs, and full details have been noted there.
This indicator is not available for most countries yet, it measures the total value of final ecosystem goods and services supplied to human well-being in a region annually, and can be measured in terms of biophysical and monetary value.	To note, It is currently being piloted with partners of the developer- IUCN, to date, a national expert panel, standardization expert panel, and thematic project group have been established, and several pilot studies have been conducted.	
This indicator measures flow of resources rather than the actual state of the system. It does not fully illustrate the full non monetary value of ecosystems or other values of ecosystems to human well-being, nor does it include the price of destroying ecosystems, which indirectly increases the GDP. We propose developing and implementing an alternative measure of wealth building on beyond-GDP indicators that prioritises both biodiversity and human well-being and are more inclusive and not necessarily monetary. While Gross Ecosystem Product might be considered, other more inclusive measures need to be examined that account for planetary boundaries and take us beyond the failures of the Gross Domestic Product system.		Change B.0.2 to 'Ecosystem and biodiversity health are valued through both in country economic reporting as well as an inclusive alternative measure of wealth, see more under target 13
We must emphasise here that 'gross ecosystem product' actually means reducing ecosystems to a market commodity within an economic system that needs urgent transformative change. it is completely inappropriate to the GBF. However, the way you frame the questions means that i cannot say no and then comment which i find unacceptable.		
		As regards B.0.2, what needs to be measured is the recognition of the value of all final ecosystem services, more so than the quantitative measure as currently proposed.
		Same issue as with B.0.1. Target and indicators should look at % of use that is sustainable.
The UN SEEA is developing this indicator. More detail provided below.	The Gross Ecosystem Product is an indicator that can be derived from the UN SEEA. The SEEA (System of Environmental Economic Accounting) is the UN statistical standard for the development of a system of national environmental-economic accounts. SEEA Ecosystem Accounting aims to measure five different elements of ecosystems and their contributions to humans: 1) ecosystem extent 2) ecosystem condition; 3) ecosystem services; and 4) monetary assets (i.e., monetary value of all ecosystems within an ecosystem accounting area)	

	and 5) thematics such as land, water, carbon, and biodiversity. This standard was adopted as an international statistical standard under the United Nations in March 2021, providing countries with the integrated statistical framework for a) organizing biophysical data; b) measuring ecosystem services, tracking changes in ecosystem assets; and c.) linking this information to economic and other human activity. Some 100 countries have expressed interest in SEEA implementation and there are efforts underway to support them in data development to do so. For example, the Earth Observation for Ecosystem Accounting Initiative (EO4EA) of the Group on Earth Observations is developing guidelines for "account ready data" bringing together the data and accounting communities to coordinate efforts. Bringing together biodiversity experts/CBD Focal Points with national SEEA statistical experts could be explored as a way to share relevant information.	
	It is not yet available for most countries so would require intensive effort to deliver.	
This indicator could be very powerful, yet standardized approaches have to be incorporated so comparisons between places and over time can be meaningful. It should also include explicit mention of marine, terrestrial, and freshwater ecosystem value	This indicator could be very powerful, yet standardized approaches have to be incorporated so comparisons between places and over time can be meaningful. It should also include explicit mention of marine, terrestrial, and freshwater ecosystem value. It will require significant capacity development	This indicator could be very powerful, yet standardized approaches have to be incorporated so comparisons between places and over time can be meaningful. It should also include explicit mention of marine, terrestrial, and freshwater ecosystem value
		Similar to B.0.1, this indicator as stated now might create perverse incentive to increase production and overexploitation of material benefits, increasing pressure on biodiversity. Alternatives are provided in comments on B.0.1.
This term "final" is unfamiliar. This indicator needs to be polished.		

Goal C: The benefits, from the utilization of genetic resources are shared fairly and equitably

C.0.1 Amount of monetary benefits (in United States dollars) received by countries from utilization of genetic resources as a result of an ABS agreement, including traditional knowledge

C.0.1 If you selected "yes, however requires further work", please describe:	C.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	C.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
Monetary benefits are an extremely crude measurement of the results of an ABS agreement including TK. We have to analyse who benefits and how, including monetary benefits but not confined to those. It requires much more research into who benefits and how in order to improve this crude indicator. We also need to ensure that the sharing of benefits is EQUITABLE and fully according to the 3 objectives of the convention. Prioritising monetary benefits could actually benefit the overexploitation of biodiversity through DSI etc, and those who wish to patent and otherwise gain market advantages.		
The amount of monetary benefits is one side of the coin, the other side is to what extent those benefits are directed at conservation of biodiversity		
This indicator may mean little within the context of the TRIPS agreements that may apply to the genetic ressources.	If the genetic ressources utilization is used solely by multinational companies on the detriment of the vulnerable populations, this indicator will de on the detriment of poor local populations.	Amount of monetary benefits (in United States dollars) GENERATED by countries from utilization of genetic resources as a result of an ABS agreement, including traditional knowledge
		Indicator: Life sustained per use of plants, animals, fungi and microbes and human rights related to them realised without removing the regeneration of their diversity. CBD institutions have to maintain monitoring as required by the Convention. (As the expansion of the commercial control/determination of biodiverse ecosystems

		has accelerated global biodiversity loss, it would be highly counterproductive to assume that further expansion of such commercial control could indicate benefits from its sustainable use. Instead of monetary benefits more relevant would be to highlight local non-monetary ways of life and livelihoods that create diverse relationships with biodiversity thus also supporting its appreciation and maintenance.)
As a general point, we suggest there should be clearer alignment between the indicators for Goal C and indicators for Target 12 which does not currently seem to be the case. This indicator as currently drafted provides only a partial view of benefits that can be created from the utilisation of genetic resources and shared, and has to be complemented with other indicators (suggestions below) and/or amended to become a broader umbrella indicator. The text of the indicator should be redrafted to represent the broad range of benefits that may be shared, many of which are not simply "monetary" transactions (suggestion below). Clarification is also required as to the definition of "countries" as in some ABS regimes, the sharing of benefits is not always with a government agency. We note also that not all countries always require monetary benefit sharing, and this limited-in-scope indicator will not capture other forms of benefit sharing that may be occurring, nor the value created as a consequence. Many "non-monetary" benefits have a cost that can be quantified(e.g. R&D projects or infrastructure/labs set up in a provider country). It would provide a more accurate picture of the monetary value created by benefit sharing if these amounts were also included in the reporting.	Any interpretation of information obtained for this indicator on monetary benefits has to take into account the fact that: 1) benefit creation is dependent on the ability to utilize genetic resources (see proposed indicators below) and 2) product research and development is a long and uncertain process. R&D on genetic resources generally takes a long time to produce a commercially viable product, if it does result in one at all, and the contribution of any single genetic resource to a successful product may not be substantive, and/or may be difficult to determine. Further, comparability of data between countries is difficult, due to 1) the different scope of obligations in the ABS laws of different countries, and 2) different degree of access and utilization. A standardization and comparison based on the amount of monetary benefits in USD per country, as suggested, gives a very incomplete picture, and could be more misleading than useful for these purposes.	We propose two revisions to the current drafting to allow for more holistic quantification of benefit sharing (or the value created as a result of it), and to more appropriately place the reference to traditional knowledge since it currently reads as being equated with genetic resources. We also suggest deleting the reference to "ABS agreements" to reflect the different approaches which countries take to ABS - some for example do not require MATs for accessing and utilising genetic resources. We suggest the alternative wording below: "Value created in countries associated with benefit sharing from utilisation of genetic resources or associated traditional knowledge" The current indicators C.0.1 and C.0.2 could be replaced by this more holistic indicator and used instead as a sub-indicators (without the reference to ABS agreements and taking into account the modifications and caveats mentioned) together with the other measurement indicators suggested under C.0.2 below.
1. The total amount should be capable of being disaggregated so that the following can be observed: (i) amounts received by country/region; (ii) amounts received for access to TK as stand alone; and (iii) flow of funds according to user type and industry. These are important to help assess whether benefits are being shared fairly and equitably. 2. Is the "ABS agreement" qualifier necessary or should the headline indicator capture monetary benefits arising	Monetary benefits are important, however, non-monetary benefit sharing is undervalued/underutilized and capacity building should focus on strengthening this dimension, particularly related to scientific and technical cooperation, technology transfer and equitable access to technologies resulting from utilization of genetic resources.	

from utilization more broadly? If the qualifier is necessary, "ABS mechanism" is preferable to "ABS agreement" as it has a broader scope which captures approaches which do not require an ABS agreement. 3. The indicator should be sufficiently flexible to capture in-kind monetary benefits for which a monetary equivalent can be readily ascertained/quantified. This would cover tangible contributions (such as vaccines, equipment, etc.) and certain intangibles (capacity development, technical and scientific cooperation and technology transfer).		
A more refined approach that would reflect the differences of commercial and non-commercial access as well as monetary and non-monetary benefits sharing contributions would be helpful. This is relevant specifically for Goal C and associated targets, even though we know that data on non-monetary benefit sharing currently is incomplete. Such a refined approach would better reflect the core principles of the Nagoya Protocol that distinguishes between commercial and non-commercial utilization that delivers different kinds of monetary and non-monetary benefit. Non-monetary benefits are essential for the post-2020 GFB, SDGs and the CBD. The positive effects of non-monetary benefit sharing (e. g. capacity building, training and joint research) are reflected in the gains of Aichi Targets 9, 11 and 19 between 2011 and 2020. To reach the 2030 milestones and the 2050 vision, capacity building, training and research collaborations in biodiversity research must be intensified further. We are concerned that non-monetary benefit sharing is rated as "nice to have" by some, which seems unfortunate, as most of the currently generated non-monetary benefits generated by taxonomic research is shared largely unnoticed. Potential data source: Financial contributions realized under BIOFIN, EU-ECOFAC and similar programs (pre- and post-project metrics which are clearly directed towards biodiversity or conversation), which are also closely aligned with SDG goals 14 and 15.		
		Benefits arise from access and utility of genetic resources. Most countries cannot utilise the genetic resources they have because of a lack of technical capacity. Fair and equitable share does not only require a share in patents and intellectual property rights, but also investments into locally owned biotech companies and breeding and genetic technology capacity.

		While the goal and milestone C.1 are acceptable, Milestone C.2 is not. It is not the objective to necessarily increase production and benefits under the CBD's third objective, but to make sure any use of genetic resources respects the agreed regulations. We suggest to look at the% of counties with established, operational ABS regulations that are being fully, fairly and equitably implemented including FPIC, MAT and the right to say "no" as indicator.
		The monetary benefit is just one of many ways benefits from genetic resources are shared. The indicator can mislead Parties and be even harmful. The indicator includes no scope for fairness and equity of benefit sharing, which misses the point of having this goal.
Nagoya Protocol says that there are monetary or no monetary benefits, maybe could be adequate include a new indicator related to "the other kind of benefits".	Income is not the only way of benefit sharing that Nagoya Protocol includes. Therefore, parties could not be able to report the non-monetary benefits	
The indicators C.0.1 and C.0 2 measure the benefits generated but these do not necessarily represent a fair sharing. The amount of benefit received doesn't measure fairness and equity. The Indicator is at country level so no indication of how equitably the benefits are shared and reach the custodians and holders of traditional knowledge. Minimally, this indicator should also include a complementary measure of the amount of monetary benefits received by holders of traditional knowledge (with disaggregated data by IPLC, men and women)	Capacities and methodologies for data disaggregation are needed.	
it should be retrospective and binding (historical genetic contribution)	Should include and indicator on accountability. NBSAPs are biased and shows manipulated or 'ghost' data	
The indicators C.0.1 and C.0 2 measure the benefits generated but these do not necessarily represent a fair sharing. The amount of benefit received doesn't measure fairness and equity. The Indicator is at country level so no indication of how equitably the benefits are shared and reach the custodians and holders of traditional knowledge. Minimally, this indicator should also include a complementary measure of the amount of monetary benefits received by holders of traditional knowledge (with disaggregated data by IPLC, men and women)	Many Parties will require assistance in measuring this	
a more detailed study of the benefits received (monetary or non-monetary) from the use of genetic resources and traditional knowledge is required, is not available		

		The indicator failed to recognize non-monetary benefits Propose indicator: Monetary and non-monetary benefits, arising from the use of, inter alia, genetic resources, indigenous and local knowledge, biological resources, protected areas and OECMs, ecosystem services, carbon credits, tourism, that are shared equitably with indigenous peoples and local communities
Monetary benefits are a good indicator however very relevant for those that are high end / big commercial research where transactions could be large and thus inflow of cash benefits are very evident. For small countries such as in the Pacific, small scale non-monetary are of equal importance / significance in sustainable development such as capacity building and training, material transfer, access to technology and local economy boosting. Instead of amount of monetary benefit, if the indicator read as total monetary value of the benefits, it would be more encompassing of the reality to include non-monetary benefits too.	As mentioned above, this may not sufficiently capture Pacific case realities because largely benefits are non monetary.	As mentioned above, slight revision of the text "total monetary value of the benefits" would be more encompassing of the reality.
The indicators C.0.1 and C.0 2 measure the benefits generated but these do not necessarily represent a fair sharing. The amount of benefit received doesn't measure fairness and equity. The Indicator is at country level so no indication of how equitably the benefits are shared and reach the custodians and holders of traditional knowledge. Minimally, this indicator should also include a complementary measure of the amount of monetary benefits received by holders of traditional knowledge (with disaggregated data by IPLC, men and women)	Many Parties will require assistance in measuring this	
		While the goal and milestone C.1 are acceptable, Milestone C.2 is not. It is not the objective to necessarily increase production and benefits under the CBD's third objective, but to make sure any use of genetic resources respects the agreed regulations. As indicator, we suggest to look at the% of counties with established, operational ABS regulations that are being fully, fairly and equitably implemented including FPIC, MAT and the right to say "no" as indicator.

		We suggest looking at % of countries with established, operational ABS regulations that are being fully, fairly and equitably implemented.
This wording is risking the overexploitation of natural resources. It should be worded focused on the percentage of existing profit from biodiversity rather than absolute value.		Change C.0.1 to "The percentage of benefits from profits derived from utilization of genetic resources as a result of an ABS agreement, including traditional knowledge is shared equitably with origin countries and their respective right holders. "
Data disaggregation for monetary benefits received by IPLCs is required because they are the beneficiaries arising from the use of traditional knowledge.	Capacities and methodologies for data disaggregation are needed.	
Monetary benefits are again an extremely crude measurement of the results of an ABS agreement including TK. We have to analyse who benefits and how, including monetary benefits but not confined to those.	It requires much more research into who benefits and how in order to improve this crude indicator. We also need to ensure that the sharing of benefits is EQUITABLE and fully according to the 3 objectives of the convention. Prioritising monetary benefits could actually benefit the overexploitation of biodiversity through DSI etc, and those who wish to patent and otherwise gain market advantages.	
the benefits should not just be monetary, in fact some of the larger benefits are non-monetary, such as capacity building,		
		While 'access and benefit-sharing (ABS) also provides an important incentive for the conservation and sustainable use of biodiversity', the focus should be on reduction of exploitation and on active conservation and restoration.

Any reporting on ABS needs to be couched in the context of ecological sustainability. It should be made clear that ecological sustainability is a precondition to achieving the social aspects of sustainability, and therefore Goal C is only achievable once biological sustainability at a systems level has been established.

As regards C.0.1, measuring income coming into national treasuries is not an indicator of fair and equitable benefit sharing, and not a measure of sustainability. |
| | | We suggest looking at % of countries with established, operational ABS regulations that |

		are being fully, fairly and equitably implemented.
Monetary benefits are not necessarily the desired outcome for all stakeholders. Focus on countries doesn't include direct community agreements with biotech companies.		
There needs to be an explicit mention of what data to collect in a standardized manner to enable comparisons between locations, over time. The indicator should include biophysical value also, not just US dollar value.	There needs to be an explicit mention of what data to collect in a standardized manner to enable comparisons between locations, over time. This indicator requires significant capacity development and collaboration.	There needs to be an explicit mention of what data to collect in a standardized manner to enable comparisons between locations, over time. The indicator should include biophysical value also, not just US dollar value.
		Does not measure aspects of FAIR and EQUITABLE sharing of benefits. The aim for ABS goals should not be to increase benefits, but to ensure they are shared fairly and equitably - and so this indicator is not in line with the 3rd objective of the CBD. Alternative could focus on % of counties with established, operational ABS regulations that are being fully, fairly and equitably implemented including FPIC, MAT and the right to say "no" as indicator. We re-emphasize that any indicators on ABS must be disaggregated by age, sex, and indigenous status to ensure the fair access and sharing of benefits for women and girls, youth and Indigenous Peoples and Local Communities.
Information about the funds available and disbursed by the Plant Treaty's benefit-sharing fund can easily be monitored as part of this indicator. However, to take this into consideration, the indicator should be revised to delete "as a result of an ABS agreement" because under the Plant Treaty's multilateral system on ABS, benefit-sharing funds not paid necessarily to providers of the genetic resources under a particular agreement, but to anyone in developing countries that the Governing Body agrees should get the funds.	Getting information on monetary benefits under the Plant Treaty is easy, as stated above. However, to get information on monetary benefits under the CBD/Nagoya Protocol is harder. It will require mechanisms through which countries can report non-confidential, aggregated information about monetary benefits received as a result of bilateral ABS agreements with providers/users within their borders. This could be addressed in the COP resolution adopting the Post 2020 framework, requesting contracting parties (and possibly other stakeholders) to voluntarily report such aggregate information. A similar mechanism/request in the COP resolution would also help to address the information gaps that challenged the monitoring of sharing non-monetary benefits as discussed below.	

C.0.2 Amount of monetary benefits (in United States dollars) received by countries from utilization of genetic resources as a result of an ABS agreement, including traditional knowledge		
C.0.2 If you selected "yes, however requires further work", please describe:	**C.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**C.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
		This indicator could work against ABS and IPLCs, women, peasant farmers and those who live interactively with biodiversity and ecosystems. There are many 'development results' being sought that could work against biodiversity and local communities, for example gene drive organisms. Publications are not necessarily a good indicator and may exclude IPLCs, women, peasant farmers and those who live interactively with biodiversity and ecosystems .
The quantity does not ensure quality. We need to ensure such studies are free of bias.	We need to make sure such research is not benefiting the sole interests of companies.	
		Indicator: Number of communities and hectares of areas whose biodiversity they are authorised to manage by their traditional knowledge, traditional occupations, land/forest/water tenures, biocultural community protocols or ICCAs for benefits from their customary sustainable use.

CBD institutions have to maintain monitoring as required by the CBD.

(While the number of research, its results or publication may in some cases correlate to equitably shared benefits, such number is not however by itself with any necessity indicating such benefits. The increase of community based solutions for biodiversity maintenance and studies by which communities can learn from each other of their ways for biodiversity utilization and maintenance can correlate to equitably shared benefits.) |

While this indicator is relevant, it is unclear and incomplete. It is unclear if "share" here means "sharing" with the public or with the provider only. We support the broader interpretation and base our subsequent comments on this. We also note that R&D results are often confidential and may therefore not always be shared under an ABS agreement. In line with current Goal C, the indicator should be measuring the extent to which ABS systems are resulting in the fair and equitable sharing of benefits from the utilization of genetic resources. The indicators should not solely focus on direct sharing from users to providers under ABS agreements, but also recognize the value created more broadly within countries from utilisation of genetic resources. Please see above in C.0.1 for our suggestion to have a broader indicator focused on value with more specific sub-indicators, which could include the current indicator C.0.2. However, the qualification "as a result of an ABS agreement" should be deleted as it excludes situations where MAT is not required for utilization of genetic resources, but where R&D results and publications are still generated and shared. It may be useful to also evaluate situations where MAT is not required for utilisation of genetic resources to enable the evaluation of the efficacity of different types of ABS regimes and other mechanisms in generating and sharing these types of benefits over time. It should also be recalled that many countries have chosen not to require agreements for utilisation of their genetic resources. The resulting benefits shared under this type of ABS approach should also be captured. In line with our proposal to have an umbrella indicator for Goal C focused on value with more specific sub-indicators, we suggest that other sub-indicators could include "non-monetary" benefits such as : number (value) of R&D projects set up in the provider country, number (value) of infrastructure/labs set up in provider country, the extent of use and contributions of information derived from research on genetic resources in international	The fact that the creation and sharing of benefits is dependent on the ability to utilize genetic resources should be taken into account in the interpretation and comparison of the information obtained under the indicators. Differences in ABS regimes will make it more or less difficult to utilise genetic resources and consequently create and share benefits – the comparison of benefits obtained by different countries will therefore be inevitably impacted by these variations.	We have suggested an indicator above based on value creation and sharing, and sub-indicators relating to capacity building and other types of non-monetary benefits.

databases by researchers in different countries, number of best practices and/or standards developed as a result of capacity building.

Capacity building should be taken into account as an important type of benefit sharing and a qualitative indicator should be developed in relation to this. As indicated in the preceding question, the monetary value of some of these benefits can be calculated and taken into account as monetary benefits.

It could also be useful to obtain information on the type of research being done on the GRs to be able to evaluate its potential value for societal goals such as local socio-economic development, scientific research capacity, health, agriculture and food security etc. There is a link to Target 8: "By 2030, ensure benefits, including nutrition, food security, livelihoods, health and well-being, for people, especially for the most vulnerable through sustainable management of wild species of fauna and flora." | | |
| 1. Is the "ABS agreement" qualifier necessary or should the headline indicator capture results or publications arising from utilization more broadly? If the qualifier is necessary, "ABS mechanism" is preferable to "ABS agreement" as it has a broader scope which captures approaches that do not require an ABS agreement.
2. Analysis concerning "R&D results or publications" should be capable of providing insights regarding the utilization of genetic resources in R&D, including country profiles in its capacity as a providers and a user. Bibliometric approaches, standardized tools and data mining of scientific publications and open databases (e.g., INSDC, GBIF, GFBio, BOLD, GGBN, PubMed) should be leveraged for such insights.
3. The indicator is being used as a proxy for non-monetary benefit sharing, however, given the broad spectrum of modalities this entails, "R&D results or publications" is too narrow as a headline indicator. This needs to be complemented by additional headline indicators capturing other dimensions of non-monetary benefit sharing such as related to scientific and technical collaboration, innovation and access to technologies resulting from the utilization of GR/TK. | Capacity building should target R&D to ensure that benefit sharing plans are integrated into R&D planning and approval as a matter of scientific integrity and best-practice for R&D involving utilization of GR (e.g. in the same way that R&D involving human research subjects is subject to ethics planning and approval). | |
| | | While we have no objections to the goal and milestone C.1, Milestone C.2 is not in line with the goal of the Convention. It is not the aim to |

		necessarily increase production and benefits under the CBD's third objective, but to make sure any use of genetic resources respects the agreed regulations. We suggest to look at the% of counties with established, operational ABS regulations that are being fully, fairly and equitably implemented including FPIC, MAT and the right to say "no" as indicator.
		Many developments may be protected for their intellectual property rights or as business secrets, which could make it difficult to use this indicator. The indicator includes no scope for fairness and equity of benefit sharing, which misses the point of having this goal.
Number of research or publication is not a relevant indicator of benefits shared fairly and equitably, but number of ABS agreements that also include where relevant IPLC as holders of Traditional Knowledge are also part in such agreements, and number of community protocols in such agreements. An alternative indicator could be "Establishment and implementation of administrative and policy frameworks by Parties to promote fair and equitable sharing of benefits"*		
indicator should be gender and cultural sensitive	Needs capacity building to maisntreaming gender and interculturality in research and publications	
		Number of research or publication is not a relevant indicator of benefits shared fairly and equitably -and do not reflect involvement of IPLCs as owners of their traditional knowledge.
		Propose: Number of internationally-recognized certificates of compliance (IRCC) that identify indigenous peoples and local communities as the source of resources or knowledge and provide evidence of PIC, FPIC, MAT

Number of community protocols and procedures and customary laws published in the ABS Clearing House |
| For communities and owners of TK may not always be the one that would be publishing or sharing research an development results. The benefit sharing to be effective requires indicators that show that benefits are flowing back to owners of resources, communities, and TK holders in a transparent, equitable and fair manner – | | The suggestion is to slightly modify to include " number of joint patents, publications and research developments between researchers and owners of genetic resources, Tk holders and biological resources. |

guess this indicator may isolate them. The indicator is ok but could be slightly improved as discussed above to ensure that communities, resources owners and TK holders are also reflected if not a separate indicator alone for them.		
Number of research or publication is not a relevant indicator of benefits shared fairly and equitably, but number of ABS agreements that also include where relevant IPLC as holders of Traditional Knowledge are also part in such agreements, and number of community protocols in such agreements. WWF proposes an alternative headline indicator: "Establishment and implementation of administrative and policy frameworks by Parties to promote fair and equitable sharing of benefits"*	Many Parties will require assistance to measure this at the national level	
	In addition the number of public consultations in the preparation of an ABS agreement should be used	
		While we have no objections to the goal and milestone C.1, Milestone C.2 is not in line with the goal of the Convention. It is not the aim to necessarily increase production and benefits under the CBD's third objective, but to make sure any use of genetic resources respects the agreed regulations. We suggest to look at the% of counties with established, operational ABS regulations that are being fully, fairly and equitably implemented including FPIC, MAT and the right to say "no" as indicator.
		Same issue as C.0.1 (see indicator recommended)
This indicator does not capture the principle of equitable benefit sharing or the role of traditional knowledge, nor does this indicator illustrate how 'research and development results' tangibly contributes to ABS or sustainable management of ABS.		Change C.0.2 to "Percentage of publications, research or development work derived from genetic resources are shared equitably with relevant local experts from source country, including traditional knowledge holders, and are fairly accredited in line with ABS."
		A more relevant indicator would be: Benefits arising from other benefit sharing instruments, e.g. the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), ethical Bio-trade and payments for environmental services.

Again this is a very crude, quantitative indicator that could work against ABS and IPLCs, women, peasant farmers and those who live interactively with biodiversity and ecosystems. There are many 'development results' being sought that could work against biodiversity and local communities, for example gene drive organisms. Publications are not necessarily a good indicator and may exclude IPLCs, women, peasant farmers and those who live interactively with biodiversity and ecosystems .		
This is a quantitative indicator that will not determine whether the benefits are shared fairly and equitably.		
		Same issues as C.0.1 (see indicator recommended)
The non-monetary benefits included in this indicator are too narrow. In addition to R&D results and publications, training and technology transfer programs that help country scientists benefit from genetic resources should be included.	Training and technology transfer programs that help country scientists benefit from genetic resources should be included.	I am suggesting an addition to R&D results and publications, not an alternative. The addition could be as simple as percent of ABS agreements that include training and technology transfer. Or a more detailed indicator such as 1) number of training and tech transfer programs or 2) number of molecular biologists and bioinformatic scientists trained to help countries benefit from genetic resources.
the measure of ABS needs standardized methodology	the measure of ABS needs standardized methodology and significant capacity development	the measure of ABS needs standardized methodology and significant capacity development
		Similar comments to previous indicator C.0.1.
Much more work needs to be done to develop meaningful indicators for non-monetary benefit sharing. This should be the focus of a specialist group working across the frameworks of the CBD, Plant Treaty and FAO CGRFA. All of these bodies are challenged by this same issue in terms of monitoring, evaluating the impacts of access and benefit sharing systems. The group should be empowered/creates as soon as possible.	Much more work needs to be done to develop meaningful indicators for non-monetary benefit sharing. This should be the focus of a specialist group working across the frameworks of the CBD, Plant Treaty and FAO CGRFA. All of these bodies are challenged by this same issue in terms of monitoring, evaluating the impacts of access and benefit sharing systems. The group should be empowered/creates as soon as possible.	While we think this indicator is relevant, and needs more work, we also want to introduce an additional new indicator as follows: C.0.3: "Amount of genetic resources that are available for use under national and international ABS regimes". Organizations that maintain the indicator, or can maintain it in the future: National ABS focal points under the CBD; National focal points for the International Treaty on Plant Genetic Resources for Food and Agriculture; Secretariat of the International Treaty on Plant Genetic Resources for Food and Agriculture; UN FAO's World Information and Early Warning System (WIEWS)

Goal D: Means of implementation are available to achieve all goals and targets in the framework

D.0.1 Index of coverage of national biodiversity strategies and action plans with formal processes for ensuring that women, indigenous peoples and local communities and youth are engaged and which capture means of implementation*

D.0.1 If you selected "yes, however requires further work", please describe:	D.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	D.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
need to clarify that the Index applies only to NBSAPs that are in line with the Global Biodiversity Framework and the CBD, as well as the decisions on implementation on harmonizing the format of NBSAPs. We need to track if the NBSAPs are in full compliance with the decisions, as comparability and add-upability are key elements of enhanced implementation.	need to clarify that the Index applies only to NBSAPs that are in line with the Global Biodiversity Framework and the CBD, as well as the decisions on implementation on harmonizing the format of NBSAPs. We need to track if the NBSAPs are in full compliance with the decisions, as comparability and add-upability are key elements of enhanced implementation.	
		We suggest the revision on this kind of indicator to adjust its biased baselines.
How do we measure the engagement of women, indigenous peoples and local communities and youth?		
The CBD obliges states to ensure that the specific sustainable uses of biodiversity by women, indigenous peoples and local communities and youth become respected, encouraged and supported rather than to engage them in other processes.	World needs to respect, support and learn sustainable uses of biodiversity by women, indigenous peoples and local communities and youth and make their rights stronger than commercial rights of corporations to unsustainable uses	
		It is important to assure that the NBSAPs are inclusive, but the key obstacle for progress on Goal D according to IPBES is a a) lack of implementation at local and regional level, which needs to be addressed through building institutional capacity from national to regional and local level, as well as the vertical integration of the Ministry of Environment b) addressing the drivers of biodiversity loss, which needs to be done through mainstreaming of biodiversity

This is a weak indicator, also because formal processes do not guarantee participation. Moreover the role of collective action is not mentioned, while there is increasing evidence collective action, including in particular ICCAs, are one of the most effective and equitable means to implement the CBD's objectives.		
1) – need to clarify that the Index applies only to NBSAPs that are in line with the Global Biodiversity Framework and the CBD, as well as the decisions on implementation on harmonizing the format of NBSAPs. We need to track if the NBSAPs are in full compliance with the decisions, as comparability and add-upability are key elements of enhanced implementation. 2) – replace "engaged" by a stronger word that sounds less top down – maybe "that have full ownership and participation"?	1) need to clarify that the Index applies only to NBSAPs that are in line with the Global Biodiversity Framework and the CBD, as well as the decisions on implementation on harmonizing the format of NBSAPs. We need to track if the NBSAPs are in full compliance with the decisions, as comparability and add-up ability are key elements of enhanced implementation. 2) – replace "engaged" by a stronger word that sounds less top down – maybe "that have full ownership and participation"?	
		The indicator addresses two separate issues, so it should be broken into two. Putting in place the process of full and meaningful identification and engagement of stakeholders in NBSAP is one, which must be validated with actual practice. Next, each major means of implementation must be checked in NBSAPs and in practice (NRs) individually. It must include the provision of sufficient finance for conservation.
Need to include "private sector" as well.		
Indicator formulation, maintenance, and data availability unclear	see above	
1) – need to clarify that the Index applies only to NBSAPs that are in line with the Global Biodiversity Framework and the CBD, as well as the decisions on implementation on harmonizing the format of NBSAPs. We need to track if the NBSAPs are in full compliance with the decisions. 2) – replace "engaged" by a stronger word that sounds less top down – maybe "that have full ownership and participation"?	1) – need to clarify that the Index applies only to NBSAPs that are in line with the Global Biodiversity Framework and the CBD, as well as the decisions on implementation on harmonizing the format of NBSAPs. We need to track if the NBSAPs are in full compliance with the decisions. 2) – replace "engaged" by a stronger word that sounds less top down – maybe "that have full ownership and participation"?	
1) The indicator should only apply to National Biodiversity Strategies and Action Plans (NBSAPs) that are in line with the Global Biodiversity Framework and CBD, as well as decisions on implementation to harmonize the format of NBSAPs.	See comment above	

2) Propose to replace "are engaged" with "participate fully and effectively".		
This indicator is not available for most countries yet.	As before, this indicator is not available for most countries and further work would be needed to assist its roll out.	
We believe countries need to systematically analyze the barriers to implementation and enhance enabling conditions to increase the effectiveness of the GBF. Successful interventions require that countries support each other to build institutional capacity, share research, ensure adequate funding, build technical capacity, and increase public awareness and engagement. Therefore, we suggest adding an indicator to monitor barriers to implementation.		Add: "Map and overcome X% of national and Y% of transboundary barriers to the implementation of the GBF [such as lack of financing, capacity building, global standards and guidance, lack of participation by women, indigenous peoples and local communities and youth etc.]."
This is a better indicator but requires work on how 'formal processes for ensuring that women, indigenous peoples and local communities and youth are engaged and which capture means of implementation' would actually be developed with them to genuinely engage the communities on the ground as equal participants in the discussion with their own vital knowledge and insights to contribute.	It is vital to work directly with women, indigenous peoples and local communities and youth to develop these processes.	
For a more logical indicator arrangement, we would suggest reversing the order of D.0.1 and D.0.2.	Retain and develop this goal and its indicators, with an enhanced focus on capacity-building and resource mobilization.	
1) The Index should only apply to National Biodiversity Strategies and Action Plans (NBSAPs) that are in line with the Global Biodiversity Framework and CBD, as well as the decisions on implementation to harmonize the format of NBSAPs. 2) Propose to replace "are engaged" with "participate fully and effectively".	See comment above	
	Not yet available for many countries.	
Quality of engagement should be included, i.e. "are fully and effectively engaged". Could also include elements measuring whether updated NBSAPs are in line with GBF and CBD Decisions, and standardised to be globally comparable. If commitments continue - to measure their alignment with NBSAPs system.		
The above indicator is relevant but we would like to add an element of measure to this Goal. From the perspective of public policy, a key aspect to promote natural		

resources governance is to guarantee the participation (engagement) of actors in a way that allows them to really influence the results of the processes of policy design. This promotes appropriation from communities and other actors, which is key to facilitate the implementation of the GBF and achieve greater impacts, for example of the NBSAP. Therefore, we suggest including the following headline indicator:
D.0.3: "Number of countries that build and/or update their NBSAP incorporating ongoing strategies (i.e. local management plans, community-based biodiversity management programs, planes de vida), as well as the traditional knowledge of IPLCs".

D.0.2 National funding for implementation of the global biodiversity framework*

D.0.2 If you selected "yes, however requires further work", please describe:	D.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	D.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		This is an inadequate indicator, as there also should be an indicator about alignment of financial flows with the CBD in general, including both perverse incentives and investments. It also fails to make a difference between developed countries - who count with their own resources, and developing countries, who need external support.
Add a qualification, e.g. % of GDP	See above	
		National contributing for Global Funding (and others international funds) [x%], when developed countries. National demands for Global Funding (and others international funds) [x%] , when developing countries.
It would be helpful for this indicator to be delineated in more detail to measure funding for various important elements such as conservation action, capacity building and data generation (e.g. systematic biodiversity observations to underpin effective implementation and tracking of the targets)	Some challenges will inevitablly result with regard to collecting accurate data on funding at the national scale and will also require careful methodological standardization to avoid countries taking very different approaches to determine what is considered funding for implementation	

	We need to ensure that this national funding is not a forced way to increase the national debt in the developing countries. We should stress on the fact that ODA is important for them to achieve their goals.	
Scientific research on biodiversity is crucial for the success of the framework so the indicator should not only measure funding for the framework's implementation but also disaggregate information to provide information on different aspects, including funding for scientific research related to biodiversity conservation.	Public data regarding funding available for research on biodiversity or in related fields is often not available. In addition, it often does not capture the difference between funding for "observational" research versus funding towards the development of new tools or technologies. Building capacity to provide funding data that is disaggregated along such lines would help measure the impact and return on investment of funding going towards research and development related to biodiversity conservation. This could in turn help countries in their future funding decisions.	
		Indicator: National funding for the implementation of the CBD as the totality of its obligations.

Follow-up and monitoring have to be maintained by the CBD parties and institutions |
	It needs a common acceptable accounting system of what qualifies as "implementation of the global biodiversity framework"	
This is an inadequate indicator, as there also should be an indicator about alignment of financial flows with the CBD in general, including both perverse incentives and investments.		
Needs to be in absolute terms, as well as in relation to needs (%)	Needs to be in absolute terms, as well as in relation to needs (%)	
Indicators on funding is a must. The source of funding should not be national (government) funding only. The funding must also be assessed against the financial needs for biodiversity. Further work has to be done to identify the financial needs to implement the GBF (Parties already must have had 10 years of experience doing this), and gauge allocated funding (by the government, but also from other sources) against them with view on how much of the needs are fulfilled.		The emphasis should not be on the absolute amount of funding, but on how sufficient the funding allocation is. The sources of funding to be monitored should include those other than national government so as to stimulate (and acknowledge) other contributors. At the same time, it is important to avoid green washing.
	As the measurement of national expenditure levels is innovative, an applied in only a limited number of countries, more capacity development will be required for each country to undertake baseline	

	measurements and some countries may need support to update previous measurements.	
	Maybe could works change by % of GDP	
We suggestadditional headline Indicators to replace D.0.2, as a better measure of progress towards goal D: -Domestic financing commitments and expenditure for implementation of the global biodiversity framework -Number of countries having developed and implemented national biodiversity finance plans. National reporting is key for measuring biodiversity financing at all levels. National biodiversity finance plans would enable accurate planning, tracking and reporting of relevant expenditure.	Many Parties may require assistance to measure this at the national level	
WWF proposes the following additional headline Indicators to replace D.0.2, as a better measure of progress towards goal D: - Domestic financing commitments and expenditure for implementation of the global biodiversity framework - Number of countries having developed and implemented national biodiversity finance plans. National reporting is key for measuring biodiversity financing at all levels. National biodiversity finance plans would enable accurate planning, tracking and reporting of relevant expenditure.	Many Parties may require assistance to measure this at the national level	
Needs to be in absolute terms, as well as in relation to needs (%)	Needs to be in absolute terms, as well as in relation to needs (%)	
The indicator should clarify that reporting on national funding should be in terms of absolute amount, as well as % of funds needed.	See above	
The indicator may wish to refer to governmental budgets or National Budgets, as it is not clear if 'national funding' also includes funding by donor GAAs, IGOs, civil society and the corporate sector.		
We suggest rephrasing as a mutually supportive target.		Change D.0.2 to 'Nations catalyze funding or are enabled to catalyze funding to meet the GBF 10-year targets.'
It requires data disaggregation for IPLCs and women, as well as qualitative case studies from CBMIS.	Yes, data disaggregation can also be complemented by CBMIS and case studies to measure outcomes and impacts.	

Means of implementation metrics should not be limited to financial value/funding, but also non-monetary implementation measures	as above	
Scientific research on biodiversity is crucial for the success of the framework; therefore the indicator should measure not only funding for the framework's implementation but also disaggregate information regarding funding for scientific research.	Public data regarding finding available for research on biodiversity or in related fields is often not available. In addition, it often does not capture the difference between funding for "observational" research versus funding that goes towards the development of new tools, solutions or technologies. Building capacity to provide funding data that is disaggregated along such lines would help measure the impact and return on investment of funding going towards research and development related to biodiversity conservation. This could in turn help countries in their future funding decisions.	
The indicator should clarify that reporting on national funding should be in terms of absolute amount, as well as % of funds needed.	As above	
Monitoring the funding made available to state actors vs. non-state actors is an important element that should be incorporated into this headline indicator.		
This indicator should be scaled to either population or GDP, not absolute dollars.		
Should include international (ODA) funding as explicit component.	To be comparable across countries, funding would need to be expressed as a percentage of need, which will likely require the development of national biodiversity finance plans.	
This should have segregation by the habitats identified in Goal A, and human all groups including those mentioned in D.0.1	This should have segregation by the habitats identified in Goal A, and human all groups including those mentioned in D.0.1. This requires substantial capacity development in standard methods	This should have segregation by the habitats identified in Goal A, and human all groups including those mentioned in D.0.1. This requires substantial capacity development in standard methods
This indicator should include with national and international funding		
Will need robust baselines. We also propose to disaggregate to measure resources channeled toward supporting conservation by indigenous peoples and local communities, women, and youth.		
As there are efforts to establish global funds to support biodiversity efforts, we suggest the indicator considers both national and international funding.		

Target 1. By 2030, [50%] of land and sea areas globally are under spatial planning addressing land/sea use change, retaining most of the existing intact and wilderness areas, and allow to restore [X%] of degraded freshwater, marine and terrestrial natural ecosystems and connectivity among them

1.0.1 Percentage of land covered by landscape scale land-use plans for terrestrial, freshwater and marine ecosystems*

1.0.1 If you selected "yes, however requires further work", please describe:	1.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	1.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
		This is a highly inadequate target and indicator, as spatial planning itself does not always support the objectives of the CBD. The target and indicators should look at land-use planning that supports the implementation of the CBD and its objectives. Biodiversity considerations should play a fundamental role in 100% of spatial planning.
		We have restrictions not only against the indicator properly, but mainly about the Target itself that must be revised. [The current debate in conservation science has acknowledged that the most traditional forms of conservation (e.g. protected areas) alone are unlikely to be sufficient to effectively achieve conservation goals. This means that other forms of conservation, such as the protection of private and unprotected land, in particular those subject to agriculture and grazing, must also be part of the conservation agenda (MLG 2019)]
As with protected areas, will want to avoid this becoming a paper exercise and thus will want to have some measure of effectiveness (perhaps thru certification schemes for what is considered an adequate land-use plan.		
We should specify that land and sea areas also include what is in the depth.		
		Indicator: Percentage of land managed by understandings and ways of life which have

		been most adapted to living by and with the regeneration of the local diversity of life

To be maintained as monitored under the CBD

(modern landscape planning has not managed to retain biodiverse ecosystems as well as understandings and ways of life which have been most adapted to living by and with the regeneration of the local diversity of life) |
| All terrestrial, freshwater and marine ecosystems and areas should be covered by land-use plans. | | |
| The current indicator only addresses the proportion of the area covered by land-use planning for terrestrial, freshwater and marine ecosystems. It would need to be improved to address the missing elements of the target i.e. restoration and connectivity. | | Proposed indicator "Percentage of land covered by landscape scale land-use plans for restoring terrestrial, freshwater and marine ecosystems and connectivity between them". It would also help measure the element of connectivity of the target.

Additionally, the following indicators are also proposed to help measure the management, restoration and improvement of ecological connectivity in spatial planning:
• "Number of National Biodiversity Strategies and Action Plans (NBSAPs) including provisions for improving ecological connectivity in spatial planning";
• "Number of national laws, regulations, and policies promoting ecological connectivity in spatial planning";
• "Number of international projects promoting ecological connectivity in spatial planning".

National governments could simply be identified as the "organisation" concerned with operating these indicators. |
| | | An indicator that just captures the extent of area under spatial planning without any mention of qualitative metrics falls short of measuring progress towards the goal ("… retain intact and wilderness areas and allow to restore…"). Torres et al. have developed set of indicators based on a scoring system for measuring rewilding progress, that combines quantitative and expert opinion-based indicators (https://doi.org/10.1098/rstb.2017.0433) and |

		could be used to track ecosystem integrity in general. The indicators have been tested in pilot projects in the Millingerwaard (NL), Iberá National Park (ARG) and the Swiss National Park (CH).
Target 1 establishes a numerical goal for spatial planning for land and sea areas, implying an intention is to cover all types of ecosystems, managed and natural. If so, the first part of Target 1 should establish a numeric goal of 100% or the totality of areas under management. This would allow the scalability of landscape planning that includes restoration and ecosystem-based approaches in managed ecosystems, in line with the rationale explained in paragraph 52, which states that ecosystem restoration as a concept may include "the rehabilitation of converted or degraded lands to improve both productivity and integrity" (CBD/SBSTTA/24/3/Add.20 .		
It is essential to have an indicator which monitors land and sea planning, as it is planning which is the primary tool employed in making land (and sea) use decisions to protect and restore biodiversity habitat. However, we have three concerns in how the indicator is currently worded. First, headline indicator 1.0.1 should be able assess land and sea use changes with the aim of RETAINING all ecosystems. Second, rather than limiting the focus to "freshwater, marine and terrestrial ecosystems", headline indicator 1.0.1 should cover ALL "natural and managed ecosystems" rather than "freshwater, marine and terrestrial ecosystems", given that the current wording may overlook transitional ecosystems and does not account for planning in managed systems, thus would not encourage conservation approaches to such planning. Third, the indicator is focused on spatial planning, but should incorporate all forms of planning designed to integrate social, economic and environmental concerns and help navigate the inevitable tradeoffs. These three concerns could be addressed by rewording the indicator as "Percentage of land covered by integrated land use/landscape scale plans for natural and managed ecosystems".	This indicator will require development that brings together all entities which share an interest in its application.	The current draft of the global biodiversity framework would benefit from a stand-alone target on restoration that aligns with Goal A and that includes the aim of achieving net positive outcomes for nature. This takes on even greater importance with the launch of the UN Decade for Ecosystem Restoration. The wording of a stand-alone target like this might be: "Achieve a net gain by 2030 in the area and integrity of freshwater, marine and terrestrial ecosystems through restoration activities and ecosystem-based approaches in managed and natural areas. And achieve no net loss by 2030 of critical ecosystems for biodiversity conservation, that increases resilience of these ecosystems and the communities that depend upon them." There are a number of no net loss approaches embraced by different MEAs which are fully compatible with each other and would contribute to a net positive outcomes for nature approach to Goal A, as communicated in para 12 and Figure 1 of CBD/SBSTTA/24/3/Add.2/Rev.1. For example, land degradation neutrality (LDN) is a net nature positive framework to enhance all land-based natural capital and the ecosystem services that flows from it. LDN is a voluntary no-net loss approach endorsed by the country Parties of the UNCCD, integral to SDG target 15.3, which provides a framework with conservation, sustainable use and restoration

		as its three pillars, to act upon the synergies among the three Rio conventions. The LDN framework also incorporates the environmental and social safeguards highlighted in para 21 of CBD/SBSTTA/24/3/Add.2/Rev.1 to mitigate the risk of unintended outcomes. LDN in its design fully acknowledges and counts on the vital role the biodiversity-related conventions play in ensuring no net loss in systems managed for conservation. Therefore, adding back a no net loss approach into the Post-2020 global biological framework would enhance synergies and be mutually beneficial to multiple MEAs. SDG indicator 15.3.1 is a tier 1 indicator already in use for such a target, and thus could be integrated into a headline indicator for ecosystem restoration in the post-2020 global biodiversity framework. The UNCCD is the custodian agency for SDG indicator 15.3.1.
This is a highly inadequate target and indicator, as spatial planning itself does not always support the objectives of the CBD. The target and indicators should look at land-use planning that supports the implementation of the CBD and its objectives, and the target and indicators should be aligned with SDG 15.2 which is a commitment to plan and conserve 100% of the world's forests.		
We would suggest to split the indicator in two indicators a) Area covered by Spatial Planning (with designated priority areas for biodiversity) and b) a part concerning the trends in the extent of valuable natural habitats in good conservation status, as foreseen in Aichi target 5 – here we hope the target will be changed to be able to take the habitats/ecosystems on board	We would suggest to split the indicator in two indicators a) Area covered by Spatial Planning (with designated priority areas for biodiversity) and b) a part concerning the trends in the extent of valuable natural habitats in good conservation status, as foreseen in Aichi target 5 – here we hope the target will be changed to be able to take the habitats/ecosystems on board	
Yes, in the sense that land/sea use plan should be in place. However, it is not just any plans, but it has to be conservation plans over areas of biodiversity significance. Area of biodiversity importance and area of degraded ecosystems that are priority for restoration must be identified, and the spatial planning coverage over them should be 100%. The definition of spatial planning must be provided.		The definition of spatial planning must be provided so that Parties can discuss on the same ground about what the % target should be.
	Just take care of not promote NPA with out respecting human rights of indigenous peoples when they live in these zones.	

Any spatial target should not be considered in a vacuum and additional components should consider governance diversity, quality and vitality. A specific indicator on % of land with land-use plans should also include these components. The collective lands, waters, and territories of IPLCs need recognition as a distinct land use category in land use and spatial planning under this target. This needs to be included as a critical component of this headline indicator. SDG indicator 1.4.2 is relevant in this context: 'Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'. It is also important to have disaggregated data on percentage of land/ecosystems that are IPLC territories and areas (recognition of the specific category). CBD Indicator could be Trends in land-use change and land-tenure in traditional territories of IPLCs (COP decision x.43) as a Headline Indicator in T1 and shared indicator in T2	The lands, territories and waters of IPLCs needs recognition as a distinct land use category in land use and spatial planning under this target. This needs to be included as a critical component of this headline indicator. SDG indicator 1.4.2 is relevant in this context: 'Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'.	Dta sources: Indigenous Peoples Navigator (land, territories and resources indicators - under development) and the International Land Coalition LANDEx (under development)
% should be defined with participation of IPLCs and women		
We agree with others who argue that 100% of territory should be under spatial planning. Also, spatial planning can be for a variety of purposes, and the most common uses are socio-economic - e.g. efficient delivery of services and utilities, economic planning based on local resources etc. There needs to be a measure of the effectiveness of the spatial planning in delivering biodiversity protection and enhancement ·The indicator needs further development to incorporate not only quantity aspects, but also quality: the "landscape scale land-use plans" must specify key biodiversity areas and areas with high ecosystem integrity in order to be a tool to measure protection of biodiversity ·The participation from stakeholders in the land-use process, especially IPLCs whose territories will be subject to this land-use-plans, is essential for this indicator. It is important to have disaggregated data on percentage of land/ecosystems that are IPLC territories and areas (recognition of the specific category)	Needs further development, as noted in bullet points above.	

Spatial planning should include One Health approaches to ecosystem degradation, as well as zoonotic disease hot spots and high risk interfaces.		
Indigenous peoples have territorial management plans that should be incorporated into spatial planning processes. Land use governance is a major issue and not currently addressed; this needs to be rectified. The lands, territories and waters of IPLCs should be recognised as a distinct category, in accordance with their customary laws, governance systems and management practices. This target should also recognise the rights of participation and FPIC of IPs (or IPLCs) in any planning that involves their lands, territories and waters.	Indigenous peoples have territorial management plans that should be incorporated into spatial planning processes. Land use governance is a major issue and not currently addressed; this needs to be rectified. The lands, territories and waters of IPLCs should be recognised as a distinct category, in accordance with their customary laws, governance systems and management practices. This target should also recognise the rights of participation and FPIC of IPs (or IPLCs) in any planning that involves their lands, territories and waters.	
Land-use obviously doesn't apply to marine, change landuse to 'management plans'. Also plans may not prioritise biodiversity protection, so some measure of relevance or effectiveness is needed. Also some measure of data certainty in the creation of the plans would be useful

This indicator also needs to reflect a way to assess/measure the retention of intact and wilderness areas and restoration of degraded areas as well as the increase in the percentage of land and sea under spatial planning. | | |
| Coverage is not sufficient, quality of management interventions also needs to be considered | | |
| WWF suggests that the indicator should instead read: "Increase in area of terrestrial, freshwater and marine ecosystems under ecosystem- based spatial planning"

We agree with others who argue that 100% of territory should be under spatial planning. Also, spatial planning can be for a variety of purposes, and the most common uses are socio-economic - e.g. efficient delivery of services and utilities, economic planning based on local resources etc. There needs to be a measure of the effectiveness of the spatial planning in delivering biodiversity protection and enhancement

This is also in line with existing international commitments, thus, again, the first percentage of the target, as we have previously commented, should be 100%. "Land-use plans" is an ambiguous term, we | WWF has previously referenced indicators to be considered as component/complementary indicators: - Proportion of transboundary basin area with an operational arrangement for water cooperation (SDG indicator 6.5.2) - Number of countries using ecosystem based approaches to managing marine areas (SDG indicator 14.2.1) where we suggested also adding a reference to competent organisations in addition to countries, to cover all marine areas and regions and degree of integrated water resources management (SDG indicator 6.5.1).
These complementary indicators are essential to measure progress in a comprehensive way. | |

propose to specify the use of ecosystem based spatial planning which is applicable to land and sea. The proposal for 1.0.1 is also not sufficient to address the issue of conversion of ecosystems. We also note that the second part of the target (restoration) is not addressed by the headline indicator. WWF also suggests the following additional headline indicators: - Natural vegetation in terrestrial ecosystems (forest, savannahs and grasslands, wetlands, woodlands, mangroves, saltmarshes), converted due to land-use change - ha per year. * - Natural vegetation in terrestrial ecosystems (forest, savannahs and grasslands, wetlands, woodlands, mangroves, saltmarshes), degraded - ha per year. * From a RBA perspective, it is important to have disaggregated data on percentage of land/ecosystems that are IPLC territories and areas (recognition of the specific category)		
Indicator formulation, maintenance, and data availability unclear. "Spatial-planning" should not be the endpoint, it needs to be qualified. Should be the percentage of the country in which biodiversity is protected through comprehensive spatial planning which accounts to population viability, ecological connectivity and resilience of native species and ecosystems. It should apply to land, sea and freshwater, not just land	Indicator formulation, maintenance, and data availability unclear	
We would suggest to split the indicator in two indicators a) Area covered by Spatial Planning (with designated priority areas for biodiversity) and b) a part concerning the trends in the extent of valuable natural habitats in good conservation status, as foreseen in Aichi target 5 – here we hope the target will be changed to be able to take the habitats/ecosystems on board	We would suggest to split the indicator in two indicators a) Area covered by Spatial Planning (with designated priority areas for biodiversity) and b) a part concerning the trends in the extent of valuable natural habitats in good conservation status, as foreseen in Aichi target 5 – here we hope the target will be changed to be able to take the habitats/ecosystems on board	
Propose to split the indicator into two: a) Area covered by Spatial Planning (priority areas for biodiversity) and b) another HI concerning the extent of valuable natural habitats whose conservation status is good (as foreseen in Aichi target 5) – using the Ecosystem Intactness Index to measure the integrity of natural ecosystems (see A.0.4).	Monitoring will be easier with the proposal to split the indicator.	

Spatial planning should include One Health approaches to ecosystem degradation and zoonotic disease hot spots and high risk interfaces.		
In principal, the premise for this indicator aligns well with target 1, as currently framed. However, we suggest it be reworded to '1.0.1 Percentage of land covered by landscape-scale, biodiversity-inclusive, spatially-explicit plans for terrestrial, freshwater and marine ecosystems', to ensure the focus is on biodiversity and results in biodiversity positive outcomes.	Criteria are needed to clarify what qualifies as a biodiversity-inclusive spatially-explicit planning.	
Land use plans are essentially zoning plans which outline the future location and type (residential, office, retail, industry) of development activity that is to be permitted and not permitted (i.e. green space, parks, etc.) within urban and regional areas over a set horizon period. Change 'land-use plan' terminology as it is framed as facilitating ongoing development.		Change 1.0.1 to 'Percentage of land covered by conservation and restoration action plans for terrestrial, freshwater and marine ecosystems'
The lands, territories and waters of IPLCs needs recognition as a distinct land use category in land use and spatial planning under this target. This needs to be included as a critical component of this headline indicator. SDG indicator 1.4.2 is relevant in this context: 'Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'.	The lands, territories and waters of IPLCs needs recognition as a distinct land use category in land use and spatial planning under this target. This needs to be included as a critical component of this headline indicator. SDG indicator 1.4.2 is relevant in this context: 'Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'.	
Again this indicator is crudely quantitative and needs defining. Above all we need to know what these 'landscape scale land-use plans for terrestrial, freshwater and marine ecosystems' actually are and who is involved in making them. They must also avoid any risk of offsetting within those plans, ie proposing to destroy biodiversity in one area in order to 'protect' it in another.		
An area may be covered by spatial plans doe not mean those areas are retaining biodiversity, but is a good proxy indicator.	as above	
We recommend use of the KBA standard as spatial planning tool to expand Protected Areas and OECMs, and the Biodiversity Intactness Index (BII) as an indicator of ecosystem resilience. Further, the One Health approach should be systematically applied to spatial planning.		

Propose to split indicator into two: a) Area covered by Spatial Planning (priority areas for biodiversity) and b) the extent that valuable natural habitats are in good conservation status (as foreseen in Aichi target 5) – using the Ecosystem Intactness Index to measure the integrity of natural ecosystems (see A.0.4). Spatial planning should include One Health approaches to ecosystem degradation and zoonotic disease hot spots and high risk interfaces.	Monitoring will be easier with the proposal to split the indicator.	
We note that the headline indicator now addresses landscape-scale (and presumably seascape-scale) spatial planning for all ecosystem types (terrestrial, freshwater and marine). The asterisk indicates that this requires further development; the AHTEG should explore means to track spatial plans that are not just landscape scale, but that address and prioritize biodiversity and that are multi-sectoral and comprehensive. Incorporating or elevating t1.2 "Percentage of spatial plans utilizing information on key biodiversity areas" could be one way to mainstream biodiversity into spatial plans. Spatial planning should include One Health approaches to ecosystem degradation, as well as zoonotic disease hot spots and high risk interfaces.	Needs further refinement by the AHTEG, as described above.	We recommend using the "Ecosystem Intactness Index" (currently included in Add.1 as "a.32 Ecoregion Intactness Index") to measure the integrity of all terrestrial ecosystems through one metric that builds off of the Human Footprint Index. The Ecosystem Intactness Index is approved by the BIP Secretariat, peer reviewed [https://conbio.onlinelibrary.wiley.com/doi/pdf/10.1111/conl.12692], and measures the relative integrity, or intactness, of natural ecosystems by using global datasets on anthropogenic pressures that cause a loss in area or quality of terrestrial ecosystems, including through their connectivity, degradation and fragmentation. The index is validated and data are standardized globally via the generation of the human footprint processes and can be disaggregated to national or ecoregional scales to identify progress towards national or global ecosystem conservation objectives on natural ecosystem/habitat loss, degradation and fragmentation. For example, for forest ecosystems, the Forest Landscape Integrity Index (FLII; www.forestintegrity.com, currently included as a.26 and t1.12 in 24/3/Add.1) includes an extent/area layer (based on updated Hansen et al. forest cover data), but goes further to provide a continuous metric of forest integrity and connectivity. This helps capture the multiple dimensions of forest ecosystems using globally standardized data that is freely

		available to governments for verification and use in national reporting.
It does not address the elements of Target 1 regarding "restore" and "connectivity		Propose different indicator: "Percentage of land covered by landscape scale land-use plans for freshwater, marine and terrestrial ecosystems, and the portion addressing restoration and connectivity" Complementary indicators to be added to assist with the measurement of management, restoration and ecological connectivity, and to be operated by national governments as the responsible "organization", include: - "Number of National Biodiversity and Strategic Action Plans (NBSAPs) documenting restoration and connectivity in spatial planning" - "Number of national laws, regulations, policies, implementing frameworks, monitoring programs, and initiatives addressing restoration and connectivity in spatial planning" - Number of global global and/or regional intergovernmental policies or commitments to address restoration and connectivity in spatial planning"
Will require carefully developed and monitored standards of the quality and scope of these land-use plans. Would benefit from additions to include marine, freshwater.		
The headline indicator now addresses landscape-scale (and presumably seascape-scale) spatial planning for all ecosystem types (terrestrial, freshwater and marine). But this indicator requires further development; the AHTEG should explore means to track spatial plans that are not just landscape scale, but that address and prioritize biodiversity and that are multi-sectoral and comprehensive. Incorporating or elevating t1.2 "Percentage of spatial plans utilizing information on key biodiversity areas" could be one way to mainstream biodiversity into spatial plans. Spatial planning should include One Health approaches to ecosystem degradation, as well as zoonotic disease hot spots and high-risk interfaces.	As noted previously, the AHTEG should explore means to track spatial plans that are not just landscape scale, but that address and prioritize biodiversity and that are multi-sectoral and comprehensive. Incorporating or elevating t1.2 "Percentage of spatial plans utilizing information on key biodiversity areas" could be one way to mainstream biodiversity into spatial plans. Spatial planning should include One Health approaches to ecosystem degradation, as well as zoonotic disease hot spots and high-risk interfaces.	We recommend using the "Ecosystem Intactness Index" (currently included in Add.1 as "a.32 Ecoregion Intactness Index") to measure the integrity of all terrestrial ecosystems through one metric that builds off of the Human Footprint Index. The Ecosystem Intactness Index is approved by the BIP Secretariat, peer reviewed [https://conbio.onlinelibrary.wiley.com/doi/pdf/10.1111/conl.12692], and measures the relative integrity, or intactness, of natural ecosystems by using global datasets on anthropogenic pressures that cause a loss in area or quality of terrestrial ecosystems, including through their connectivity, degradation and fragmentation. The index is validated and data are standardized globally via the generation of the human footprint processes and can be disaggregated to national or ecoregional scales to identify progress towards national or global ecosystem conservation objectives on natural

		ecosystem/habitat loss, degradation and fragmentation.

For example, for forest ecosystems, the Forest Landscape Integrity Index (FLII; www.forestintegrity.com, currently included as a.26 and t1.12 in 24/3/Add.1) includes an extent/area layer (based on updated Hansen et al. forest cover data), but goes further to provide a continuous metric of forest integrity and connectivity. This helps capture the multiple dimensions of forest ecosystems using globally standardized data that is freely available to governments for verification and use in national reporting. The Wildlife Conservation Society has committed to providing this data to Parties for reporting through 2030. It has been accepted by the Biodiversity Indicators Partnership and recommended in INF/16. |
| Spatial plans exist in almost all countries, but many result in no action. Spatial plans must be part of cross-sector framework to mitigate impacts to natural ecosystems, protect the most important areas for biodiversity and restore priority ecosystems. | | # Countries that have a spatially explicit biodiversity impact mitigation policy in place to identify and avoid conversion of areas important for biodiversity and identify restoration priorities. |
| Indicator 1.0.1 should explicitly state "Percentage of Land and Sea" areas, segregated by marine jurisdiction. Land-use area policies don't all pertain to marine spatial management areas. | Indicator 1.0.1 should explicitly state "Percentage of Land and Sea" areas, segregated by marine jurisdiction. Land-use area policies don't all pertain to marine spatial management areas. Integrating the marine, freshwater and terrestrial areas and percentages should be done relative to each habitat type as well as national jurisdiction, not just relative to "land covered" metrics | Indicator 1.0.1 should explicitly state "Percentage of Land and Sea" areas, segregated by marine jurisdiction. Land-use area policies don't all pertain to marine spatial management areas. Integrating the marine, freshwater and terrestrial areas and percentages should be done relative to each habitat type as well as national jurisdiction, not just relative to "land covered" metrics |
| | | The target should instead focus on ecosystem integrity and quality of these areas in line with Goal A, and land-use plans on their own might not translate into action. If spatial planning remains an element of this target, recognition of Indigenous peoples territories as a land use category should be captured.

Alternatives:
- CBD indicator: Trends in land-use change and land tenure in the traditional territories of IPLCs (COP decision X.43)
- SDG indicator 1.4.2 land tenure: Proportion of |

		total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure
It is key to guarantee the coordination and integration of land use (spatial) planning processes at the national and sub-national levels to strengthen the implementation of the GBF. In this respect, we suggest adding the following headline indicator: 1.0.2: "Number of countries that promote the coordination and integration of landscape scale land-use plans at the sub-national and national levels". Moreover, we would like ensure the inclusion of the following component indicator 't1.17 Percentage of cropped landscapes with at least 10% natural land' (which is now considered as a complementary indicator). This indicator captures on one hand the integrity of the agricultural ecosystem, and the ability of the ecosystem to contribute to sustainable food production. (Diaz et al. 2020; Leclere et al. 2020; DeClerck et al 2021 UNFSS paper). This would also help address the comments of several countries to include managed landscapes in this Target and in Goal A.		
We note that the headline indicator now addresses landscape-scale (and presumably seascape-scale) spatial planning for all ecosystem types (terrestrial, freshwater and marine). The asterisk indicates that this requires further development; the AHTEG should explore means to track spatial plans that are not just landscape scale, but that address and prioritize biodiversity and that are multi-sectoral and comprehensive. Incorporating or elevating t1.2 "Percentage of spatial plans utilizing information on key biodiversity areas" could be one way to mainstream biodiversity into spatial plans. Spatial planning should include One Health approaches to ecosystem degradation, as well as zoonotic disease hot spots and high risk interfaces.	Needs further refinement by the AHTEG, as described above.	We recommend using the "Ecosystem Intactness Index" (currently included in Add.1 as "a.32 Ecoregion Intactness Index") to measure the integrity of all terrestrial ecosystems through one metric that builds off of the Human Footprint Index. The Ecosystem Intactness Index is approved by the BIP Secretariat, peer reviewed [https://conbio.onlinelibrary.wiley.com/doi/pdf/10.1111/conl.12692], and measures the relative integrity, or intactness, of natural ecosystems by using global datasets on anthropogenic pressures that cause a loss in area or quality of terrestrial ecosystems, including through their connectivity, degradation and fragmentation. The index is validated and data are standardized globally via the generation of the human footprint processes and can be disaggregated to national or ecoregional scales to identify progress towards national or global ecosystem conservation objectives on natural ecosystem/habitat loss, degradation and fragmentation.

		For example, for forest ecosystems, the Forest Landscape Integrity Index (FLII; www.forestintegrity.com, currently included as a.26 and t1.12 in 24/3/Add.1) includes an extent/area layer (based on updated Hansen et al. forest cover data), but goes further to provide a continuous metric of forest integrity and connectivity. This helps capture the multiple dimensions of forest ecosystems using globally standardized data that is freely available to governments for verification and use in national reporting. The Wildlife Conservation Society has committed to providing this data to Parties for reporting through 2030. It has been accepted by the Biodiversity Indicators Partnership and recommended in INF/16.
Restoration should be evaluated by an indicator. There are no indicators on restoration in the GBF yet.		
We note that the headline indicator now addresses landscape-scale (and presumably seascape-scale) spatial planning for all ecosystem types (terrestrial, freshwater and marine). The asterisk indicates that this requires further development; the AHTEG should explore means to track spatial plans that are not just landscape scale, but that address and prioritize biodiversity and that are multi-sectoral and comprehensive. Incorporating or elevating t1.2 "Percentage of spatial plans utilizing information on key biodiversity areas" could be one way to mainstream biodiversity into spatial plans. Spatial planning should include One Health approaches to ecosystem degradation, as well as zoonotic disease hot spots and high risk interfaces.	Needs further refinement by the AHTEG, as described above.	We recommend using the "Ecosystem Intactness Index" (currently included in Add.1 as "a.32 Ecoregion Intactness Index") to measure the integrity of all terrestrial ecosystems through one metric that builds off of the Human Footprint Index. The Ecosystem Intactness Index is approved by the BIP Secretariat, peer reviewed [https://conbio.onlinelibrary.wiley.com/doi/pdf/10.1111/conl.12692], and measures the relative integrity, or intactness, of natural ecosystems by using global datasets on anthropogenic pressures that cause a loss in area or quality of terrestrial ecosystems, including through their connectivity, degradation and fragmentation. The index is validated and data are standardized globally via the generation of the human footprint processes and can be disaggregated to national or ecoregional scales to identify progress towards national or global ecosystem conservation objectives on natural ecosystem/habitat loss, degradation and fragmentation. For example, for forest ecosystems, the Forest Landscape Integrity Index (FLII; www.forestintegrity.com, currently included as

		a.26 and t1.12 in 24/3/Add.1) includes an extent/area layer (based on updated Hansen et al. forest cover data), but goes further to provide a continuous metric of forest integrity and connectivity. This helps capture the multiple dimensions of forest ecosystems using globally standardized data that is freely available to governments for verification and use in national reporting. The Wildlife Conservation Society has committed to providing this data to Parties for reporting through 2030. It has been accepted by the Biodiversity Indicators Partnership and recommended in INF/16.
It is not clear what it means "Percentage of land" we suggest a more clear wording as follows: Percentage of terrestrial, freshwater, marine and coastal ecosystems under spatial planning. We also suggest to have a separate indicator on restoration. For restoration, Parties to the Convention on Wetlands have recognized the importance of restoration in Target 12 of the Convention Strategic Plan "Restoration is in progress in degraded wetlands, with priority to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation". Specific data on this Target is provided by Contracting Parties in the National Reports as well as in the Ramsar Sites Information Service. Therefore, to avoid duplication efforts and burden from Parties this indicator can be used as headline indicator if there is a separate indicator.	As indicated above	

Target 2. By 2030, protect and conserve through well connected and effective system of protected areas and other effective area-based conservation measures at least 30 per cent of the planet with the focus on areas particularly important for biodiversity

2.0.1 Protected area coverage of important biodiversity areas

2.0.1 If you selected "yes, however requires further work", please describe:	2.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	2.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
I would mention: 1. Protected areas effectiveness, 2.Appropriate management, 3.Sustainable financing.		
This indicator can be disaggregated to mountain relevant scales and has therefore high relevance to monitor		

mountain biodiversity. Can be well aligned with monitoring SDG 15.4.1. "Coverage by protected areas of important sites for mountain biodiversity." The indicator is still under development. Its relevance for mountains will depend on how areas important for biodiversity are defined. The definition of important biodiversity areas, as noted above, is key. The IUCN has developed a tool for prioritizing Key Biodiversity Areas (KBA) sites based on whether they contain examples of un- or under-protected terrestrial ecosystems, in addition to their importance for species-level conservation. Protected areas' long-term conservation potential depends on their ability to maintain the (a)biotic conditions that promote biodiversity despite changing climatic conditions. Protected area coverage does not suffice to safeguard biodiversity as it redistributes with climate (change). Protecting biodiversity along elevational gradients is essential.		
A simple area indicator is not enough. Area indicators should also include areas lost, stable and restored. The indicator should include all the qualifiers already contained in Aichi target 11. It should include a sub-indicator that the rights of IPLCs have been fully respected, no violence or evictions have been taking place, and with their full and effective participation (FPIC), and that UNDRIPs has been fully applied. In a view that ICCA conservation is the most effective form of conservation, progress in supporting the rights of IPLCs and ICCAs is an important indicator into protected areas. We therefor need additional indicator: - showing the amount of human rights violations related to the defense of ecosystems by IPLCs - progress in measures and policies that provide guarantees for IPLCs to protect the ecosystems they live in - support provided (financial/logistic/…) for ICCAs in order to be able to fulfil their role		
		Percentage of public and private protected areas, including fully protected conservation areas, and permanent preservation areas (APPs). [PS: Permanent Preservation Areas (APP) are areas of vegetation that have been designated for protection because they have been identified as critical to the preservation of essential ecosystem functions, such as

		ensuring a clean and steady water supply, regulating hydrological and weather cycles, protecting geological and soil stability, or conserving biodiversity. The Forest Code requires that the vegetation in Permanent Preservation Areas be left intact. The code also sets Permanent Preservation Areas restrictions according to geographical features and their physical attributes. Geographical features that may be protected include banks of rivers, springs, and lakes, mangroves, vereda (type of wetland), hilltops, steep slopes, and sandbanks.]
The challenge is in the methodology for identifying KBAs and thus some imporvements are needed to ensure they better reflect the truly, most key areas - with less weighting on birds, for instance which may be causing some important areas to be missed. But generally, this is a good indicator overall.	The challenge is in the methodology for identifying KBAs and thus some imporvements are needed to ensure they better reflect the truly, most key areas - with less weighting on birds, for instance which may be causing some important areas to be missed. But generally, this is a good indicator overall.	Species Protection Index can cover some other important elements of how well important species are under protection.
We need to ensure those protected areas are not sanctuaries preventing the most vulnerable people to access essential ecosystem services they need for their survival.	I am worried this indicator might ostracize the most vulnerable ones and lead to expulsions.	
		Indicator requirement: Coverage of areas which are "designated or regulated and managed to achieve specific conservation objectives" of in-situ conservation determined by the various paragraphs in the whole of the CBD article 8 so that the overall global impact of each of such areas' designation, regulation and management is transparently ensured to advance the fulfillment of the whole of what CBD in-situ conservation obligations under the CBD article 8 require and negative impacts on biodiversity do not get merely transferred from some areas to others. CBD institutions have to maintain in this respect monitoring required by the CBD. This is necessary to ensure that what are declared/considered as "protected areas" by their overall global impacts on biodiversity actually "protect and conserve" rather than degrade it in the totality of such "areas particularly important for biodiversity" which

		they affect. (This coverage differs crucially from the coverage of areas which have been declared as "protected areas". To protect Earth and its life's diversity does not automatically result from declaring areas as protected areas.)
Needs further definition of what are important biodiversity areas	Needs context specific guidance, i.e. what is important in a country (the "pristine areas") or as well the managed ecosystems in e.g. agricultural settings that eventually support critical ecosystem services.	
The current indicator exclusively focuses on the coverage of protected areas, and would need to be improved (a) to address other effective area-based conservation measures, (b) to address connectivity, and (c) to address effectiveness. All of those elements are the subject of the target.		Proposed indicator: The "Coverage of Key Biodiversity Areas for migratory species by protected areas and other effective area-based conservation measures (OECMs) including ICCAs". It would measure the adequacy of the coverage and connectivity of protected and conserved areas by reference to defined "sufficiency" or "coherence" standards, such as Key Biodiversity Areas for migratory species. Several thousand of these sites. have been identified for migratory species that are either threatened, or concentrate in significant aggregations (when breeding, on migration, or in the non-breeding season). As key sites for migratory species are better protected and connected, the index goes up. Over the next few years, this indicator can be complemented by a metric for "Proportion of KBAs for migratory species in favourable condition", based on standardised monitoring of KBAs derived from in situ and remote sensing data (building from existing monitoring and datasets for IBAs). See Butchart et al 2012, 2015, Brooks et al 2016. The organization that maintains it is the KBA Partnership.
The German Center for Integrative Biodiversity Research (iDiv) recognizes a gap in the availability of indicators for monitoring the outcomes of restoration in Goal A/Target 2 and specifically for measuring ecosystem integrity and connectivity. Indicators currently under development by scientists should be also added to the selected available indicators. iDiv offers the development of the Global Ecosystem Restoration Index.		

PA coverage is important but not sufficient. There must be a component in the indicator that captures the effectiveness of protection. Are they effectively protected against land conversion, against hunting or exploitation etc.		To provide information on Target 2 it would be better to report on the area of PAs that have adequate support/capacity (would need some agreed measure).
The current indicator exclusively focuses on the coverage of protected areas, and would need to be improved (a) to address other effective area-based conservation measures, (b) to address connectivity, and (c) to address effectiveness. All of those elements are the subject of the target.		Proposed indicator: The "Coverage of Key Biodiversity Areas for migratory species by protected areas and other effective area-based conservation measures (OECMs) including ICCAs". It would measure the adequacy of the coverage and connectivity of protected and conserved areas by reference to defined "sufficiency" or "coherence" standards, such as Key Biodiversity Areas for migratory species. Several thousand of these sites. have been identified for migratory species that are either threatened, or concentrate in significant aggregations (when breeding, on migration, or in the non-breeding season). As key sites for migratory species are better protected and connected, the index goes up. Over the next few years, this indicator can be complemented by a metric for "Proportion of KBAs for migratory species in favourable condition", based on standardised monitoring of KBAs derived from in situ and remote sensing data (building from existing monitoring and datasets for IBAs). See Butchart et al 2012, 2015, Brooks et al 2016. The organization that maintains it is the KBA Partnership.
This is a highly inadequate and regressive target and indicator, which dismisses value work done by the CBD on rights-based approaches, ICCAs and other forms of collective action and equitable governance in the field of area-based conservation mechanisms. There should be a specific indicator on ICCAs, and a separate one on OECMs in general, in line with the suggestions by many Parties to integrate IPLCs. There should also be an indicator for equitable management of conserved areas, which should be gender-disaggregated.		
A simple area indicator is not enough.Areas that have been included in the IUCN green list could be a template for this indicator.	A simple area indicator is not enough.Areas that have been included in the IUCN green list could be a template for this indicator.	
Does indicator is meant to measure the extent to which protected areas cover the areas identified as "important biodiversity areas"? Which means, the important		It must be made clear that protected areas must cover area of particular importance for biodiversity and that coverage should be over 30% of the globe, not just any land under

biodiversity areas collectively cover over 30% of the globe and the target for this indicator is 100%?		protected area designations. There should be scope for OECM, but note that area suitable for protected areas have to be covered by protected areas. OECMs should be employed for those areas that can be better managed as OECMs.
Needs an operational definition and guidelines on "important biodiversity areas".	As above.	
Social aspects are important, mainly indigenous peoples rights before establishing NPA	To include FPC before establishing news Natural Protected Areas	
In relation to the IPLC land classification as a distinct category in Target 1, data disaggregation (e.g. for IPLC territories and conserved areas including ICCAs; for IPLC lands overlapping with PAs, OECMs; for joint management; etc) would need to be added in T2. SDG indicator 1.4.2 is relevant in this context: 'Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'.

The indicator should include all the qualifiers already contained in Aichi target 11. In light of global consensus and the emerging need to focus on PA/OECM management effectiveness, this indicator should not only focus on area coverage but it should address the "effectiveness" and should measure the proportion of PA's and OECM's that are equitably governed and effectively managed. Specifically, it should include a sub-indicator that the rights of IPLCs have been fully respected, no violence or evictions have been taking place, and with their full and effective participation and their FPIC, and that UNDRIPs has been fully applied.

A new indicator could be: "Trends in equitable governance and effective management of protected areas and OECMs"

The headline indicator should measure management effectiveness and equitable governance of protected areas and OECMs. Without the governance dimension, | Metrics to measure this will be necessary. Indicators on equitable governance with relevant indicators (building on work by IIED) could be referenced. | |

there is no guarantee of connectivity, sustainability and effectiveness (that cannot be measured by #hectares)		
should be refrased as protected are governed by IPLCs	if recognises the rights of IPLCs to thier territories in protected areas	
We note that some of the existing indicators for Target 2 do not consider OECMs, which will be a critical addition to the post-2020 framework (and were present in Aichi Target 11). We suggest the following adjustment: "Proportion of important sites for terrestrial, marine and freshwater biodiversity that are covered by protected areas, by ecosystem type". We also suggest this new headline indicator: "Trends in equitable governance and effective management of protected areas and other effective area-based conservation measures". The headline indicator should measure management effectiveness and equitable governance of protected areas and OECMs. Without the governance dimension, there is no guarantee of connectivity, sustainability and effectiveness (that cannot be measured by # of hectares). It is important to have an indicator that addresses effectiveness and ecological outcomes (and includes both terrestrial and marine environments). We would also recommend adding a headline indicator to address the "stage of establishment and degree to which protected areas and OECMs prohibit environmentally damaging activities." This should address the fact that some activities incompatible with ecosystem conservation should not take place in either PAs or OECMs.	We welcome that the headline indicators both address the overlap between protected and conserved areas and geographies important for biodiversity (Key Biodiversity Areas [2.0.1] and species ranges [2.0.2]). Many Parties will require assistance to measure this at the national level	
The target needs to recognize the special relationship to collective territories, lands and waters, and resources of IPLCs. Further, indigenous territories often overlap with key biodiversity areas The science dictates that there should be flexibility in the options available to Indigenous Peoples to enable their territories and governance to be counted as a governance system that results in positive biodiversity outcomes: IPLC-led conservation through inclusion in protected areas or OECM systems and recognition of Indigenous tenure and governance	The target needs to recognize the special relationship to collective territories, lands and waters, and resources of IPLCs. Further, indigenous territories often overlap with key biodiversity areas The science dictates that there should be flexibility in the options available to Indigenous Peoples to enable their territories and governance to be counted as a governance system that results in positive biodiversity outcomes: IPLC-led conservation through inclusion in protected areas or OECM systems and recognition of Indigenous tenure and governance	

This indicator should also capture protected area coverage identified as Key Biodiversity Areas (KBAs) and or EBSAs, Locally Managed Marine Areas (LMMAs).	Relevant and links to the following national environmental indicators in the Pacific: Areas for important biodiversity protected. Ongoing support required to ensure protected areas formally submitted to WDPA in required data format, and much support required in region to get OECMs data collated and submitted by governments.	
WWF proposes that the indicator be amended to read: "Proportion of important sites for terrestrial, marine and freshwater biodiversity that are covered by protected areas, by ecosystem type". (These could include the proportion of ecosystems such as: coral reefs, deep sea ecosystems (by type, depth, strata), mangroves, seagrasses, saltmarshes, etc included in effectively managed MPAs and OECMs.) WWF also proposes a new headline indicator: "Trends in equitable governance and effective management of protected areas and other effective area-based conservation measures". The headline indicator should measure management effectiveness and equitable governance of protected areas and OECMs. Without the governance dimension, there is no guarantee of connectivity, sustainability and effectiveness (that cannot be measured by #hectares)	Many Parties will require assistance to measure this at the national level	
- The indicator should include all the qualifiers already contained in Aichi target 11. It should only count conserved areas (including all types of governance, such as ICCAs and other OECMs) that are representative and valuable for biodiversity and have a management that is equitable and effective in view of site specific	- The indicator should include all the qualifiers already contained in Aichi target 11. It should only count conserved areas (including all types of governance, such as ICCAs and other OECMs) that are representative and valuable for biodiversity and have a management that is equitable and	

conservation objectives. - It should include a sub-indicator that the rights of IPLCs have been fully respected, no violence or evictions have been taking place, a grievance mechanism exists and with their full and effective participation (FPIC), and that UNDRIPs has been fully applied. - Areas that have been included in the IUCN green list could be counted towards this indicator ?	effective in view of site specific conservation objectives. - It should include a sub-indicator that the rights of IPLCs have been fully respected, no violence or evictions have been taking place, a grievance mechanism exists and with their full and effective participation (FPIC), and that UNDRIPs has been fully applied. - Areas that have been included in the IUCN green list could be counted towards this indicator ?	
A simple area indicator is not enough. The indicator should include all the qualifiers contained in Aichi target 11. Indicators should be updated or developed to address OECMs, in line with technical guidance from CBD (Decision 14/8) and the IUCN WCPA guidance. The headline indicator should only count conserved areas that are representative and valuable for biodiversity, with equitable and effective management. Areas that have been included in the IUCN green list could be a template for this indicator. This headline indicator should include a sub-indicator that reports on whether the rights of IPLCs have been fully respected.	Many countries have some Key Biodiversity Areas identified, but technical and financial support is still needed to identify all KBAs. Additional resource are needed to implement a sub-indicator regarding the rights of IPLCs.	
	Capacity building required to raise awareness of Important Plant Areas and resources to support countries in identifying and protecting them. Resources needed to expand and maintain the Important Plant Area database.	
Important biodiversity areas only cover one form of protection. Given the likely impact on human populations of increasing protected area coverage to 30% by 2030 it is important to consider different protected area management categories that take into account effectively and equitably management as well as the sustainable use of natural resources. Coverage needs to be defined (e.g. increase in ha).		Change 2.0.1 to 'Increased coverage (in hectares) of protected area categories as defined by the IUCN (IA, IB, II, III, IV, V, VI), and OECMs as defined by the CBD.'
- It should include protected and conserved areas. - In relation to the IPLC land classification as a distinct category in Target 1, data disaggregation (e.g. for IPLC territories and conserved areas including ICCAs; for IPLC lands overlapping with PAs, OECMs; for joint management; etc) would need to be added in T2. SDG indicator 1.4.2 is relevant in this context: 'Proportion of total adult population with secure tenure rights to land, (a)	- It should include protected and conserved areas. - In relation to the IPLC land classification as a distinct category in Target 1, data disaggregation (e.g. for IPLC territories and conserved areas including ICCAs; for IPLC lands overlapping with PAs, OECMs; for joint management; etc) would need to be added in T2. SDG indicator 1.4.2 is relevant in this context: 'Proportion of total adult	

with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'. - The indicator should include all the qualifiers already contained in Aichi target 11. It should only count protected and conserved areas that have governance and management that is equitable and effective. For example, component indicators on equitable governance with relevant indicators (building on work by IIED) as part of the indicators process between COP 15 and COP 16 will need to be considered. Specifically, it should include a sub-indicator that the rights of IPLCs have been fully respected, no violence or evictions have been taking place, and with their full and effective participation and their FPIC, and that UNDRIPs has been fully applied.	population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'. - The indicator should include all the qualifiers already contained in Aichi target 11. It should only count protected and conserved areas that have governance and management that is equitable and effective. For example, component indicators on equitable governance with relevant indicators (building on work by IIED) as part of the indicators process between COP 15 and COP 16 will need to be considered. Specifically, it should include a sub-indicator that the rights of IPLCs have been fully respected, no violence or evictions have been taking place, and with their full and effective participation and their FPIC, and that UNDRIPs has been fully applied.	
	It is proposed that complementary indicator t2.4 (% coral reef protected) could be incorporated to help deliver this headline indicator for coral reef ecosystems as a key biodiversity area	
This indicator again is purely quantitative - what we need is to protect ecosystem integrity in collaboration with IPLCs etc. We already know that protected areas are not always the most effective for this purpose, sometimes less so than lands cared for by IPLCs, women and peasant farmers.		
Because an area is protected, does not mean it is "well connected and effective" We would recommend specific reference to IUCN protected area management categories e.g. % area coverage by IUCN Ia, Ib and II designations.	As above	
Need to simultaneously expand the existing coverage of area-based measures while enhancing connectivity and improving their effectiveness through equitable resourcing and management. If well-sited and designed, and managed effectively and equitably, PAs remain essential measures to conserve biodiversity. Expansion of protected and conserved areas must be in the right places (Key Biodiversity Areas – KBA but also protection of particular areas necessary to conserve the cultural diversity of a species (e.g., cultural diversity in chimpanzees). It is also important to recognise that 'particularly important areas for biodiversity' includes areas in which biodiversity may be less dense, but highly		

adapted, and its protection (and connectivity) may be equally critical to ecosystem stability. It is suggested that an indicator be including specifically to monitor the preservation of this element of biodiversity. Associated CMS work stream may be helpful (CMS Work Stream on Animal Culture: https://www.cms.int/en/news/animal-culture-linked-conservation-first-time) We recommend using the Green List of Protected and Conserved Areas to assess ecological outcomes at the site level.		
A simple area indicator is not enough. The indicator should include all the qualifiers contained in Aichi target 11. Indicators should be updated or developed to address OECMs, in line with technical guidance from CBD (Decision 14/8) and the IUCN WCPA guidance. The headline indicator should only count conserved areas that are representative and valuable for biodiversity, with equitable and effective management. Areas that have been included in the IUCN green list could be a template for this indicator. This headline indicator should include a sub-indicator that reports on whether the rights of IPLCs have been fully respected.	Many countries have Key Biodiversity Areas identified, but technical and financial support is still needed to identify all KBAs. Additional resources are needed to implement a sub-indicator regarding the rights of IPLCs.	
We note that some of the existing indicators for Target 2 do not consider OECMs, which will be a critical addition to the post-2020 framework (and were present in Aichi Target 11) but do require guidelines for implementation and reporting (Alves Pinto et al. 2021: https://www.sciencedirect.com/science/article/pii/S2530064421000043). Indicators updated or developed to address OECMs should be in line with technical guidance from CBD (Decision 14/8) and the IUCN WCPA guidance (IUCN WCPA Task Force on OECMs 2019: https://portals.iucn.org/library/sites/library/files/documents/PATRS-003-En.pdf). Furthermore, not all KBAs should be protected areas or OECMs; indeed, KBAs, which have not yet been identified for all countries using the agreed KBA Standard, are meant to identify areas important for the persistence of biodiversity. They are not meant to be recommendations for specific management actions. Certain ecosystems, such as coral reefs, are important for biodiversity and evaluation of coverage of coral reefs	We welcome that the headline indicators both address the overlap between protected and conserved areas and geographies important for biodiversity (Key Biodiversity Areas [2.0.1] and species ranges [2.0.2]). KBAs are inclusive of important ecological aspects, such as integrity (KBA criterion C), but KBA identification, particularly in marine ecosystems, will require technical and financial support. Although almost all countries have some KBAs identified, technical and financial support are needed to get all countries to identify their KBAs based on the new KBA Standard.	

should be incorporated into the methodology for this indicator or form an important complement.		
There is further work needed to adequately cover and assess OECM coverage and other LLMAs for protected or sustainable use.	There is further work needed to ensure adequate comparability in national reporting for OECM coverage and other LLMAs, given that OECMs often occur on a smaller scale and has different designation processes.	N/A
The current indicator lacks specificity, and requires improvement to include OECMs, ecological networks, ecological corridors, and managed ecosystems, as well as to address "well connected" and "effective" as identified elements in Target 2 requiring measurement.		Propose different indicator: "ConnIntact: The extent of connectivity of Protected Area networks, including OECMS and ecological corridors, within the wider landscape". ConnIntact (See Ward, M., Saura, S., Williams, B. et al. Just ten percent of the global terrestrial protected area network is structurally connected via intact land. Nat Commun 11, 4563 (2020). https://doi.org/10.1038/s41467-020-18457-x) is a refined approach to ProtConn (Proposed as component indicator for Target 2, 2.1.5 and serves as a CBD indicator for Aichi Target 11). It is better at reflecting connectivity via conditions of the intervening landscape, irrespective of whether they are protected or not including areas connected by intact lands (direct connections without using any other intermediate PA in the network) and connected through stepping stones (indirect connections facilitated by one or several other intermediate areas).
Biodiversity Area (KBA) identification, a bottom-up process led by national coordination groups with the support of governments, requires additional resources and capacity to ensure that all marine KBAs are identified across geographies and taxonomic groups.		
We note that some of the existing indicators for Target 2 do not consider OECMs, which will be a critical addition to the post-2020 framework (and if not included, potentially backtrack from Aichi Target 11) but do require guidelines for implementation and reporting (Alves Pinto et al. 2021: https://www.sciencedirect.com/science/article/pii/S2530064421000043). Indicators updated or developed to address OECMs should be in line with technical guidance from CBD (Decision 14/8) and the IUCN WCPA guidance (IUCN WCPA Task Force on OECMs 2019: https://portals.iucn.org/library/sites/library/files/documents/PATRS-003-En.pdf).	We welcome that the headline indicators both address the overlap between protected and conserved areas and geographies important for biodiversity (Key Biodiversity Areas [2.0.1] and species ranges [2.0.2]). KBAs are inclusive of important ecological aspects, such as integrity (KBA criterion C), but KBA identification, particularly in marine ecosystems, will require technical and financial support. Although almost all countries have some KBAs identified, technical and financial support are needed to get all	

Furthermore, not all KBAs should be protected areas or OECMs; indeed, KBAs, which have not yet been identified for all countries using the agreed KBA Standard, are meant to identify areas important for the persistence of biodiversity. They are not meant to be recommendations for specific management actions. Certain ecosystems, such as coral reefs, are important for biodiversity and evaluation of coverage of coral reefs should be incorporated into the methodology for this indicator or form an important complement.	countries to identify their KBAs based on the new KBA Standard.	
Need to define "important biodiversity areas." (KBAs are not sufficient, especially for ocean and freshwater systems, many countries don't have them and they are heavily biased toward certain taxa). Should be driven by conservation planning process in each country and what countries value as their critical biodiversity. While protecting importing sites for biodiversity is critical, we must also ensure representation across area-based networks. The Representation Achievement Score would be a very valuable complementary indicator.	Countries will need help with identification of priority sites. Systematic conservation planning to identify national level areas of biodiversity importance.	Representation Achievement Score (RSA) is now available for every country in the world in the new version of the Digital Observatory of Protected Areas (DOPA). The "DOPA" is the European Commission's global indicators dashboard for protected areas. They worked closely with UNEP-WCMC and Protected Planet to develop this product: the RSA will now be calculated annually as part of the "Conservation" Indicators provided on country-level PA progress.
To be effective, percentage will need to vary and be specified by type of habitat, ecosystem, and country and specific management area or jurisdiction. Level of protection also needs to be specified.	To be effective, percentage will need to vary and be specified by type of habitat, ecosystem, and country and specific management area or jurisdiction. Level of protection also needs to be specified.	To be effective, percentage will need to vary and be specified by type of habitat, ecosystem, and country and specific management area or jurisdiction. Level of protection also needs to be specified.
Lacks reference to effective and equitable governance -- coverage is not enough. To strengthen quality considerations, if an area is to be designated as a PA or recognized as an OECM, it should be fulfilling relevant qualitative criteria as agreed upon in order to be counted towards the quantitative target. Decision 14/8 elaborates criteria on "effective, equitable conservation" which should apply to both Protected areas and OECMs. Furthermore, securing the full legal recognition of Indigenous peoples' rights to lands, territories, and waters, and local community rights to lands should be reflected in this indicator, given their significance to achieving the outcomes sought by area-based conservation measures.		Lacks reference to effective and equitable governance -- coverage is not enough. To strengthen quality considerations, if an area is to be designated as a PA or recognized as an OECM, it should be fulfilling relevant qualitative criteria as agreed upon in order to be counted towards the quantitative target. Decision 14/8 elaborates criteria on "effective, equitable conservation" which should apply to both Protected areas and OECMs. Furthermore, securing the full legal recognition of Indigenous peoples' rights to lands, territories, and waters, and local community rights to lands should be reflected in this indicator, given their significance to achieving the outcomes sought by area-based conservation measures. The following could be considered as included in headline indicators:

		- CBD indicator: Trends in land-use change and land tenure in the traditional territories of IPLCs (COP decision X.43) - SDG indicator 1.4.2 land tenure: Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure
		This indicator is insufficient for measuring progress towards the target of >30% protected areas of the planet. The Component indicators for this target are more accurate and informative, and are feasible to measure. 2.1.1. Protected area coverage by type (marine, freshwater, mountain and terrestrial) 2.1.2. Protected area coverage of important biodiversity areas (by type (marine, freshwater, mountain and terrestrial) These could be combined in a Headline indicator as follow 2.0.1: "Protected area coverage by ecosystem type and within important biodiversity areas". Moreover, we would suggest including an additional complementary indicator: 'Net conversion of agricultural land' with 0 as quantitative target (EAT-Lancet commission 2019).
We note that some of the existing indicators for Target 2 do not consider OECMs, which will be a critical addition to the post-2020 framework (and were present in Aichi Target 11) but do require guidelines for implementation and reporting (Alves Pinto et al. 2021: https://www.sciencedirect.com/science/article/pii/S2530064421000043). Indicators updated or developed to address OECMs should be in line with technical guidance from CBD (Decision 14/8) and the IUCN WCPA guidance (IUCN WCPA Task Force on OECMs 2019: https://portals.iucn.org/library/sites/library/files/documents/PATRS-003-En.pdf). Furthermore, not all KBAs should be protected areas or OECMs; indeed, KBAs, which have not yet been identified for all countries using the agreed KBA Standard, are meant to identify areas important for the persistence of biodiversity. They are not meant to be recommendations for specific management actions.	We welcome that the headline indicators both address the overlap between protected and conserved areas and geographies important for biodiversity (Key Biodiversity Areas [2.0.1] and species ranges [2.0.2]). KBAs are inclusive of important ecological aspects, such as integrity (KBA criterion C), but KBA identification, particularly in marine ecosystems, will require technical and financial support. Although almost all countries have some KBAs identified, technical and financial support are needed to get all countries to identify their KBAs based on the new KBA Standard.	

Certain ecosystems, such as coral reefs, are important for biodiversity and evaluation of coverage of coral reefs should be incorporated into the methodology for this indicator or form an important complement.		
OECMs coverage is missing. This indicator should also clearly mention "...and other effective area-based conservation measures (OECM)".		
We note that some of the existing indicators for Target 2 do not consider OECMs, which will be a critical addition to the post-2020 framework (and were present in Aichi Target 11) but do require guidelines for implementation and reporting (Alves Pinto et al. 2021: https://www.sciencedirect.com/science/article/pii/S2530064421000043). Indicators updated or developed to address OECMs should be in line with technical guidance from CBD (Decision 14/8) and the IUCN WCPA guidance (IUCN WCPA Task Force on OECMs 2019: https://portals.iucn.org/library/sites/library/files/documents/PATRS-003-En.pdf).

Furthermore, not all KBAs should be protected areas or OECMs; indeed, KBAs, which have not yet been identified for all countries using the agreed KBA Standard, are meant to identify areas important for the persistence of biodiversity. They are not meant to be recommendations for specific management actions. Certain ecosystems, such as coral reefs, are important for biodiversity and evaluation of coverage of coral reefs should be incorporated into the methodology for this indicator or form an important complement. | We welcome that the headline indicators both address the overlap between protected and conserved areas and geographies important for biodiversity (Key Biodiversity Areas [2.0.1] and species ranges [2.0.2]). KBAs are inclusive of important ecological aspects, such as integrity (KBA criterion C), but KBA identification, particularly in marine ecosystems, will require technical and financial support. Although almost all countries have some KBAs identified, technical and financial support are needed to get all countries to identify their KBAs based on the new KBA Standard. | |
| Would be important to clearly indicate what is the definition of "important biodiversity areas" under the Convention. | In order that this indicator is used globally for reporting is important to clarify as indicated above the definition of "important biodiversity areas". Under the Convention on Wetlands Contracting Parties designate wetlands of International Importance. The list is an international network of protected areas with more than 2,414 Sites which are important for the conservation of global, biological diversity and for sustaining human life through the maintenance of their ecosystem components, processes and benefits/ services. The List of Wetlands of International Importance or Ramsar Sites have contributed to Contracting Parties to achieve Aichi Target 11 and would contribute to Target 2 consequently it would be important to include it as a Component Indicator of Target 2 of the monitoring framework. | |

2.0.2 Species Protection Index		
2.0.2 If you selected "yes, however requires further work", please describe:	**2.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**2.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
Species existence index.		
Indicator can be disaggregated to mountain relevant scales. When applied, it recognizes the need to protect suitable habitats for the long-term survival or rare an/or threatened, often endemic, mountain species. It enables the re-evaluation and improvement of strategic protection of mountain species for which protected area targets have not been met. It further aligns with ongoing monitoring for Sustainable Development Goal (SDG) 15.4.1 "Coverage by protected areas of important sites for mountain biodiversity."		
The species protection index informs on how well the habitats of threatened species are represented in protected areas. It therefore only addresses one aspect of protected areas: representativity. It is not clear whether the indicator also takes OECMs into account, and none of the other qualifiers contained in Aichi target 11 are monitored through this. It is therefore not suited as a headline indicator, but could be a component indicator for representativity.	The species protection index informs on how well the habitats of threatened species are represented in protected areas. It therefore only addresses one aspect of protected areas: representativity. It is not clear whether the indicator also takes OECMs into account, and none of the other qualifiers contained in Aichi target 11 are monitored through this. It is therefore not suited as a headline indicator, but could be a component indicator for representativity.	
		We suggest the exclusion of this indicator (biased baselines)
		Indicator:
Index on how processes and activities within jurisdiction or control of each state party affect globally the biodiversity.

CBD obliges its parties and institutions to maintain monitoring such processes and activities to regulate or manage them so as to prevent them from driving global biodiversity loss acceleration.

(If processes and activities which drive global biodiversity loss acceleration are not duly monitored to regulate and prevent them from |

		continuing to do so then Species Protection Index can not prevent global biodiversity loss acceleration and can not thus actually protect biodiversity.)
We do not find this indicator relevant, since most species go extinct without being indexed beforehand; it would be worth focusing more on the protection of habitats and their integrity		
There must be a component in the indicator that captures the effectiveness of protection.	Reporting needs to be normalised based on existing national capacity and progress made in building the capacity. For global reporting attention needs to be on comparable baselines.	
The species protection index informs on how well the habitats of threatened species are represented in protected areas. It therefore only addresses one aspect of protected areas: representativity. It is not clear whether the indicator also takes OECMs into account, and none of the other qualifiers contained in Aichi target 11 are monitored though this. It is therefore not suited as a headline indicator, but could be a component indicator for representativity.	The species protection index informs on how well the habitats of threatened species are represented in protected areas. With this, it only addresses one aspect of protected areas: representativity. It is not clear whether the indicator also takes OECMs into account, and none of the other qualifiers contained in Aichi target 11 are monitored though this. It is therefore not suited as a headline indicator, but could be a component indicator for representativity.	
I understand that this index is computed based on the overlap of protected areas and the range of species determined by models. The model validation for each species concerned is an issue.	To validate the models, large amount of field data needs to be collected; otherwise, it can lead to regional and taxonomic bias (maybe).	
requires to include IPLCs criterium for the Index	If IPLCs meaninful particiaption	
	The species protection index informs on how well the habitats of threatened species are represented in protected areas. It therefore only addresses one aspect of protected areas: representativity. It is not clear whether the indicator also takes OECMs into account, and none of the other qualifiers contained in Aichi target 11 are monitored though this. It is therefore not suited as a headline indicator, but could be a component indicator for representativity.	The species protection index informs on how well the habitats of threatened species are represented in protected areas. It therefore only addresses one aspect of protected areas: representativity. It is not clear whether the indicator also takes OECMs into account, and none of the other qualifiers contained in Aichi target 11 are monitored though this. It is therefore not suited as a headline indicator, but could be a component indicator for representativity.
Good indicator but many Pacific island countries and territories have not been assessed	Capacity and technical assistance required to undertake these analyses in the Pacific island countries.	
Indicator does not appear to be available; unclear additional value to existing indicator suite	see above	

The species protection index informs on how well the habitats of threatened species are represented in protected areas. It therefore only addresses one aspect of protected areas: representativity. It is not clear whether the indicator also takes OECMs into account, and none of the other qualifiers contained in Aichi target 11 are monitored though this. It is therefore not suited as a headline indicator, but could be a component indicator for representativity.	The species protection index informs on how well the habitats of threatened species are represented in protected areas. It therefore only addresses one aspect of protected areas: representativity. It is not clear whether the indicator also takes OECMs into account, and none of the other qualifiers contained in Aichi target 11 are monitored though this. It is therefore not suited as a headline indicator, but could be a component indicator for representativity.	
		Recommend replacing headline indicator 2.0.2. "Species Protection Index' with an indicator that addresses effectiveness and/or ecological outcomes (and includes both terrestrial and marine environments). For example, 2.1.1.5 "Green List of Protected and Conserved Areas" addresses management effectiveness and ecological outcomes.

Recommend adding a headline indicator to address the "stage of establishment and degree to which protected areas and OECMs prohibit environmentally damaging activities."

The species protection index is not suitable as a headline indicator, but could be a component indicator for how well threatened species are represented in protected areas. |
| | | Headline indicator 2.0.1 - focusing on protected/conserved area coverage of Key Biodiversity Areas (including those identifed for species) provides a more useful metric of the contribution of protected areas to species (and wider biodiversity) conservation than this one focused on the protected area coverage of species ranges. Indicator 2.0.1 is compiled by BirdLife International, IUCN and UNEP-WCMC based on national data submitted by countries to the WDPA and WDKBA. Instead of the Species Protection Index, move indicator 3.0.1. "Protected area management effectiveness" to report under T2 (here), noting that no such indicator is available for all countries or at a global scale yet, but should be a priority to develop. |
| The species protection index informs on how well the habitats of threatened species are represented in protected areas. It therefore only addresses one aspect of | The Protected Areas Representativeness Index (PARI) indicator measures how well protected areas represent the ecological diversity of a | It is therefore not suited as a headline indicator, but could be a component indicator for representativity. |

protected areas: representativity. It is not clear whether the indicator also takes OECMs into account, and none of the other qualifiers contained in Aichi target 11 are monitored through this. Some countries are already at 100 on the index which is the maximum score and it is likely that these countries will be disincentivized to use this indicator.	country. This metric is calculated by CSIRO using high-resolution remote sensing data and biological records of species' locations. A score of 100 indicates that a country's terrestrial protected areas nearly perfectly represent the country's ecosystem diversity, and a score of 0 indicates very low representativeness (≤5th-percentile of PARI values).	
		The target is about effective PA systems. This indicator needs to focus on effectiveness. Although species diversity and abundance is the ultimate indicator or biodiversity, changes in this indicator are difficult and costly to measure and often are not detectable over a 5 year timeframe (ie for mid term review) even if PA/OECM management effectiveness has improved. We need an indicator on effectiveness of PAs which is more sensitive to change over time and less complex and costly to measure. Indicator 3.0.1 on PA management effectiveness is the right headline indicator for target 2, with number of PAs having conducted PA management effectiveness assessment within the last 5 years being added as a component indicator. Furthermore, the PA management equity (as in Aichi 11) is important as well as PA management effectiveness and both depend on effectiveness and equity of PA governance. In short: 1. Replace headline 2.0.2 with headline indicator 3.0.1 and equity and governance: "Effectiveness and equity of PA management and governance". 2. Add as a component indicators: a. "Number of PAs having conducted a PA management effectiveness evaluation in the last 5 years" b. "Number of PAs having conducted a PA governance assessment in the last 5 years"
We must ensure that IPLCs, women, peasant farmers etc are involved in assessing the progress of the target.	as noted above, under these conditions it may be helpful	
		Consider using instead the Green List of Protected and Conserved Areas focussing on ecological outcomes and management effectiveness.

		(https://www.iucn.org/theme/protected-areas/our-work/iucn-green-list-protected-and-conserved-areas)
		Recommend replacing headline indicator 2.0.2. "Species Protection Index' with an indicator that addresses effectiveness and/or ecological outcomes (and includes both terrestrial and marine environments). For example, 2.1.1.5 "Green List of Protected and Conserved Areas" addresses management effectiveness and ecological outcomes. Recommend adding a headline indicator to address the "stage of establishment and degree to which protected areas and OECMs prohibit environmentally damaging activities." The species protection index is not suitable as a headline indicator but could be a component indicator for how well threatened species are represented in protected areas.
		Current Target 2 headline indicators address the placement of area-based measures in places important for biodiversity; as such we recommend replacing headline indicator 2.0.2. "Species Protection Index' with an indicator that addresses effectiveness and/or ecological outcomes (and includes both terrestrial and marine environments). 2.1.1.5 "Green List of Protected and Conserved Areas" [https://www.iucn.org/theme/protected-areas/our-work/iucn-green-list-protected-and-conserved-areas] addresses both management effectiveness and ecological outcomes, and is already in use as a global standard (but is resource intensive). We welcome the intent of 2.1.6 "Area of Protected areas and other effective area-based conservation measures meeting their documented ecological objectives," but note that the methodology is unclear (and requires attention by AHTEG). We would also recommend adding a headline indicator to address the "stage of establishment and degree to which protected areas and OECMs prohibit environmentally damaging activities." This should address the fact that some activities incompatible with ecosystem

		conservation should not take place in either PAs or OECMs.
		N/A
We recommend deleting 2.0.2 "Species Protection Index" but to retain it as a component indicator. As a headline indicator it is too repetitive and less relevant for marine species.	We recommend deleting 2.0.2 "Species Protection Index" but to retain it as a component indicator. As a headline indicator it is too repetitive and less relevant for marine species.	We propose the addition of the following two headline indicators: Indicator 1: stage of establishment and degree to which protected areas and OECMs prohibit environmentally damaging activities (I.e. level of protection) Organization: data on this indicator can be collected in accordance with the MPA Guide and reported to the WDPA Protected Planet website Indicator 2: Area of Protected areas and other effective area-based conservation measures meeting their documented ecological objectives Organization: the IUCN Green List is one example of ways to track progress toward this indicator
		Current Target 2 headline indicators address the placement of area-based measures in places important for biodiversity; as such we recommend replacing headline indicator 2.0.2. "Species Protection Index' with an indicator that addresses effectiveness and/or ecological outcomes (and includes both terrestrial and marine environments). 2.1.1.5 "Green List of Protected and Conserved Areas" [https://www.iucn.org/theme/protected-areas/our-work/iucn-green-list-protected-and-conserved-areas] addresses both management effectiveness and ecological outcomes, and is already in use as a global standard (but is resource intensive). We welcome the intent of 2.1.6 "Area of Protected areas and other effective area-based conservation measures meeting their documented ecological objectives," but note that the methodology is unclear (and requires attention by AHTEG).

		We would also recommend adding a headline indicator to address the "stage of establishment and degree to which protected areas and OECMs prohibit environmentally damaging activities." This should address the fact that some activities incompatible with ecosystem conservation should not take place in either PAs or OECMs.
	Regional capacity needed to mobilize species information to contribute to expanded taxonomic coverage for the indicator, and around national decision-support and report tools that leverage the indicator information.	
The species protection index needs to include aquatic species (freshwater and marine) and aquatic habitat areas	The species protection index needs to include aquatic species (freshwater and marine) and aquatic habitat areas. This index requires significant investment in capacity development	The species protection index needs to include aquatic species (freshwater and marine) and aquatic habitat areas. This index requires significant investment in capacity development
		Current Target 2 headline indicators address the placement of area-based measures in places important for biodiversity; as such we recommend replacing headline indicator 2.0.2. "Species Protection Index' with an indicator that addresses effectiveness and/or ecological outcomes (and includes both terrestrial and marine environments). 2.1.1.5 "Green List of Protected and Conserved Areas" [https://www.iucn.org/theme/protected-areas/our-work/iucn-green-list-protected-and-conserved-areas] addresses both management effectiveness and ecological outcomes, and is already in use as a global standard (but is resource intensive). We welcome the intent of 2.1.6 "Area of Protected areas and other effective area-based conservation measures meeting their documented ecological objectives," but note that the methodology is unclear (and requires attention by AHTEG). We would also recommend adding a headline indicator to address the "stage of establishment and degree to which protected areas and OECMs prohibit environmentally damaging activities." This should address the fact that some activities incompatible with ecosystem conservation should not take place in either PAs or OECMs.

This indicator cannot work for marine ecosystems, as it only mentions "terrestrial" species. The indicators should cover all types of ecosystems. Also, this indicator is using only the data of vertebrate, invertebrate, and plant species. It does not show how the habitat or ecosystem is changed inside the areas. To enhance the management effectiveness, it is important to follow how the ecosystem is changing. For instance, retreating coastlines, shrinking inland wetlands inside PAs and OECMs, etc. should be measured in order to show how species will be affected in the future by ongoing changes in their habitat.		
		Current Target 2 headline indicators address the placement of area-based measures in places important for biodiversity; as such we recommend replacing headline indicator 2.0.2. "Species Protection Index' with an indicator that addresses effectiveness and/or ecological outcomes (and includes both terrestrial and marine environments). 2.1.1.5 "Green List of Protected and Conserved Areas" [https://www.iucn.org/theme/protected-areas/our-work/iucn-green-list-protected-and-conserved-areas] addresses both management effectiveness and ecological outcomes, and is already in use as a global standard (but is resource intensive). We welcome the intent of 2.1.6 "Area of Protected areas and other effective area-based conservation measures meeting their documented ecological objectives," but note that the methodology is unclear (and requires attention by AHTEG). We would also recommend adding a headline indicator to address the "stage of establishment and degree to which protected areas and OECMs prohibit environmentally damaging activities." This should address the fact that some activities incompatible with ecosystem conservation should not take place in either PAs or OECMs.

Target 3. By 2030, ensure active management actions to enable wild species of fauna and flora recovery and conservation, and reduce human-wildlife conflict by [X%].

3.0.1 Protected areas management effectiveness

3.0.1 If you selected "yes, however requires further work", please describe:	3.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	3.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
Capacity building sustainable financing.		
This is an inadequate target and indicator, also because PAs are not the only mechanism for species conservation, in fact they have been proven to be less effective than ICCAs and other community initiatives. It also doesn´t account for the importance of protecting species outside of Protected areas and OECMs. All areas have to enhance their actions to protect species living in them.		The target does not take on board the reasons why these human-wildlife conflict present themselves. Very often this is because IPLCs, small scale producers and other rightsholders are receiving too much pressure from corporate destructive projects and have to venture forth into areas where they previously wouldn´t come. Similarly, wildlife leaves their natural habitat because of similar pressures. One cannot expect a problem to get solved by only measuring the symptoms of it.
		Species conservation and management plan effectiveness; and also we propose to add another indidator, such as "Total of payments for solving human-wildlife conflicts"
I believe this indicator still needs further development to ensure reasonable/relevant/accurate proxy measures of effectiveness to ensure valid results.		
We need to define what we mean by effectiveness and what is expected from the countries having the least resources and capacities to do so.	A special provision should be specified for the least developed countries so they receive the support they need to achieve results.	
As according to CBD "protected areas" are all areas which are "designated or regulated and managed to achieve specific conservation objectives" of in-situ conservation, thus the effectiveness of each protected area has to be monitored according to how far the overall global impacts of its designation, regulation, management and their financing prevent the acceleration of the overall loss of world's in-situ biodiversity. This is however very different from the ways how "Protected areas management effectiveness" is currently	When the effectiveness of protected areas is understood as we presented above, it can become relevant for global reporting and for enhancing standardization and comparability in national reporting.	

mostly understood, which has to be corrected accordingly.		
	It will be difficult to report on - active management for recovery as this is not a dimmer switch, it needs time until a respective measure can be judged successful.	
	Not all countries have the same risk of human wildlife conflict. For global reporting attention needs to be to comparable baselines and what "reduction" means	
This is an inadequate target and indicator, also because PAs are not the only mechanism for species conservation, in fact they have been proven to be less effective than ICCAs and other community initiatives.		
		The indicator is about the effectiveness of protected areas, and therefore is an important component indicator for target 2. For target 3, we suggest to use the percentage of endangered species (Red Lists) at (sub-)national/Global level with effective species management plans.
		The target statement itself include two separate issues, which makes it difficult to determine and produce useful information. Need specification on kinds of species to be targeted for restoration, probably with % target for it. Does human-wildlife conflict have effective baseline at all?
Protected areas management effectiveness not are the only way to measure the health of populations. What about monitoring populations?	We can add more indicators and is a long-term work.	
Headline Indicator could be: Active Management by IPLC's of flora, fauna and wild species in their lands and territories. Including Trends in monitoring, conservation, and restoration of species in IPLC territories, trends in customary sustainable use of wild flora and fauna, community based information monitoring systems: potential use of Indigenous Navigator Data sets.		
rephrse as protected areas governed and managed effectively by IPLCs	with meaninful participation of IPLCs	
For full wild species recovery, and conservation, protected areas are not sufficient and need to be complemented by efficient management of natural and	Many Parties may require assistance to measure this at the national level	

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semi natural areas outside of protected areas. Perhaps it would be more effective for the headline indicator to also measure the effectiveness of other natural and semi-natural ecosystems, as well as protected areas.		
Indigenous territories often overlap with protected areas and are often the local partners of Parties in management. It should include as sub indicator: Trends in enhanced participatory management involving IPLCs	Indigenous territories often overlap with protected areas and are often the local partners of Parties in management. It should include as sub indicator: Trends in enhanced participatory management involving IPLCs	
	Relevant and links to the following national environmental indicators in the Pacific: Protected area management effectiveness (defined as '% of formally protected areas (PAs) where PA management effectiveness assessments (PAME) have been completed' progressing to '% of formally protected areas (PAs) with effective management') Limited PAME undertaken in the Pacific islands to date and ongoing capacity building required.	
For full wild species recovery, and conservation, protected areas are not sufficient and need to be complemented by efficient management of natural and semi natural areas outside of protected areas. WWF proposes that it would be more effective for the headline indicator to also measure the effectiveness of other natural and semi-natural ecosystems, as well as protected areas.	Many Parties may require assistance to measure this at the national level	
This does not seem sufficiently focussed to be informative about this target, in that (as written) it both: a) could apply to protected areas that does not contain species that need such intensive actions, and b) it does not include a whole range of other intensive management actions that may well be needed for species identified as in need. We need to agree on which elements of PA effectiveness are being measured. Suggest using the IUCN Green List of Protected and Conserved Areas Standard as a basis for measuring effectiveness. Only peripherally relevant to target; would be appropriate as a second headline indicator for Target 2 (https://www.bipindicators.net/indicators/protected-area-management-effectiveness)	see above	In time, indicator of Protected area management effectiveness for Target 2 could be complemented with indicators derived from the Green List of Protected and Conserved Areas (www.iucngreenlist.org)
		The indicator is about the effectiveness of protected areas, and therefore is an important component indicator for target 2. For target 3, we suggest to use the percentage of endangered species (Red Lists) at

		(sub-)national/Global level with effective species management plans.
		Propose: the percentage of endangered species (Red Lists) at (sub-) national/Global level with effective species management plans.
		Replace with "Number of species for which recovery has been documented using 'green status of species' assessments on the IUCN Red List"
The indicator is about the effectiveness of protected areas, and therefore is an important component indicator for target 2.	Effective management will be critical to the success of both marine and on land protected areas - primarily the extent to which management is protecting values and achieving goals and objectives. Capacity building will be required to develop a suite of strategies and actions aimed at strengthening the individual, institutional and societal capacities needed to create a representative and comprehensive protected area network, address critical management weaknesses, abate key threats and improve the enabling environment within a protected area system.	For target 3, we suggest using the 'percentage of endangered species (Red Lists) at (sub-)national/Global level with effective species management plans.'
	This headline indicator should not be about management effectiveness in general (which is more relevant to target 2) but management actions for conservation and human wildlife conflict as indicated by the components. The other problem is there are no component indicators for headline indicator 3.0.1. I suggest: 1. Replace headline indicator 3.0.1 with: "Effectiveness of relevant management actions". 2. Add component indicators: a. "Number of incidents of poaching of endangered species" b. "Number of reports of HWC by PA adjacent communities to PA management" The second indicator relates to HWC mitigation efforts which may include avoidance (eg by fencing) , reduction (eg rangers chasing animals back into the park), and/or by compensation for any residual damage. The indicator I have proposed works for the first two. It does not work for compensation but since HWC compensation is	

	a contentious issue Parties will not be likely to accept an indicator that includes compensation. The way I have framed the indicator allows for reporting both by PA management (reports they have received from communities) and communities (reports they have sent to PA management). Parallel reporting can be beneficial in promoting transparency and accountability.	
This is not simply about the number of species etc. It must be assessed in collaboration with IPLCs, women and peasant farmers, since it is already on record that protected areas can have a negative impact on them and even lead to their exclusion or limits on their traditional activities, especially in the case of eg nomadic peoples.	As noted above, it must include IPLCs etc and assess the impacts on them and their cultural and traditional practices.	
It is important to measure protected area management effectiveness, but there could also be an indicator monitoring the effectiveness of species management plans. In addition, gaps in post-2020 indicators to measure reduction in human-wildlife conflict must be addressed. It is also important to note that 'trend in human-wildlife conflicts' is not appropriate as a decrease in human-wildlife conflicts could well result from a decline in wild species populations that were subject to habitat loss and degradation, retaliatory killing, poaching and other illegal activities. See following study: 'Measuring human–wildlife conflicts: Comparing insights from different monitoring approaches' (2017). This study finds that monitoring systems that address broader issues beyond providing a record of damage incidents are likely to have a greater effect in reducing human–wildlife conflicts in the long-term. We would promote monitoring systems that address broader issues beyond providing a record of damage incidents are likely to have a greater effect in reducing human–wildlife conflicts in the long-term. Possible indicators for reduced HWC might include the attitudes, tolerance and understanding of rural communities; their living standards and capacities; and the resilience of sustainable rural economies; as well as improved land use planning, the implementation and success of proven methods to mitigate and reduce HWC, such as fencing around communities and farms and use of deterrents to prevent crop-raiding or livestock		

predation, and along ecological rather than administrative boundaries, policy changes, etc.		
		Propose: the percentage of endangered species (Red Lists) at (sub-) national/Global level with effective species management plans.
		We note that an indicator related to management effectiveness in protected areas is better placed as a headline or component indicator under Target 2 as it does not align to the key monitoring elements of Target 3. Headline indicators for Target 3 should focus on the presence/existence of species conservation actions and their implementation and effectiveness, especially for species threatened with extinction. An alternative headline indicator assessing the overall effectiveness of species conservation actions would be the "Species Protection Index," currently indicator 2.0.2, which would be more appropriately applied in this context rather than under Target 2, and it could be coupled with or take into account outputs from the IUCN Green Status of Species assessments where possible, along with IUCN Red List of Threatened Species assessments.
Requires sufficiently comprehensive global coverage and standards to ensure comparability		
		We note that an indicator related to management effectiveness in protected areas is better placed as a headline or component indicator under Target 2 as it does not align to the key monitoring elements of Target 3.

Headline indicators for Target 3 should focus on the presence/existence of species conservation actions and their implementation and effectiveness, especially for species threatened with extinction. An alternative headline indicator assessing the overall effectiveness of species conservation actions would be the "Species Protection Index," currently indicator 2.0.2, which would be more appropriately applied in this context rather than under Target 2, and it could be coupled with or take into account outputs from the IUCN Green |

		Status of Species assessments where possible, along with IUCN Red List of Threatened Species assessments.
Would make more sense to have this under Target 2.	The indicator isn't applied with sufficient coverage and frequency to be useful.	
	There need to be standardized methods and capacity development	There need to be standardized methods and capacity development
		Better suited toward target 2, and should measure equitability alongside effectiveness. COP Decision 14/8 defines criteria for "effective, equitable area-based conservation" which could serve as a guide in developing suitable indicators.
This indicator should clearly be under Target 2, which mentions PAs and their effectiveness. Also, it should not be limited to Protected Areas, and at least OECMs should be included. Target 3 should not focus on only "wild" species. The current draft target ignores the objectives of the Convention.		
		We note that an indicator related to management effectiveness in protected areas is better placed as a headline or component indicator under Target 2 as it does not align to the key monitoring elements of Target 3. Headline indicators for Target 3 should focus on the presence/existence of species conservation actions and their implementation and effectiveness, especially for species threatened with extinction. An alternative headline indicator assessing the overall effectiveness of species conservation actions would be the "Species Protection Index," currently indicator 2.0.2, which would be more appropriately applied in this context rather than under Target 2, and it could be coupled with or take into account outputs from the IUCN Green Status of Species assessments where possible, along with IUCN Red List of Threatened Species assessments.
This indicator seem to be better place under headline indicator 2.01 "Protected area coverage of important biodiversity areas" where the components of effectiveness of protected areas are addressed. Under the Convention on Wetlands Contracting Parties report on the management effectiveness of their Wetlands of	As above	

International Importance through their National Reports and Ramsar Sites data base which would avoid duplication efforts if included as a component indicator.		

3.0.2 Species recovery programmes*

3.0.2 If you selected "yes, however requires further work", please describe:	3.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	3.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
Species recovery programmes should include a genetic component, and management actions should take into account data obtained from monitoring the genetic diversity of wild species .		
		Species recovery plans and other instruments implemented
	We need to highlight that cooperation between parties is essential as aspects harming species such as poaching and corruption demand international intervention.	
As most of the areas where species have traditionally lived have been deprived of their character as habitat for those species by being taken under the commercial control but not by the ways how people have earlier used them, the actual recovery requires changing current ways of such commercial control	Needed change in ways how the concept "Species recovery programmes" are understood we described here above	
3.0.2 If you selected "Yes, however requires further work", please describe: Overall, rather than the target focusing on actions to support certain species, the target should focus on achieving a good or favorable conservation status for species, and this would be measured, as indicator, in relation to the overall number of species, as %. If the target remains as suggested, we strongly recommend to monitor the number of effective management actions in relation to the overall number of species (%).	3.0.2 If you selected "Yes, however requires further work", please describe: Overall, rather than the target focusing on actions to support certain species, the target should focus on achieving a good or favorable conservation status for species, and this would be measured, as indicator, in relation to the overall number of species, as %. If the target remains as suggested, we strongly recommend to monitor the number of effective management actions in relation to the overall number of species (%).	
		As stated, it is too vague, and does not tell anything about how it might be determined. The presence of recovery program is one thing,

		whether it is actually conducted and provide expected results is completely another.
requires meaninful participation of IPLCs and women	increase capacities of IPLCs and women	
prioritize species and how the program can be implemented, and sectors involved		
Number of programmes is not sufficient, a measure of effectiveness needs to be included		
Suggested alternative headline indicator for recovery actions: Status and trend of species for which recovery actions are required. This indicator could be derived from the IUCN Red List of Threatened Species. For an outline of how to determine which species require recovery actions, please see this publication: https://www.biorxiv.org/content/10.1101/2020.11.09.3743 14v1 Suggested headline indicator on Human Wildlife Conflict: Human Wildlife Conflict Index. The Human Wildlife Conflict Index is a composite index under development, which combines the severity, frequency and magnitude of conflict incidents across 3 dimensions, human, economic and wildlife. Use of an Index such as this by Parties would enable the consistent compilation of data that would allow for progress on this Target to be measured over time across multiple levels – from an individual landscape, aggregated to national, regional and global levels.	Parties will require assistance to measure this at the national level	
Indicator formulation, maintenance, and data availability unclear The critical point here seems to be that there is a need to identify the species that require intensive/dedicated actions. There is no point having 50 species recovery plans if they are not targeting 50 species that need this action. Unclear how these would translate to indicators, but the process would be: 1) identify the species (one approach is given in https://www.biorxiv.org/content/10.1101/2020.11.09.3743 14v1, but there will be others, such as for plants): 2) then develop plans that spell out the actions needed for those species, and determine how track progress; 3) implement the programmes; and 4) measure change in species status. An indicator for each of those steps would make sense	see above	Number of species extinctions (https://www.bipindicators.net/indicators/numbe r-of-species-extinctions-birds-and-mammals) and number of extinctions avoided (https://www.bipindicators.net/indicators/numbe r-of-extinctions-avoided) would be better headline indicators for Target 3

Overall, rather than the target focussing on actions to support certain species, the target should focus on achieving a good or favorable conservation status for species, and this would be measured, as indicator, in relation to the overall number of species, as %. If the target remains as suggested, we strongly recommend to monitor the number of effective management actions in relation to the overall number of species (%).	Overall, rather than the target focusing on actions to support certain species, the target should focus on achieving a good or favorable conservation status for species, and this would be measured, as indicator, in relation to the overall number of species, as %. If the target remains as suggested, we strongly recommend to monitor the number of effective management actions in relation to the overall number of species (%).	
We recommend the indicator monitor the number of effective management actions in relation to the overall number of species (%).		
This needs to be more specific. The number of species recovery programmes itself does not mean the species recovery actions are receiving sufficient funding or resourcing to ensure the species is on an improved trajectory.		Change 3.0.2 to: 'Number of species recovery programmes that have implemented effective management actions that demonstrably reduce the risk of extinction.'
Again this requires collaboration with IPLCs etc in order to fully understand how this can work in the context of the ecosystem overall.	Under the conditions that it works closely with IPLCs etc.	
Not sufficient to monitor the Target 3. Restoring populations to healthy viable levels and social structures consistent with their ecological role should be the focus of this target. This target and its headline indicators should go further to include species reintroductions and recovery actions, such as vaccinations, breeding site provision and supplementary feeding. As regards ex-situ conservation measures, they should be at best peripheral, as it can only be a measurable intervention if it proves successful – it is not a measure in and of itself. Carefully managed reintroduction and rewilding programmes can be extremely valuable if local stakeholders are brought along; however without local support they can be disastrous – e.g. the recent mass killing of wolves in Wisconsin. Active recovery and conservation management actions also requires improved transboundary conservation work and cooperation. The CMS programmes and initiatives could prove useful in developing relevant indicators for this target component.		

We recommend the indicator monitor the number of effective management actions in relation to the overall number of species (%).	as above	
We note that headline indicators for Target 3 should focus on the presence/existence of species conservation actions and their implementation and effectiveness, especially for species threatened with extinction. An alternative headline indicator should evaluate the presence/existence of both ex-situ and in-situ conservation efforts. We recommend using the IUCN Red List of Threatened Species as the key indicator (www.iucnredlist.org), specifically, data on trends in "Conservation Action" related to in-situ and ex-situ activities (comparing conservation actions needed with conservation actions taken). Sub-indicators should assess the existence of national species recovery plans and international actions focused on the recovery of the species, such as listing on the Appendices of the Convention on Migratory Species (CMS) or existence of CMS species-specific daughter agreements or Memoranda of Understand (MOUs), or listing on the Appendices of the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) (See also Indictor 4.0.2).		
We note that headline indicators for Target 3 should focus on the presence/existence of species conservation actions and their implementation and effectiveness, especially for species threatened with extinction. An alternative headline indicator should evaluate the presence/existence of both ex-situ and in-situ conservation efforts. We recommend using the IUCN Red List of Threatened Species as the key indicator (www.iucnredlist.org), specifically, data on trends in "Conservation Action" related to in-situ and ex-situ activities (comparing conservation actions needed with conservation actions taken). Sub-indicators should assess the existence of national species recovery plans and international actions focused on the recovery of the species, such as listing on the Appendices of the Convention on Migratory Species (CMS) or existence of CMS species-specific daughter agreements or Memoranda of Understand (MOUs), or listing on the Appendices of the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) (See also Indictor 4.0.2).		
The dimension of genetic diversity is not captured in the Target and the Indicator. We suggest rewording as follow:		

3.0.2: "By 2030, ensure active management actions to enable the recovery and conservation of populations of wild species of fauna and flora and their genetic diversity, and to reduce human-wildlife conflict by [X%]".		
This is the only indicator directly related to the target of species conservation, but species recovery programmes are only a very small part of it. It does not cover the many positive active management activities related to conservation and especially harmonious human-nature relationships. "Human-nature" conflict is also much more specific than the rest of the targets, and could be covered in an indicator rather than the headline target.		
We note that headline indicators for Target 3 should focus on the presence/existence of species conservation actions and their implementation and effectiveness, especially for species threatened with extinction. An alternative headline indicator should evaluate the presence/existence of both ex-situ and in-situ conservation efforts. We recommend using the IUCN Red List of Threatened Species as the key indicator (www.iucnredlist.org), specifically, data on trends in "Conservation Action" related to in-situ and ex-situ activities (comparing conservation actions needed with conservation actions taken). Sub-indicators should assess the existence of national species recovery plans and international actions focused on the recovery of the species, such as listing on the Appendices of the Convention on Migratory Species (CMS) or existence of CMS species-specific daughter agreements or Memoranda of Understand (MOUs), or listing on the Appendices of the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) (See also Indictor 4.0.2).		

Target 4. By 2030, ensure that the harvesting, trade and use of wild species of fauna and flora is legal, at sustainable levels and safe.

4.0.1 Proportion of traded wildlife that is legal and safe (not poached, illicitly trafficked or unsustainable)

4.0.1 If you selected "yes, however requires further work", please describe:	4.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	4.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		The current target is too limited to bring about the necessary protection and sustainability of use for the species concerned. The precautionary principle should be imbedded in

		Target 4, eliminating all commercial exploitation and trade of wildlife unless it is demonstrably sustainable, legal, well managed and presents zero risk to human or animal health, and enhances the livelihoods of Indigenous Peoples and local communities. We suggest to adapt the indicator accordingly.
Current wording confusing - proposal: "Proportion of traded wildlife that is legal and sustainable"	see above	
		Proportion of trade of national species: Number of the national species traded legally and safely in comparison to the number of the national species traded ilegally and unsafely.
Needs further definition on what is deemed 'safe'.	Needs further definition on what is deemed 'safe'.	
The notion of traded wildlife may be interpreted differently and national juridiction may turn legal the trading of endangered species.	We need to agree on a common definition of traded wildlife.	
		Proportion of the use of wildlife that is sustainable. CBD is responsible to keep this monitored.
Previous reports on environmental and wildlife crime (UNEP & Interpol 2014, 2016) have shown significant uncertainty in the extent of illegal wildlife trade, harvest or use (including forestry and fisheries). Empirical data is needed, towards reliable quantifications of legal, safe and sustainable, versus illegal or unsustainable actions. In contrast to documentation, such empirical data need to be tamper-proof and long-term persistent, cp. genomic and/or bio-geochemical data obtained from the harvested, traded and/or used organisms and their parts. Well-designed, distribution range-wide reference datasets within species will provide the information-rich genomic and phenotypic (trait) data for reliable statistical evaluations and conclusions. Such collections of samples and trait data can be continuously extended to provide scale-independent results of sufficient statistical power and reliability. In turn, these datasets support versatile application, for example, they will inform simultaneously on Goals A, B and D and several of their targets.	The necessary sample collections, datasets and their associated standardized data infrastructures and analytical work environments do not exist today. Still, over the coming years, capacity building efforts can focus on providing international concerted progress towards the realization and implementation of such resources and functionality. Efforts towards this goal are already underway in the form of the development of an integrated digital extended data infrastructure with associated work environments by the alliance for biodiversity knowledge under the auspices of GBIF, together with the international collections community, and a wide range of stakeholders. Once developed, these datasets, data management infrastructures and work environments, including reporting modules can be integrated into and directly support national reporting systems. Indicators based on such capacity will be relevant and provide the necessary basis for standardization, comparability and reporting across all scales, from global to national to subnational reporting. The proposed AHTEG on	

	indicators might provide scientific-technical advice and guidance for such capacity building.	
The current indicator exclusively focuses on wildlife trade and would need to be improved to address as well harvest and use. All of those elements are the subject of the target.		Indicator to be proposed
This is an important indicator but the difficulty will be in establishing sustainability (how is this being defined – sustainable off-take?, how is it being measured?). There will be a huge capacity gap in most developing countries to actually measure this with any degree of accuracy.	As mentioned above, the capacity of most countries to measure sustainability of populations is very limited.	
The current target is, in the view of organisations following this issue more closely, too limited to bring about the necessary protection and sustainability of use for the species concerned. The precautionary principle should be imbedded in Target 4, eliminating all commercial exploitation and trade of wildlife unless it is demonstrably sustainable, legal, well managed and presents zero risk to human or animal health, and enhances the livelihoods of Indigenous Peoples and local communities. We suggest to adapt the indicator accordingly.	The current target is, in the view of organisations following this issue more closely, too limited to bring about the necessary protection and sustainability of use for the species concerned. The precautionary principle should be imbedded in Target 4, eliminating all commercial exploitation and trade of wildlife unless it is demonstrably sustainable, legal, well managed and presents zero risk to human or animal health, and enhances the livelihoods of Indigenous Peoples and local communities. We suggest to adapt the indicator accordingly.	
		Being legal does not mean the uses are sustainable. The indicator should stick to the sustainable use focus. The species listed on Appendices of CITES might be monitored through its scheme, but species that are not threatened by international trade are not covered by CITES by definition.
This indicator needs to take into account and respect the rights of customary sustainable use of IPLCs. This could be done by adapting the indicator and developing component indicators, e.g.: 'Trends in the recognition and respect of customary sustainable use requirements and practices in relation to the harvest of wild fauna and flora.' Data sources could be trends monitored by IPLCs and practices reported in LBO reports.		
IPLCs should also define what is legal and safe	Increase capacities at all levels, including of the consumers	
We note that issues of legality, sustainability, and safety must be measured separately, through separate headline indicators. Certain forms of trade may be legal but unsustainable; or there may be sustainable and legal	This target is about all exploitation/use and trade, but 4.0.1 deals with trade only. Not all use results in trade (domestic or international). Therefore, the headline indicator must include both the elimination	

trade that is unsafe from a zoonotic perspective; or there may be forms of trade that are safe but illegal. We therefore recommend a suite of indicators (below) that would encompass the legality, sustainability and safety of exploitation/use and trade in terrestrial, freshwater and marine species.

We also suggest that safe should be defined as: "posing no risk of pathogen spillover to humans, wildlife, or domesticated species and posing no risk of becoming an alien invasive species." "Safe" should not be conflated with "legal" or "sustainable."

Additionally, Target 4 needs to also include headline indicators for flora, because otherwise we will fail across a range of targets (including PA quality targets) because of wholesale degradation of PAs through charcoal harvesting, selective logging of precious timbers, harvest of high value medicinal, ornamental and aromatic plants, and concomitant poaching of wildlife by the harvesters for food.

We recommend three headline indicators for Target 4 (to effectively update/replace 4.0.1 and 4.0.2):
1. One headline indicator that evaluates the elimination of illegal exploitation and trade (both domestic and international). We therefore recommend building on proposed headline indicator 4.0.1, but ensuring that it covers elimination of illegal exploitation and trade in marine species. It can be accompanied by supplementary indicators (such as application of the ICCWC indicator framework) at the complementary level. The headline indicator should not only look at international trade, or trade in species included on the CITES or CMS Appendices, but should include address any and all species for which exploitation and trade is illegal.
2. We recommend a second headline indicator that evaluates whether any trade and use that is legal/allowed is in fact ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments, whilst ensuring this information is used to assess both international and domestic exploitation, use, trade, and consumption. We also recommend that inclusion of species on the CITES or CMS Appendices (or inclusion on Appendix I for either Convention) be used as a complementary indicator of the unsustainability of use and/or trade. The IUCN Red List assessments evaluate the threat of unsustainable trade to species, and can be useful. This information is already available, but a more

of illegal exploitation/use as well as the elimination of illegal trade; in our view, it would be ideal for these elements to be reflected in separate headline indicators, as they are related but measured differently. Furthermore, we stress that any indicator here should encompass both domestic uses (e.g. hunting, fishing, collection of live animals, captive breeding, etc.) as well as any domestic or international trade.

Partied will require assistance with this.

precise methodology for such an indicator can be refined through the AHTEG. 3. We recommend a third headline indicator that evaluates whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We therefore recommend that Parties be asked to report on the adoption of legislation and/or regulations to prohibit commercial trade and markets in live animals, particularly birds and mammals (which are known to present a significant risk to human and animal health, when traded live and marketed live or freshly slaughtered). An indicator could reflect the number or percentage of Parties that are working to close domestic and international commercial trade in live animals, due to the risk of both pathogen spillover and becoming invasive.		
		In order to ensure alignment between the GBF and the Convention text Targets, there is a need to include customary sustainable use [including management and monitoring] in its scope, - in accordance with article 10(c) - recognizing that trade in wild species based on Indigenous customary practice and laws should be respected. In addition, 'active management actions' should explicitly include community-based customary use, management and monitoring.
The current headline indicators for target 4 do not represent the breadth of the topics that need to be included in this target, and it is unclear how the current headline indicator '4.0.1 Proportion of traded wildlife that is legal and safe (not poached, illicitly trafficked, or unsustainable)' would be measured. This will be difficult to measure, even for species under international protection. In addition, "safe" should also comprise use and trade that does not pose a risk to human, animal or ecosystem health. In addition, there are likely to be very few species of 'traded' wildlife for which poaching / illicit trafficking was zero globally, so this indicator would likely consistently be high. We would suggest an alternative headline indicator for illegal wildlife trade: Status and trend of species threatened by (i) illegal wildlife trade, (ii) unsustainable legal trade (iii) indirect take, including bycatch and ship strikes. This indicator could be derived from the IUCN Red List of Threatened Species.	Parties will require assistance to measure this at the national level	

Proposed headline indicators to capture sustainable use of flora: Trends in proportion of area of forest production under sustainable practices: - Area of forest under sustainable management certification - Progress towards sustainable forest management (indicator for SDG target 15.2) Target 4 needs to also include headline indicators for flora, because otherwise we will fail across a range of targets (including PA quality targets) because of wholesale degradation of PAs through charcoal harvesting, selective logging of precious timbers, harvest of high value medicinal, ornamental and aromatic plants, and concomitant poaching of wildlife by the harvesters for food. Finally, it is important to also measure and collect data on customary sustainable use: Trends in customary sustainable use of wild flora and fauna		
Indicator formulation, maintenance, and data availability unclear. Not sure this makes clear that this applies to the wider range of biodiversity – not just iconic species.	Indicator formulation, maintenance, and data availability unclear	
The current target is, in the view of organisations following this issue more closely, too limited to bring about the necessary protection and sustainability of use for the species concerned. The precautionary principle should be imbedded in Target 4, eliminating all commercial exploitation and trade of wildlife unless it is demonstrably sustainable, legal, well managed and presents zero risk to human or animal health, and enhances the livelihoods of Indigenous Peoples and local communities. We suggest to adapt the indicator accordingly.	The current target is, in the view of organisations following this issue more closely, too limited to bring about the necessary protection and sustainability of use for the species concerned. The precautionary principle should be imbedded in Target 4, eliminating all commercial exploitation and trade of wildlife unless it is demonstrably sustainable, legal, well managed and presents zero risk to human or animal health, and enhances the livelihoods of Indigenous Peoples and local communities. We suggest to adapt the indicator accordingly.	
As Fondation Franz Weber and many other organisations pointed out in our joint intervention delivered by WCS in the SBSTTA Contact Group, target 4 as it stands is deeply problematic and reflects a business-as-usual policy. Wildlife trade and exploitation, both legal and illegal, are a significant threat to biodiversity and human health. Even if trade is biologically sustainable and legal, it can still threaten human or animal health. Pathogens are indifferent to sustainability or legality. At a time when we are experiencing the worst pandemic since 1918, it is important that target 4 matches the science and meets the level of threat posed by wildlife trade and exploitation	Overall, more work is needed on the target, which makes it difficult to make monitoring recommendations. It will be important to build on, and improve, the existing indicator "Proportion of traded wildlife that was poached or illicitly trafficked [by species group]" (SDG indicators 15.7.1 and 15.c.1). We note that it is exceedingly difficult to assess the proportion of wildlife in international and domestic trade that was illegally obtained or trafficked, and it is important to factor in enforcement effort when	We recommend three headline indicators for Target 4 (to effectively update/replace headline indicators 4.0.1 and 4.0.2): 1. One headline indicator to evaluate the elimination of illegal exploitation and trade (domestic and international). We recommend building on proposed headline indicator 4.0.1, but ensuring it covers elimination of illegal exploitation and trade in marine species. The HI should not only look at international trade, or trade in species included on the CITES or CMS

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with ambitious language embedding the precautionary principle that aims to eliminate all commercial exploitation and trade of wildlife unless it is demonstrably sustainable, legal, well managed and presents zero risk to human or animal health, and enhances the livelihoods of Indigenous Peoples and local communities.

Legality, sustainability, and safety are currently conflated under draft target 4 and in HI 4.0.1, They must be measured separately, through separate headline indicators. Certain forms of trade may be legal but unsustainable; or there may be sustainable and legal trade that is unsafe from a zoonotic perspective; or there may be forms of trade that are safe but illegal. We therefore recommend a set of indicators (below) that would encompass the legality, sustainability and safety of exploitation/use and trade in terrestrial, freshwater and marine species. [Note: see here for an illustrative table: https://tinyurl.com/28rnts5t]

With regards to "safe" exploitation/use and trade, we strongly recommend inclusion within the framework of the definition our organizations provided in the Contact Group (supported by two Parties), that safe should be defined as: "posing no risk of pathogen spillover to humans, wildlife, or domesticated species and posing no risk of becoming an alien invasive species." "Safe" should not be conflated with "legal" or "sustainable."

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evaluating trade (as increased seizures could be erroneously seen as reflecting increased illegal trade but may rather reflect enhanced enforcement effort).

This indicator must also cover marine species and must also adopt supplementary indicators (such as the ICCWC indicator framework – see below). More work is needed on the issue of eliminating the risk of pathogen spillover or becoming invasive, involving the trade and marketing of live wildlife.

Appendices, but should address any and all species for which exploitation and trade is illegal. Supplementary indicators can be developed at the complementary level including, for example, the degree of implementation of international instruments aiming to combat wildlife and forest crime (e.g. using the ICCWC indicator framework, FATF national risk assessments etc.), or the number of successful prosecutions.

2. A second headline indicator to evaluate whether any trade and use that is legal/allowed is in fact ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments of the conservation status and trends for species that are or may be exploited commercially, ensuring that both international and domestic use, trade and consumption are assessed. We also recommend that inclusion of species in the CITES or CMS Appendices be used as a complementary indicator of the unsustainability of use and/or trade. The IUCN Red List assessments evaluate the threat of unsustainable trade to species and are already available, but it would be helpful to refine more precise methodology for such an indicator through the AHTEG.

3. A third headline indicator to evaluate whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We recommend that Parties report on the adoption of legislation and regulations to prohibit commercial trade and markets in certain taxonomic groups (not species by species), like birds and mammals which are known to present a significant risk to human and animal health when traded live and marketed live or freshly slaughtered. An indicator could reflect the number of Parties that are working to close domestic and international commercial trade in live animals, due to the risk of both pathogen spillover and becoming invasive.

This indicator will only be meaningful/useful if one is confident of getting full data on both the illegal and legal trade. However, by its very nature it is not easy to get full

data on the extent of the illegal trade and as such an indicator linked such a ratio variable (ie. proportion) will not be reliable. We suggest revising this to look at the trend in the shift of the legal trade and the growth on this, while separately also tracking the decline in the illegal trade pattern, as the species involved in one or the other can be quite different. The language could be as follows: 'Trends of legal and illegal trade in wild species of fauna and flora ' It is important to ensure that 'wildlife' definition in this headline indicator is representative of the wild species of fauna and flora in trade, and it may thus be useful to use the same language for the definition of the scope of species as in the Target 4. For the definition of wildlife trade, retain the 'legal, sustainable and safe', not only 'legal and safe' in the headline indicator.		
The current target is too limited to bring about the necessary protection and sustainability of use for the species concerned and risks increasing wildlife trade. The precautionary principle should be embedded in Target 4, eliminating all commercial exploitation and trade of wildlife unless it is demonstrably sustainable, legal, well managed and presents zero risk to human or animal health, and enhances the livelihoods of Indigenous Peoples and local communities		Change 4.0.1 to 'Proportion of traded wildlife that is within ecological boundaries, and does not harm human health.'
This indicator needs to take into account and respect the rights of customary sustainable use of IPLCs. This could be done by adapting the indicator and developing component indicators, e.g.: 'Trends in the recognition and respect of customary sustainable use requirements and practices in relation to harvest of wild fauna and flora.'	Capacity building to take into account and respect the rights of customary sustainable use of IPLCs. This could be done by adapting the indicator and developing component indicators, e.g.: 'Trends in the recognition and respect of customary sustainable use requirements and practices in relation to harvest of wild fauna and flora.'	
More and more evidence indicates that legal wildlife trade may still be unsustainable and challenges biodiversity loss. Animal welfare measures should be included to minimize detrimental impacts to animals and humans		
More work is required to refine the target's indicators, which currently lack true measures of ecological and biological sustainability.Current proposed indicator 4.0.1 focusses on legality, which is not in itself a direct measure of sustainability or safety. The target suggests that if it is not illegal or unsustainable, it is therefore safe, which is not necessarily the case. In addition, "proportion" of traded wildlife that is "legal and safe" is not only very	2. We recommend a second headline indicator that evaluates whether any trade and use that is legal/allowed is in fact ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments, whilst ensuring this information is used to assess both international and domestic exploitation, use, trade, and consumption. We also recommend that inclusion of species on the CITES	

difficult to objectively ascertain, but also fails to account for fluctuations in supply and demand, the effects of which can be dramatic on total volume of trade.

We recommend three headline indicators for Target 4 (to effectively update/replace 4.0.1 and 4.0.2):

1. We recommend one headline indicator that evaluates the elimination of illegal exploitation and trade (both domestic and international). We recommend building on proposed headline indicator 4.0.1, but ensuring that it covers elimination of illegal exploitation and trade in marine species. It can be accompanied by supplementary indicators on trends in the adoption of policies, laws and regulations, as well as measuring the degree of implementation and enforcement efforts through international instruments (such as application of the ICCWC indicator framework) at the complementary level, for all types of wildlife, terrestrial and marine, and not just those species listed under CITES. The headline indicator should not only look at international trade, or trade in species included on the CITES or CMS Appendices, but should address any and all species for which exploitation and trade is illegal.

[continued under next question]

or CMS Appendices (or inclusion on Appendix I for either Convention) be used as a complementary indicator of the unsustainability of use and/or trade. The IUCN Red List assessments evaluate the threat of unsustainable trade to species, and can be useful. This information is already available, but a more precise methodology for such an indicator can be refined through the AHTEG.

3. None of the current proposed indicators for this target address the risks to human health from exploitation and trade. Monitoring measures to ensure "safe" wildlife offtake and trade operations will inevitably fall short of keeping people safe from pathogens. We recommend a third headline indicator that evaluates whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We therefore recommend that Parties be asked to report on the adoption of legislation and/or regulations to prohibit commercial trade and markets in live animals, particularly birds and mammals (which are known to present a significant risk to human and animal health, when traded live and marketed live or freshly slaughtered). An indicator could reflect the number or percentage of Parties that are working to close domestic and international commercial trade in live animals, due to the risk of both pathogen spillover and becoming invasive. An indicator should be added, that aligns with the Tripartite (WHO/OIE/FAO)'s guidance under development, as this guidance is to include a list of wildlife species and conditions under which they could present significant risks of transmitting zoonoses, and guidelines towards mitigating these risks.

As David Shepherd Wildlife Foundation (DSWF) and many other organisations pointed out in our joint intervention delivered by WCS in the SBSTTA Contact Group, target 4 as it stands is deeply problematic and reflects a business-as-usual policy. Wildlife trade and exploitation, both legal and illegal, are a significant threat to biodiversity and human health. Even if trade is biologically sustainable and legal, it can still threaten human or animal health. Pathogens are indifferent to sustainability or legality. At a time when we are experiencing the worst pandemic since 1918, it is

Overall, more work is needed on the target, which makes it difficult to make monitoring recommendations.

It will be important to build on, and improve, the existing indicator "Proportion of traded wildlife that was poached or illicitly trafficked [by species group]" (SDG indicators 15.7.1 and 15.c.1). We note that it is exceedingly difficult to assess the proportion of wildlife in international and domestic trade that was illegally obtained or trafficked, and it

We recommend three headline indicators for Target 4 (to effectively update/replace headline indicators 4.0.1 and 4.0.2):

1. One headline indicator to evaluate the elimination of illegal exploitation and trade (domestic and international). We recommend building on proposed headline indicator 4.0.1, but ensuring it covers elimination of illegal exploitation and trade in marine species. The HI should not only look at international trade, or

important that target 4 matches the science and meets the level of threat posed by wildlife trade and exploitation with ambitious language embedding the precautionary principle that aims to eliminate all commercial exploitation and trade of wildlife unless it is demonstrably sustainable, legal, well managed and presents zero risk to human or animal health, and enhances the livelihoods of Indigenous Peoples and local communities.

Legality, sustainability, and safety are currently conflated under draft target 4 and in HI 4.0.1, They must be measured separately, through separate headline indicators. Certain forms of trade may be legal but unsustainable; or there may be sustainable and legal trade that is unsafe from a zoonotic perspective; or there may be forms of trade that are safe but illegal. We therefore recommend a set of indicators (below) that would encompass the legality, sustainability and safety of exploitation/use and trade in terrestrial, freshwater and marine species. [Note: see here for an illustrative table: https://tinyurl.com/28rnts5t]

With regards to "safe" exploitation/use and trade, we strongly recommend inclusion within the framework of the definition our organizations provided in the Contact Group (supported by two Parties), that safe should be defined as: "posing no risk of pathogen spillover to humans, wildlife, or domesticated species and posing no risk of becoming an alien invasive species." "Safe" should not be conflated with "legal" or "sustainable."

is important to factor in enforcement effort when evaluating trade (as increased seizures could be erroneously seen as reflecting increased illegal trade but may rather reflect enhanced enforcement effort).

This indicator must also cover marine species and must also adopt supplementary indicators (such as the ICCWC indicator framework – see below). More work is needed on the issue of eliminating the risk of pathogen spillover or becoming invasive, involving the trade and marketing of live wildlife.

trade in species included on the CITES or CMS Appendices, but should address any and all species for which exploitation and trade is illegal. Supplementary indicators can be developed at the complementary level including, for example, the degree of implementation of international instruments aiming to combat wildlife and forest crime (e.g. using the ICCWC indicator framework, FATF national risk assessments etc.), or the number of successful prosecutions.

2. A second headline indicator to evaluate whether any trade and use that is legal/allowed is in fact ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments of the conservation status and trends for species that are or may be exploited commercially, ensuring that both international and domestic use, trade and consumption are assessed. We also recommend that inclusion of species in the CITES or CMS Appendices be used as a complementary indicator of the unsustainability of use and/or trade. The IUCN Red List assessments evaluate the threat of unsustainable trade to species and are already available, but it would be helpful to refine more precise methodology for such an indicator through the AHTEG.

3. A third headline indicator to evaluate whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We recommend that Parties report on the adoption of legislation and regulations to prohibit commercial trade and markets in certain taxonomic groups (not species by species), like birds and mammals which are known to present a significant risk to human and animal health when traded live and marketed live or freshly slaughtered. An indicator could reflect the number of Parties that are working to close domestic and international commercial trade in live animals, due to the risk of both pathogen spillover and becoming invasive.

We recommend three headline indicators for Target 4 (to effectively update/replace 4.0.1 and 4.0.2): We recommend one headline indicator that evaluates the elimination of illegal exploitation and trade (both domestic and international). We therefore recommend building on proposed headline indicator 4.0.1, but ensuring that it covers elimination of illegal exploitation and trade in marine species. It can be accompanied by supplementary indicators (such as application of the ICCWC indicator framework) at the complementary level. The headline indicator should not only look at international trade, or trade in species included on the CITES or CMS Appendices, but should include address any and all species for which exploitation and trade is illegal. We recommend a second headline indicator that evaluates whether any trade and use that is legal/allowed is in fact ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments, whilst ensuring this information is used to assess both international and domestic exploitation, use, trade, and consumption. We also recommend that inclusion of species on the CITES or CMS Appendices (or inclusion on Appendix I for either Convention) be used as a complementary indicator of the unsustainability of use and/or trade. The IUCN Red List assessments evaluate the threat of unsustainable trade to species, and can be useful. This information is already available, but a more precise methodology for such an indicator can be refined through the AHTEG. We recommend a third headline indicator that evaluates whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We therefore recommend that Parties be asked to report on the adoption of legislation and/or regulations to prohibit commercial trade and markets in live animals, particularly birds and mammals (which are known to present a significant risk to human and animal health, when traded live and marketed live or freshly slaughtered). An indicator could reflect the number or percentage of Parties that are working to close domestic and international commercial trade in live animals, due to the risk of both pathogen spillover and becoming invasive.		
As we and many other organisations pointed out in our joint intervention delivered by WCS in the SBSTTA Contact Group, target 4 should match the science and	It will be important to build on, and improve, the existing indicator "Proportion of traded wildlife that was poached or illicitly trafficked [by species	We recommend three headline indicators for Target 4 (to effectively update/replace headline indicators 4.0.1 and 4.0.2):

meets the level of threat posed by wildlife trade and exploitation: By 2030, eliminate all commercial exploitation of wildlife (domestic and international) that is not legal and ecologically, biologically, and culturally sustainable or poses any risk to human or animal health; and ensure any remaining trade is effectively regulated, and provides benefits including nutrition, food security, livelihoods, and cultural values to Indigenous Peoples or local communities.

We recommend three headline indicators for Target 4 (to effectively update/replace headline indicators 4.0.1 and 4.0.2):

1. One headline indicator to evaluate the elimination of illegal exploitation and trade (domestic and international). We recommend building on proposed headline indicator 4.0.1, but ensuring it covers elimination of illegal exploitation and trade in marine species. The HI should not only look at international trade, or trade in species included on the CITES or CMS Appendices, but should address any and all species for which exploitation and trade is illegal.

2. A second headline indicator to evaluate whether any trade and use that is legal/allowed is in fact ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments of the conservation status and trends for species that are or may be exploited commercially, ensuring that both international and domestic use, trade and consumption are assessed.

3. A third headline indicator to evaluate whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We recommend that Parties report on the adoption of legislation and regulations to prohibit commercial trade and markets in certain taxonomic groups using as an indicator the number of Parties that are working to close domestic and international commercial trade, farming and markets due to the risk of both pathogen spillover and becoming invasive.

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group]" (SDG indicators 15.7.1 and 15.c.1). Furthermore, this target is about all exploitation/use and trade, but 4.0.1 deals with trade only. Not all use results in trade (domestic or international). Therefore, the headline indicator must include both the elimination of illegal exploitation/use as well as the elimination of illegal trade; and encompass both domestic uses (e.g. wildlife markets, fishing, collection of live animals, farming, captive breeding, etc.) as well as any domestic or international trade. This indicator must also cover marine species and must also adopt supplementary indicators (such as the ICCWC indicator framework – see below). More work is needed on the issue of eliminating the risk of pathogen spillover and on the risk of invasive species.

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1. One headline indicator to evaluate the elimination of illegal exploitation and trade (domestic and international).

2. A second headline indicator to evaluate whether any trade and use that is legal/allowed is in fact ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments of the conservation status and trends for species that are or may be exploited commercially, ensuring that both international and domestic use, trade and consumption are assessed.

3. A third headline indicator to evaluate whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We recommend that Parties report on the adoption of legislation and regulations to prohibit commercial trade and markets in certain taxonomic groups (not species by species), like birds and mammals which are known to present a significant risk to human and animal health when traded live and marketed live or freshly slaughtered. An indicator could reflect the number of Parties that are working to close domestic and international commercial trade in live animals, due to the risk of both pathogen spillover and becoming invasive.

To align the headline indicator more closely with the scope of the target, we propose to add 'traceable' to the headline indicator so that it would read: Proportion of traded wildlife that is legal, traceable and safe (not poached, illicitly trafficked or unsustainable). Traceability of traded goods is an important criterium to ensure sustainable value chains.

Please note that more details will need to be developed on the understanding of 'wildlife' in the context of this indicator and further work will be required to complete a comprehensive and coherent methodology for this headline indicator. Work on the related component and complementary indicators will need also to continue and UNCTAD is ready to contribute.

		Priority focus should be on ensuring sustainability, as it may be interpreted such that the only needed action is to legalize harvest, trade and use that is unsustainable. Further, "illegality" is often used to criminalize customary sustainable use by IPLCs. Could be streamlined with CITES indicators. Suggested inclusion: - Number of Parties adopting policies and action plans on customary sustainable use
We note that issues of legality, sustainability, and safety must be measured separately, through separate headline indicators. Certain forms of trade may be legal but unsustainable; or there may be sustainable and legal trade that is unsafe from a zoonotic perspective; or there may be forms of trade that are safe but illegal. We therefore recommend a suite of indicators (below) that would encompass the legality, sustainability and safety of exploitation/use and trade in terrestrial, freshwater and marine species. [Note: see here for an illustrative table: https://tinyurl.com/28rnts5t] With regards to "safe" exploitation/use and trade, we strongly recommend inclusion within the framework of the definition WCS and many other organizations provided in the SBSTTA Contact Group, and supported by two Parties, that safe should be defined as: "posing no risk of pathogen spillover to humans, wildlife, or domesticated species and posing no risk of becoming an alien invasive species." "Safe" should not be conflated with "legal" or "sustainable." We recommend three headline indicators for Target 4 (to effectively update/replace 4.0.1 and 4.0.2): 1. We recommend one headline indicator that evaluates the elimination of illegal exploitation and trade (both domestic and international). We therefore recommend building on proposed headline indicator 4.0.1, but ensuring that it covers elimination of illegal exploitation and trade in marine species. It can be accompanied by supplementary indicators (such as application of the ICCWC indicator framework) at the complementary level. The headline indicator should not only look at international trade, or trade in species included on the CITES or CMS Appendices, but should include address any and all species for which exploitation and trade is illegal.	It will be important to build on, and improve, the existing indicator "Proportion of traded wildlife that was poached or illicitly trafficked [by species group]" (SDG indicators 15.7.1 and 15.c.1). We note that it is exceedingly difficult to assess the proportion of wildlife in international and domestic trade that was illegally obtained or trafficked, and it is important to factor in enforcement effort when evaluating trade (as increased seizures could be erroneously seen as reflecting increased illegal trade, but may rather reflect enhanced enforcement effort). Furthermore, this target is about all exploitation/use and trade, but 4.0.1 deals with trade only. Not all use results in trade (domestic or international). Therefore, the headline indicator must include both the elimination of illegal exploitation/use as well as the elimination of illegal trade; in our view, it would be ideal for these elements to be reflected in separate headline indicators, as they are related but measured differently. Furthermore, we stress that any indicator here should encompass both domestic uses (e.g. hunting, fishing, collection of live animals, captive breeding, etc.) as well as any domestic or international trade. Furthermore, this indicator must cover marine species and must also adopt supplementary indicators (such as the ICCWC indicator framework – see below). More work is needed on the issue of eliminating the risk of pathogen spillover or becoming invasive, involving the trade and marketing of live wildlife. Overall, more work is needed on the target, which makes it difficult to make monitoring recommendations.	However, there are likely complementary "process" indicators that can be used, e.g. current indicator 4.1.1.1./ 8.1.1.2 (SDG Indicator 14.6.1; UNSD metadata). A similar indicator ("[Degree of implementation of international instruments aiming to combat wildlife and forest crime]") could examine implementation of international instruments to combat wildlife and forest crime (a terrestrial version of SDG indicator 14.6.1 on international instruments on IUU fishing), with support from UNODC and others. Another useful indicator, at the national level, can be successful prosecutions (as a complementary indicator). Furthermore, there are ongoing efforts of both CITES and CMS to look at the suitability of national legislation of Parties, in terms of implementation and enforcement of the provisions of the respective treaty. For CITES in particular, there is a numerical scale evaluating the adequacy of Parties' legislation, which can be used.

2. We recommend a second headline indicator that evaluates whether any trade and use that is legal/allowed is in fact ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments, whilst ensuring this information is used to assess both international and domestic exploitation, use, trade, and consumption. We also recommend that inclusion of species on the CITES or CMS Appendices (or inclusion on Appendix I for either Convention) be used as a complementary indicator of the unsustainability of use and/or trade. The IUCN Red List assessments evaluate the threat of unsustainable trade to species, and can be useful. This information is already available, but a more precise methodology for such an indicator can be refined through the AHTEG. 3. We recommend a third headline indicator that evaluates whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We therefore recommend that Parties be asked to report on the adoption of legislation and/or regulations to prohibit commercial trade and markets in live animals, particularly birds and mammals (which are known to present a significant risk to human and animal health, when traded live and marketed live or freshly slaughtered). An indicator could reflect the number or percentage of Parties that are working to close domestic and international commercial trade in live animals, due to the risk of both pathogen spillover and becoming invasive.		
It should not be about the "proportion" only, as it is impossible to figure out the whole picture of illegal trading. Also production and harvesting stages are not considered by this indicator at all.		
Issues of legality, sustainability, and safety must be measured through separate headline indicators (HI). Certain forms of trade may be legal but unsustainable; or there may be sustainable and legal trade that is unsafe from a zoonotic perspective. We strongly recommend inclusion within the framework of the definition WCS and many other organizations provided in the SBSTTA Contact Group, and supported by two Parties, that "safe" should be defined as: "posing no risk of pathogen spillover to humans, wildlife, or domesticated species and posing no risk of becoming an alien invasive species." "Safe" should not be conflated with "legal" or "sustainable."	It will be important to improve the existing indicator "Proportion of traded wildlife that was poached or illicitly trafficked [by species group]". It is exceedingly difficult to assess the proportion of wildlife in international and domestic trade that was illegally obtained or trafficked, and it is important to factor in enforcement effort when evaluating trade. This target is about all exploitation/use and trade, but 4.0.1 deals with trade only. Not all use results in trade (domestic or international). The HI must include the elimination of illegal exploitation/use as well as the elimination of illegal trade; it would be ideal for these elements to be reflected in separate HIs as they are related but measured differently.	There are likely complementary "process" indicators that can be used, e.g. current indicator 4.1.1.1./ 8.1.1.2. A similar indicator ("[Degree of implementation of international instruments aiming to combat wildlife and forest crime]") could examine implementation of international instruments to combat wildlife and forest crime (a terrestrial version of SDG indicator 14.6.1 on international instruments on IUU fishing), with support from UNODC and others. Another useful complementary indicator can be successful prosecutions. There are ongoing efforts of both CITES and CMS to look at the suitability of national legislation of Parties, in terms of implementation and

We recommend three headline indicators: We recommend one HI that evaluates the elimination of illegal exploitation and trade (both domestic and international) that builds on proposed HI 4.0.1 to ensure that it covers elimination of illegal exploitation and trade in marine species. The HI should not only look at international trade, or trade in species included on the CITES or CMS Appendices, but should address all species for which exploitation and trade is illegal. We recommend a second HI that evaluates whether any trade and use that is legal/allowed is ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments, whilst ensuring this information is used to assess both international and domestic exploitation, use, trade, and consumption. We also recommend that inclusion of species on the CITES or CMS Appendices be used as a complementary indicator of the unsustainability of use and/or trade. We recommend a third HI that evaluates whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We therefore recommend that Parties be asked to report on the adoption of legislation and/or regulations to prohibit commercial trade and markets in live animals, particularly birds and mammals. An indicator could reflect the number or percentage of Parties that are working to close domestic and international commercial trade in live animals.	Any indicator here should encompass both domestic uses as well as any domestic or international trade. This indicator must cover marine species and must also adopt supplementary indicators (such as the ICCWC indicator framework). More work is needed on the issue of eliminating the risk of pathogen spillover or becoming invasive, involving the trade and marketing of live wildlife. Overall, more work is needed on the target, which makes it difficult to make monitoring recommendations.	enforcement of the respective treaty. For CITES in particular, there is a numerical scale evaluating the adequacy of Parties' legislation, which can be used.

4.0.2 Proportion of fish stocks within biologically sustainable level

4.0.2 If you selected "yes, however requires further work", please describe:	4.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	4.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
Proposal: "Proportion of fish stocks legal and within biologically sustainable level"	See above	

I believe many harvested fish stocks are still not adequately assessed thus, the information base that this indicator depends on, needs further investment.	I believe many harvested fish stocks are still not adequately assessed thus, the information base that this indicator depends on, needs further investment.	
	What about countries allowing other countries doing industrial fishing in their waters? Those countries would score poorly while a country benefiting from such agreements and harming fish stocks would have a good score.	
	Determination of sustainable levels for all species would require substantial research.	I think the indicator should read "fish catch" or "fish harvest" for it to make sense.
Operational definition and guidelines for "biologically sustainable level" especially this is technically area-specific.	Operational definition and guidelines for "biologically sustainable level" especially this is technically area-specific.	
Sustainability of fish stocks is a narrow measure of sustainability overall. Bycatch of threatened species for example is not included in this measure. Need to include ecosystem-based fisheries management in this indicator to reflect the benefits provided to communities from avenues such as tourism.	Most Pacific Island countries do not have any ongoing monitoring of reef fish stocks either through direct (fish surveys) or indirect methods (e.g. Creel surveys)	
SDG indicator 14.4.1. Capacity building in stock assessment is needed to improve the coverage and the quality of the assessments in the developing world	see above	
		With regards to the substance of this indicator, see comments on 4.0.1. It is important that fisheries are both sustainable and legal. This indicator gives the erroneous impression that for fisheries, only biological sustainability matters. However, illegal fisheries undermine biodiversity conservation and sustainable development, and both factors must be addressed. Furthermore, the sustainability of fisheries must include the sustainability of the target species as well as any impacts on non-target species that are taken in the same fishery.
Use of 'proportion' will be problematic, as it is dependent on high confidence levels about both sustainable and unsustainable levels of stocks. It is also solely focused on fisheries, and as such it will not enable measuring the overall progress of the target. A more general headline indicator would be: 'Population/conservation status trends of wild species of fauna and flora in use and trade.'		

This could link to the Biodiversity for Food and Medicine indicator, methodology for which is set-up, linking to the Red List Index and the Accessibility Index https://www.traffic.org/site/assets/files/7300/biodiversity-for-food-and-medicine-english.pdf		
		Fisheries are by far the activity posing the largest threat to the marine environment according to the IPBES report; it is important to recognise, alongside the a measure of sustainability of fish stocks, the impact fisheries are having on non-target species. We suggest consideration is given to the addition of i. Red List Index (impacts of fisheries) which shows changes in extinction risk of marine species driven by fisheries impacts (including positive trends resulting from more sustainable practices; note that trends driven by non-fisheries factors are excluded) and, ii. Living Planet Index (trends in target and bycatch species), which shows trends in population abundance of target and bycatch species (though these may be driven by factors other than fisheries).
This indicator is only reliable as a measure of sustainability if those limits/quotas have been set sustainably and are enforced to commensurate conservation outcomes ensue for target populations. Moreover, illegal, unreported, and unregulated fishing activities undermine measures, such as setting quotas.		There seems to be some overlap between target 3, 4, and 8 regarding active and sustainable management, while also ensuring legal and sustainable harvesting. Indicator 4.0.2 is also stated under target 8. However, given that bycatch is part of sustainable harvest, not mentioned under target 4, we recommend re-evaluating targets 3, 4, and 8 to avoid duplications, overlaps or inconsistencies. We also propose to focus on trends in people finding alternative ways of income or people finding alternative uses of wildlife products.
It is vital that this work is carried out with fisherfolk and others with relevant cultural and traditional knowledge	so long as the work is carried out in close collaboration with fisherfolk and others with relevant cultural and traditional knowledge	
The challenge is getting the data which is reliable and accurate		
		With regards to the substance of this indicator, see comments on 4.0.1.

It is important that fisheries are both sustainable and legal. This indicator gives the |

		erroneous impression that for fisheries, only biological sustainability matters. However, illegal fisheries undermine biodiversity conservation and sustainable development, and both factors must be addressed. Furthermore, the sustainability of fisheries must include the sustainability of the target species as well as any impacts on non-target species that are taken in the same fishery.
		With regards to the substance of this indicator, see comments on 4.0.1. It is important that fisheries are both sustainable and legal. This indicator gives the erroneous impression that for fisheries, only biological sustainability matters. However, illegal fisheries undermine biodiversity conservation and sustainable development, and both factors must be addressed. Furthermore, the sustainability of fisheries must include the sustainability of the target species as well as any impacts on non-target species that are taken in the same fishery.

We recommend three headline indicators for Target 4 (to effectively update/replace 4.0.1 and 4.0.2):

We recommend one headline indicator that evaluates the elimination of illegal exploitation and trade (both domestic and international). We therefore recommend building on proposed headline indicator 4.0.1, but ensuring that it covers elimination of illegal exploitation and trade in marine species. It can be accompanied by supplementary indicators (such as application of the ICCWC indicator framework) at the complementary level. The headline indicator should not only look at international trade, or trade in species included on the CITES or CMS Appendices, but should include address any and all species for which exploitation and trade is illegal.

We recommend a second headline indicator that evaluates whether any trade and use that is legal/allowed is in fact ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments, whilst |

| | | ensuring this information is used to assess both international and domestic exploitation, use, trade, and consumption. We also recommend that inclusion of species on the CITES or CMS Appendices (or inclusion on Appendix I for either Convention) be used as a complementary indicator of the unsustainability of use and/or trade. The IUCN Red List assessments evaluate the threat of unsustainable trade to species, and can be useful. This information is already available, but a more precise methodology for such an indicator can be refined through the AHTEG.

We recommend a third headline indicator that evaluates whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We therefore recommend that Parties be asked to report on the adoption of legislation and/or regulations to prohibit commercial trade and markets in live animals, particularly birds and mammals (which are known to present a significant risk to human and animal health, when traded live and marketed live or freshly slaughtered). An indicator could reflect the number or percentage of Parties that are working to close domestic and international commercial trade in live animals, due to the risk of both pathogen spillover and becoming invasive. |
| | | With regards to the substance of this indicator, see comments on 4.0.1. It is important that fisheries are both sustainable and legal. That said, we recommend three headline indicators for Target 4 (to effectively update/replace 4.0.1 and 4.0.2):

1. A headline indicator building on proposed headline indicator 4.0.1, but ensuring that it covers elimination of illegal exploitation and trade in marine species.
2. A second headline indicator that evaluates whether any trade and use that is legal/allowed is in fact ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments, whilst ensuring this information is used to assess both international and domestic |

		exploitation, use, trade, and consumption. 3. A third headline indicator that evaluates whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We therefore recommend that Parties be asked to report on the adoption of legislation and/or regulations to prohibit commercial trade and markets in live animals, particularly birds and mammals (which are known to present a significant risk to human and animal health, when traded live and marketed live or freshly slaughtered). An indicator could reflect the number or percentage of Parties that are working to close domestic and international commercial trade in live animals, due to the risk of both pathogen spillover and becoming invasive.
Most if not all the stocks/fisheries for which we can measure biologically sustainable levels (SDG indicator 14.4.1) are those fisheries that are regularly assessed and managed (about 500 stocks). There are another 10,000+ fisheries that have no stock assessment or data, and none of these will be able to be measured under any of the indicators proposed. However, in terms of species impacted and people dependent on fisheries, these 10,000+ fisheries are much more important. An indicator for small scale, data limited fisheries is needed, or at least a proxy. A proxy could be 'Presence of a process/regulation to improve data collection, apply data limited stock assessment and development of harvest strategies'		We recommend including the new Living Planet Index for Migratory Freshwater Fish to cover diadromous fish. https://www.worldfishmigrationfoundation.com/living-planet-index-2020
Should include other aquatic species (marine and freshwater): invertebrates (like shellfish), birds, reptiles, and mammals	Should include other aquatic species (marine and freshwater): invertebrates (like shellfish), birds, reptiles, and mammals	Should include other aquatic species (marine and freshwater): invertebrates (like shellfish), birds, reptiles, and mammals
		With regards to the substance of this indicator, see comments on 4.0.1. It is important that fisheries are both sustainable and legal. This indicator gives the erroneous impression that for fisheries, only biological sustainability matters. However, illegal fisheries undermine biodiversity conservation and sustainable development, and both factors must be addressed. Furthermore, the sustainability of fisheries must include the sustainability of the target species as well as any impacts on non-target species that are taken in the same

fishery.

We recommend three headline indicators for Target 4 (to effectively update/replace 4.0.1 and 4.0.2):

1. We recommend one headline indicator that evaluates the elimination of illegal exploitation and trade (both domestic and international). We therefore recommend building on proposed headline indicator 4.0.1, but ensuring that it covers elimination of illegal exploitation and trade in marine species. It can be accompanied by supplementary indicators (such as application of the ICCWC indicator framework) at the complementary level. The headline indicator should not only look at international trade, or trade in species included on the CITES or CMS Appendices, but should include address any and all species for which exploitation and trade is illegal.

2. We recommend a second headline indicator that evaluates whether any trade and use that is legal/allowed is in fact ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments, whilst ensuring this information is used to assess both international and domestic exploitation, use, trade, and consumption. We also recommend that inclusion of species on the CITES or CMS Appendices (or inclusion on Appendix I for either Convention) be used as a complementary indicator of the unsustainability of use and/or trade. The IUCN Red List assessments evaluate the threat of unsustainable trade to species, and can be useful. This information is already available, but a more precise methodology for such an indicator can be refined through the AHTEG.

3. We recommend a third headline indicator that evaluates whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We therefore recommend that Parties be asked to report on the adoption of legislation and/or regulations to prohibit commercial trade and markets in live animals, particularly birds and mammals (which are known to present a significant risk to human

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		and animal health, when traded live and marketed live or freshly slaughtered). An indicator could reflect the number or percentage of Parties that are working to close domestic and international commercial trade in live animals, due to the risk of both pathogen spillover and becoming invasive.
This indicator is very unclear. Why only "fish stocks"?		
		With regards to the substance of this indicator, see comments on 4.0.1. It is important that fisheries are both sustainable and legal. This indicator gives the erroneous impression that for fisheries, only biological sustainability matters. However, illegal fisheries undermine biodiversity conservation and sustainable development, and both factors must be addressed. Furthermore, the sustainability of fisheries must include the sustainability of the target species as well as any impacts on non-target species that are taken in the same fishery. We recommend three headline indicators for Target 4 (to effectively update/replace 4.0.1 and 4.0.2): 1. We recommend one headline indicator that evaluates the elimination of illegal exploitation and trade (both domestic and international). We therefore recommend building on proposed headline indicator 4.0.1, but ensuring that it covers elimination of illegal exploitation and trade in marine species. It can be accompanied by supplementary indicators (such as application of the ICCWC indicator framework) at the complementary level. The headline indicator should not only look at international trade, or trade in species included on the CITES or CMS Appendices, but should include address any and all species for which exploitation and trade is illegal. 2. We recommend a second headline indicator that evaluates whether any trade and use that is legal/allowed is in fact ecologically sustainable. To measure this, we recommend using the IUCN Red List assessments, whilst

		ensuring this information is used to assess both international and domestic exploitation, use, trade, and consumption. We also recommend that inclusion of species on the CITES or CMS Appendices (or inclusion on Appendix I for either Convention) be used as a complementary indicator of the unsustainability of use and/or trade. The IUCN Red List assessments evaluate the threat of unsustainable trade to species, and can be useful. This information is already available, but a more precise methodology for such an indicator can be refined through the AHTEG. 3. We recommend a third headline indicator that evaluates whether commercial exploitation and trade (domestic and international) that presents a risk to human or animal health is being eliminated. We therefore recommend that Parties be asked to report on the adoption of legislation and/or regulations to prohibit commercial trade and markets in live animals, particularly birds and mammals (which are known to present a significant risk to human and animal health, when traded live and marketed live or freshly slaughtered). An indicator could reflect the number or percentage of Parties that are working to close domestic and international commercial trade in live animals, due to the risk of both pathogen spillover and becoming invasive.

Target 5. By 2030, manage, and where possible control, pathways for the introduction of invasive alien species, achieving [50%] reduction in the rate of new introductions, and control or eradicate invasive alien species to eliminate or reduce their impacts, including in at least [50%] of priority sites

5.0.1 Rate of invasive alien species spread

5.0.1 If you selected "yes, however requires further work", please describe:	**5.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**5.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
The indicator can be disaggregated to mountain relevant scales. Indicator should include alien species as well as native species that have modified their distribution as a direct response to anthropogenic drivers ("range-expanding species"), e.g., number of alien/range-expanding species and its ratio to total species diversity by taxa. Invasive alien species' rapid spread under		

favourable climatic conditions calls for focused monitoring in mountains. The new IUCN Environmental Impact Classification for Alien Taxa (EICAT) system offers a useful framework to assess invasion risk.		
The indicator is generally meaningful, but in some cases could lead to forceful eradication of alien species that lead to other types of ecosystem destruction. E.g. gene drives leading to the extinction of alien species could escape and lead to world-wide extinction of such species, including in areas where they are NOT alien. We should avoid that the wish to get "good marks" on an indicator actually leads to negative impacts.		
		Rate of implemented action plan to control invasive alien species; and also we could add another Indicator, such as: "proportion of alien species already introduced in comparison to the national native species richness."
Yes, however, significant additional investments in the underpinning data are needed to ensure accurate results.	Yes, however, significant additional investments in the underpinning data are needed to ensure accurate results.	Not sure if this is the same indicator as proposed by Melodie McGeoch but indicators led by her team should be considered.
Measuring the spread rate of IAS is important, but preventing IAS introduction in the first place should be a priority as it is far more cost-effective than attempting to eradicate IAS once they become established. We suggest the inclusion of an indicator that captures measures in place to prevent IAS introduction.		
This indicator requires increased numbers of taxonomic experts, who are able to rapidly recognize those species so that measures can be taken and enforced.		
As we are living in an area of rapid climate change, species distribution is also changing rapidly. The indicator cannot distinguish between a natural change of species composition and one that is introduced by men.	The indicator needs to be less ambiguous. Which impacts for whom and on what needs to be clearly defined and agreed. Needs objective assessment of which aliens are really harmful and which are inevitable with climate change etc.	
Phasing out introduction of invasive alien species with a timeline of halting introduction of such species		
		The pathways to control cannot be known until the problems of invasive species are recognized, so that part of the target need revision or elimination. Similarly, introductions are hard to monitor. The target should be on the establishment of known invasive alien species, while monitoring all alien species

		newly found in the area of interest. The target for preventing the establishment of invasive alien species should be 100%.
Be more specific about the decreasing of alien species spreading	more specificity about the decreasing of alien species spreading	
it requires to include the GMOs		
Measuring invasive alien species spread is at best only achievable at the site level or international level through occurrence data. The data to accurately support this is not available.		Pacific countries are not in a position to be able to monitor all invasive alien species spread within their countries. I don't know of any country that has managed to achieve this internationally. In the Pacific State of the Environment Reporting we use "% of priority invasive species eradicated from defined areas or under formal management" to indicate the effectiveness of invasive species eradication and management programs, with the desired outcome of "All or positive trend in the number of priority species under management or eradicated".
As "Trends in the numbers of invasive alien species introduction events" (https://www.bipindicators.net/indicators/trends-in-numbers-of-invasive-alien-species-introduction-events)	see above	SDG indicator 15.8.1 "Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species"(https://www.bipindicators.net/indicators/adoption-of-national-legislation-relevant-to-the-prevention-or-control-of-invasive-alien-species)
In terms of pathways, it is important to understand the potential routes into and within a country, as well as the degree to which each pathway is responsible for spreading organisms.		Change 5.0.1 to 'rate of introduction of new unregulated species.'
Again it is vital to properly consult with IPLCs, women, peasant farmers etc.		
Further animal welfare concerns should be included in controlling and eradicating invasive alien species. In addition, alien species sometimes are commercialized as pets and thus poses further threat to biodiversity loss, health and animal weflare.	THe booming trade of global exotic pets is believed to be one driver for invasive alien species. There is a need to address problems related to legal wildlife trade for exotic pets.	
Measuring the spread rate of IAS is important, but preventing IAS introduction in the first place should be a priority as it is far more cost-effective than attempting to		

eradicate IAS once they become established. We suggest the inclusion of an indicator that captures measures in place to prevent IAS introduction.		
Percentages need to vary by jurisdiction or habitat	Percentages need to vary by jurisdiction or habitat	Percentages need to vary by jurisdiction or habitat
		As the way the two indicators are drafting (5.01 and 5.02), they do not seem to measure the Target. For this purpose it would necessary to include elements of management and control of invasive alien species. For reference under the Convention on Wetlands Strategic Plan Target 4 states: "Invasive alien species and pathways of introduction and expansion are identified and prioritized, priority invasive alien species are controlled or eradicated, and management responses are prepared and implemented to prevent their introduction and establishment". Contracting Parties report on this Target through their National Reports so this Target and indicator (e.g proportion of countries controlling through management actions invasive species of high risk to wetland ecosystems) could be used as a headline indicator.

5.0.2 Rate of invasive alien species impact

5.0.2 If you selected "yes, however requires further work", please describe:	5.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	5.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
Require futher detailed on wich environmental impact is related to	There is a lack of specific definition of the environmental impacts to which this indicator refers.	Rate of invasive alien species impact on national ecosystems and biodiversity
Will likely require additional investments to ensure spatially accurate results.	Will likely require additional investments to ensure spatially accurate results.	
How would we measure this impact?		

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It may be more useful to measure positive outcomes from actions, for example to have an indicator that measures the number of successful IAS eradication programmes and restored ecosystems as a result. The current framing of the indicator is all about passive observation, but not an indicator of the impact of actions, which would help to motivate more action and more resources in that direction.		
The indicator needs to be less ambiguous. Which impacts for whom and on what needs to be clearly defined and agreed. Needs objective assessment of which aliens are really harmful and which are inevitable with climate change etc.		
Gender disaggregated indicator		
		Not clear how the rate of impact can be measured.
should be defined inpact on ecosystems, biodiversity and gendered livelihoods		
Measuring the rate of invasive alien species impacts is most likely unachievable outside of a small study site.		Measuring the rate of invasive alien species impacts is most likely unachievable outside of a small study site. Pacific countries are not in a position to be able to monitor all invasive alien species impacts within their countries. I don't know of any country that has managed to achieve this internationally. In the Pacific State of the Environment Reporting we use "Number of priority sites with multi-taxa management programmes" to indicate the effectiveness of invasive species management in protecting ecologically valuable sites/protected areas", with the desired outcome of "All sites or positive trend in the number of priority sites are managed".
Rate of impact is not a suitable identifier - impact is highly context dependent (invasive species, ecosystem invaded). Rather degree of impact or severity of impact.		
Supportive of the approach, drawing from the Environmental Impact Classification for Alien Taxa (https://www.iucn.org/theme/species/our-work/invasive-species/eicat), but indicator would need conceptualisation, development, and maintenance, and	see above	

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"Rate" of impact seems a difficult variable to measure and compare		
More work needs to be done to determine how Parties would measure "the rate of…impact". It would also be clearer and more informative to measure the "rate and extent of…impact".		
Reword as Red List Index (impact of invasive alien species) which shows trends in extinction risk of species driven by the impacts of invasive aliens, including reductions in threats from successful control or eradication of invasive aliens.	Reword as Red List Index (impact of invasive alien species) which shows trends in extinction risk of species driven by the impacts of invasive aliens, including reductions in threats from successful control or eradication of invasive aliens.	
This indicator measures rate of impact, which is not measurable as such. Moreover, this indicator should align with 5.0.1.		Change 5.0.2 to: 'Number of invasive species that have major impacts and extent of area that suffers major impacts from invasions' and 'Level of success in managing invasions.'
Preventing is a far more cost-effective than attempting to eradicate alien species once they become established. See ongoing IPBES Assessment on Invasive Alien Species. The current component of the target does not include any reference to the humane management of invasive species management. Dubois et al., (2017) set out seven principles for ethical wildlife control, which should be considered when establishing measures for managing invasive species (https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/cobi.12896) . For 5.0.2, use standard Environmental Impact Classification of Alien taxa that scores the damaging impacts of invasive species, since measuring the reduction in number of invasive species in and of itself is not necessarily a reflection of a reduction in impact on biodiversity.		
The IAS impact will be beyond 2030; hence it is not possible to establish a timeframe. It may be more useful to measure positive outcomes from actions, for example to have an indicator that measures the number of successful IAS eradication programmes and restored ecosystems as a result. The current framing of the indicator is all about passive observation, but not an indicator of the impact of actions, which would help to motivate more action and more resources in that direction.		

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More work needs to be done to determine how Parties would measure "the rate of…impact". It would also be clearer and more informative to measure the "rate and extent of…impact".		
Will require sufficient impact data for global comparability	Will require sufficient impact data for global comparability	
		Rate of impact is only relevant if impact is defined and impact endpoints are specified
Not currently available		

Target 6. By 2030, reduce pollution from all sources, including reducing excess nutrients [by x%], biocides [by x%], plastic waste [by x%] to levels that are not harmful to biodiversity and ecosystem functions and human health

6.0.1 Proportion of water with good ambient water quality (freshwater and marine)

6.0.1 If you selected "yes, however requires further work", please describe:	6.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	6.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
It is not only waters that are affected, but also the soil and with that, many ecosystems. Pollution needs to be brought to levels that are not harmful to biodiversity and ecosystem functions and human health. Also, there is so far no indicator on nutrients. The critical loads concept is a good concept to measure this, as it looks at the soil from its capacity to buffer/store/take up and use these pollutants (such as natural or artificial fertilizers). We therefore propose to split this indicator, or to add an additional indicator 6.0.5 Proportion of land at or below critical loads levels (N/P)		
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
		NASA has been producing some interesting indicators for measuring water quality based on remotely sensed data. Do not know enough to

		determine if this is a replacement or enhancement from what is proposed.
This is the most important indicator for target 6, as it looks at the issue from the perspective of the ecosystem and not at the output of certain product types. However, it is not only waters that are affected, but also the soil and with that, many ecosystems. Pollution needs to be brought to levels that are not harmful to biodiversity and ecosystem functions and human health. Also, there is so far no indicator on nutrients. The critical loads concept is a good concept to measure this, as it looks at the soil from its capacity to buffer/store/take up and use these pollutants (such as natural or artificial fertilizers). We therefore propose to split this indicator, or to add an additional indicator 6.0.5 Proportion of land at or below critical loads levels (N/P)	This is the most important indicator for target 6, as it looks at the issue from the perspective of the ecosystem and not at the output of certain product types. However, it is not only waters that are affected, but also the soil and with that, many ecosystems. Pollution needs to be brought to levels that are not harmful to biodiversity and ecosystem functions and human health. Also, there is so far no indicator on nutrients. The critical loads concept is a good concept to measure this, as it looks at the soil from its capacity to buffer/store/take up and use these pollutants (such as natural or artificial fertilizers). We therefore propose to split this indicator, or to add an additional indicator 6.0.5 Proportion of land at or below critical loads levels (N/P)	
Need a clear definition of "good." Certain pollutants, such as biocides/chemicals, should have global target level on absolute scales. For others, such as BOD, targets should be specified by types of systems.		The % targets should be the operationalization of "levels that are not harmful to biodiversity and ecosystem functions and human health." To make the target simple and robust, % target should be moved from the target statement to an accompanying table. Rather than monitoring the inputs (as the current target statement may imply), the state of pollution should be monitored (e.g., BOD at specified locations, regularly monitored). That will be much simpler and relevant to biodiversity conservation objective. The indicator is okay (with further work), but the target should be rewritten to refer to the state.
i9nclude a right-based approach in terms of access to certain proportion of healthy water	if conbined with right-based approach	
Agree that this indicator would be useful but it would require more work to have baseline data available for all Pacific island countries. At the moment very few Pacific islands countries have this data.	As indicated above there is a need for more baseline for the Pacific island countries to make this data a useful data. Relevant Pacific Islands indicators: Lagoon water quality (Enterococci levels) and Freshwater quality (E. coli levels). Pacific Island countries frequently don't have adequate laboratory facilities or frequent testing regimes.	

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The headline indicators don't address noise, nutrients - if indeed we are looking at all sources.	Parties may require assistance to measure this at the national level	
Relationship to SDG indicator 6.3.2 needs clarification if they are intended to be the same, then would support this as "yes"	see above	
This is the most important indicator for target 6, as it looks at the issue from the perspective of the ecosystem and not at the output of certain product types. However, it is not only waters that are affected, but also the soil and with that, many ecosystems. Pollution needs to be brought to levels that are not harmful to biodiversity and ecosystem functions and human health. Also, there is so far no indicator on nutrients. The critical loads concept is a good concept to measure this, as it looks at the soil from its capacity to buffer/store/take up and use these pollutants (such as natural or artificial fertilizers). We therefore propose to split this indicator, or to add an additional indicator 6.0.5 Proportion of land at or below critical loads levels (N/P)	This is the most important indicator for target 6, as it looks at the issue from the perspective of the ecosystem and not at the output of certain product types. However, it is not only waters that are affected, but also the soil and with that, many ecosystems. Pollution needs to be brought to levels that are not harmful to biodiversity and ecosystem functions and human health. Also, there is so far no indicator on nutrients. The critical loads concept is a good concept to measure this, as it looks at the soil from its capacity to buffer/store/take up and use these pollutants (such as natural or artificial fertilizers). We therefore propose to split this indicator, or to add an additional indicator 6.0.5 Proportion of land at or below critical loads levels (N/P)	
Indicator should look not only at quality of waters, but also the soil and other ecosystems. There should also be an indicator on nutrients. The critical loads concept is a good concept to measure nutrients in the soil. Propose additional indicator 6.0.5 Proportion of land at or below critical loads levels (N/P).	See comment above	
This indicator is not currently available.	As the indicator is not currently available it is difficult to make a judgement on the needs for capacity development and other work.	
Pollution does not only affect waters, but also the soil and with that, many ecosystems. In addition, we notice an overlap with headline indicators 10.0.1 Population living in areas with clean air and clean and accessible water*. While air is not mentioned under target 6, it is mentioned under 10.1. Regulation of air quality.		We propose merging headline indicators 6.01 and 10.0.1 under target 6, as well as adding following headline indicators: 6.0.x "Proportion of air with good ambient air quality" 6.0.x "Proportion of soil with good ambient soil quality"
IPLCs etc must be included in assessing this, contributing their traditional and cultural knowledge	on above conditions	
Need to define good ambient water quality and this may be not applicable or practical in certain jurisdictions		

Indicator should look not only at quality of waters, but also the soil and other ecosystems. There should also be an indicator on nutrients. The critical loads concept is a good concept to measure nutrients in the soil. Propose additional indicator 6.0.5 Proportion of land at or below critical loads levels (N/P)	See comment above.	
We note that in the context of the SDGs, the headline indicator "Proportion of bodies of water with good ambient water quality" (SDG Indicator 6.3.2; https://www.sdg6monitoring.org/indicator-632/) relies on an index of five core parameter groups: oxygen, salinity, nitrogen, phosphorus, and acidification. While all are import components to measure when determining ambient water quality, these five parameters – together with the other two suggested headline indicators for Target 6 – do not represent an exhaustive list of all major pollutants that adversely affect freshwater and marine environments. Underwater noise pollution in particular is not currently covered by any of the headline indicators. The Draft CBD Technical Series Report on Anthropogenic Underwater Noise (CBD/SBSTTA/24/INF/5) states that "Anthropogenic noise has gained recognition as a major global pollutant and an important stressor for marine life and acknowledged as an issue that must be addressed", and we note several Parties have recommended that underwater noise be addressed in Target 6. We recommend either amending this headline indicator or including a new headline indicator to specifically measure reductions in anthropogenic energy including underwater noise and light pollution to levels that do not adversely affect the environment with respect to ecosystem function and biodiversity or human health. Reporting on levels of underwater noise pollution could follow approaches taken by the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) and the European Union (https://www.ospar.org/documents?v=33031; https://publications.jrc.ec.europa.eu/repository/handle/JRC88045).	The scientific community has given increasing attention to the issue of anthropogenic underwater noise and its impacts on biodiversity, however identifying baselines and measuring changes in levels of underwater noise will require technical and financial support. Research has been conducted in this regard at the sub-national, national, and regional levels (see references to the OSPAR Convention and CBD Draft Technical Series Report in response above) that may be useful for informing future research, capacity-building, and other relevant work.	
We note that in the context of the SDGs, the headline indicator "Proportion of bodies of water with good ambient water quality" (SDG Indicator 6.3.2) relies on an index of five core parameter groups: oxygen, salinity, nitrogen, phosphorus, and acidification. While all are import components to measure when determining ambient water quality, these five parameters – together with the other	The scientific community has given increasing attention to the issue of anthropogenic underwater noise and its impacts on biodiversity. Research has been conducted in this regard at the sub-national, national, and regional levels (see references to the OSPAR Convention and CBD	

two suggested headline indicators for Target 6 – do not represent an exhaustive list of all major pollutants that adversely affect freshwater and marine environments. Underwater noise pollution in particular is not currently covered. We recommend either amending this headline indicator or including a new headline indicator to specifically measure reductions in anthropogenic energy including underwater noise and light pollution . Reporting on levels of underwater noise pollution could follow approaches taken by the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) and the European Union (https://www.ospar.org/documents?v=33031; https://publications.jrc.ec.europa.eu/repository/handle/JRC88045).	Draft Technical Series Report in response above) that can be used.	
Recommend amendment to this target by noting "Proportion of water (area and length) with good ambient water quality (freshwater and marine)". This better represents the ecological and hydrologic boundaries that impact water quality for species and habitats and ecosystem services delivered.	Improved units to note "proportion of water" should include additional methodologies more conducive to freshwater- connectivity, and flow.	
		the suggested indicator is not about biodiversity. Also, this target itself is required to be considered well. It is too early to mention the exact name of the indicator at this stage.
We note that in the context of the SDGs, the headline indicator "Proportion of bodies of water with good ambient water quality" (SDG Indicator 6.3.2; https://www.sdg6monitoring.org/indicator-632/) relies on an index of five core parameter groups: oxygen, salinity, nitrogen, phosphorus, and acidification. While all are import components to measure when determining ambient water quality, these five parameters – together with the other two suggested headline indicators for Target 6 – do not represent an exhaustive list of all major pollutants that adversely affect freshwater and marine environments. Underwater noise pollution in particular is not currently covered by any of the headline indicators. The Draft CBD Technical Series Report on Anthropogenic Underwater Noise (CBD/SBSTTA/24/INF/5) states that "Anthropogenic noise has gained recognition as a major global pollutant and an important stressor for marine life and acknowledged as an issue that must be addressed", and we note several Parties have recommended that underwater noise be addressed in Target 6. We recommend either amending this headline indicator or including a new headline indicator to specifically measure	The scientific community has given increasing attention to the issue of anthropogenic underwater noise and its impacts on biodiversity, however identifying baselines and measuring changes in levels of underwater noise will require technical and financial support. Research has been conducted in this regard at the sub-national, national, and regional levels (see references to the OSPAR Convention and CBD Draft Technical Series Report in response above) that may be useful for informing future research, capacity-building, and other relevant work.	

reductions in anthropogenic energy including underwater noise and light pollution to levels that do not adversely affect the environment with respect to ecosystem function and biodiversity or human health. Reporting on levels of underwater noise pollution could follow approaches taken by the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) and the European Union (https://www.ospar.org/documents?v=33031; https://publications.jrc.ec.europa.eu/repository/handle/JRC88045).

6.0.2 Plastic debris density

6.0.2 If you selected "yes, however requires further work", please describe:	6.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	6.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
Proposal : "Plastic debris quantity and density"	See above	
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
	Will require reasonable data coverage to ensure spatially accurate results across countries.	
	We need to define what we mean by plastic. Some industries would may see this indicator as harming their profitability. The most vulnerable countries might have difficulties in tracking the data for such indicator and consequently, some industries may be tempted to relocate their plastic-producing activities in such countries.	
		The % targets should be the operationalization of "levels that are not harmful to biodiversity and ecosystem functions and human health." To make the target simple and robust, % target should be moved from the target statement to an accompanying table. Rather than monitoring the inputs (as the current target statement may imply), the state of pollution should be monitored (e.g., BOD at specified locations, regularly monitored). That will be much simpler and relevant to biodiversity conservation objective. The indicator is okay (with further

		work), but the target should be rewritten to refer to the state.
should be combined with the reduction of plastic production and use (as priority)	If the reporting focus on the reduction of plastic production and use	
There are no baseline data of plastic debris density in the Pacific and this would be a difficult indicator to monitor and track progress. This indicator also does not reflect other sources of pollution from the terrestrial ecosystems, abandoned, lost or derelict fishing gear, illegal dumping of non-biodegradable wastes at sea, biological indicators such as incidence of ingested plastic trends in monitored populations of wildlife eg, seabirds hence, suggestion for this indicator to include plastic debris density from land and sea.	As indicated above there is a need for more baseline for the Pacific island countries to make this data a useful data.	
		Rather a component indicator
This indicator is not currently available.	As the indicator is not currently available it is difficult to make a judgement on the needs for capacity development and other work.	
Many more pollutants are harming biodiversity, but not all pollutions have a separate headline indicator. We propose a headline indicator for at least the main five pollutants per national context. Moreover, we see opportunities to include headline indicators from target 10 , 14, and 15, under target 6. Pollution should be reduced significantly at the source of production as well as through consumption in order to not harm biodiversity or human health. Once pollutants have reduced to levels safe to humans and ecosystems through target 6 as well as targets 13, 14, 15, and 17, nature-based solutions as mentioned under target 10 can buffer the remaining pollutants.		We suggest adding new headline indicators either under target 6 or 14: 'Availability and access of alternative, reusable, efficient, and sustainable options, including non materialistic options' and 'Reduction of application or use of raw resources through sustainable and efficient production, consumption, and supply practices, as part of a circular economy and waste management.'
Again this is a crude measure. It is not just the density that must be examined, but also the source and how to stop this pollution.	We need to trace plastic pollution through the supply chains and production chains in order to address it adequately.	
Indicator should focus on and include measures of biodiversity, health of species and populations, not just a metric of plastic.	Indicator should focus on and include measures of biodiversity, health of species and populations, not just a metric of plastic.	Indicator should focus on and include measures of biodiversity, health of species and populations, not just a metric of plastic.
This is not about biodiversity, and also very unclear whether it is plastic in the ocean, or what, and what is the difference between plastic "waste" and "debris".		

Consistency of language is important for all targets and indicators.		
6.0.3 Pesticide use per area of cropland		
6.0.3 If you selected "yes, however requires further work", please describe:	**6.0.3 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**6.0.3 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
There are huge differences in the toxicity of pesticides and the amounts needed to have certain effects. We propose to differentiate this indicator accordingly.		
Proposal : "Use of harmful biocides per area of agricultural land and aquaculture".	See above	
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
	The most vulnerable countries, especially those in conflicts (L3 in the past 5-10 years), would be disadvantaged. The humanitarian aid needs to provide agricultural solutions that do not rely on pesticides and allow sufficient productivity to relaunch agriculture.	
The headline indicator 6.0.3 as proposed is not well connected with the objective of target 6, which is about addressing pollution from excess use and not pesticide (and nutrient) use on cropland per se. Pesticide uses require authorization under dedicated law, and thus are highly regulated, including assessment of levels in the environment that have been found acceptable by the regulatory approval process. This link is important to make when assessing excess pesticide pollution. Thus, a headline indicator linking to the sustainable use of pesticides (and other farm inputs) might be more appropriate and action able.

In the context of better defining the headline indicator, linkages to the ongoing work under SAICM and the post 2020 Global Chemicals Management Framework should be considered as well those that exist to the respective | If monitoring of pesticide use reveals risks to biodiversity the identification of targeted measures should focus on risk reduction. This could be use reduction, but it could also entail other exposure reduction measures. It is important to look at all options on the table and chose those that have the best sustainability outcome. There are many exposure reductions measures available that can successfully reduce the risk to biodiversity. The advantage of this approach is that the benefit of the use of the pesticide is maintained for the farmer while the risks for biodiversity are mitigated.

If the headline indicator 6.0.3 would be better aligned by linking it to sustainable use and risk reduction it would allow the introduction of more specific and actionable indicators towards target 6 | |

country specific pesticide legislation to avoid unnecessary overlaps.	such as, e.g.,: i. Percentage of Parties that establish and implement risk management / mitigation measures that mitigate run-off to edge-of-field water bodies and to terrestrial habitats. ii. Percentage of Parties that conduct scientifically sound environmental risk assessments that support that mitigate run-off to edge-of-field water bodies and to terrestrial habitats measures. iii. Adoption rate to precision agriculture to reduce the footprint of pesticide applications. iv. Reduction in the frequency of exceedance of regulatory acceptable concentrations for aquatic ecosystems (if baseline is available). For additional comments regarding Target 6, please refer to CropLife International submissions to the CBD secretariat: i) recent intervention regarding Goals and Targets (online), ii) review of the proposed goals and targets in the updated zero draft of the post-2020 global biodiversity framework, and iii) the draft monitoring framework for the post-2020 global biodiversity framework.	
The parameter of importance is the total toxicity, not the volume. Use of pesticide is only one path of toxicity. Use of pesticides has decline in many developed countries but the toxicity has increased to the toxic load has increased. Animal manure from intensive animal production are a massive source of antibiotics and toxic organic substances		Rather than measuring pesticide use it would be better to develop an indicator that measures the mitigation measures for use and disposal of organic chemicals within agricultural fields and landscapes.
Highly regressive and questionable – will enable continuation of use of harmful pesticides. Should include, at least to start with a banned list of pesticides. Ora mechanism to indicate that harmful pesticides are not used – having a benchmark list of harmful pesticides		
There are huge differences in the toxicity of pesticides and the amounts needed to have certain effects. We propose to differentiate this indicator accordingly.	There are huge differences in the toxicity of pesticides and the amounts needed to have certain effects. We propose to differentiate this indicator accordingly.	
		Rather than monitoring the inputs (as the current target statement may imply), the state of pollution should be monitored (e.g., BOD at specified locations, regularly monitored). That will be much simpler and relevant to biodiversity conservation objective. The indicator is okay

		(with further work), but the target should be rewritten to refer to the state.
if conbined with measure to decrease or zero production of pesticides	focus in reducing the production, import/export of pesticides	
No baselines in the PAcific islands		
Formulation, availability, and maintenance unclear	see above	
There are huge differences in the toxicity of pesticides and the amounts needed to have certain effects. We propose to differentiate this indicator accordingly.	There are huge differences in the toxicity of pesticides and the amounts needed to have certain effects. We propose to differentiate this indicator accordingly.	
There are huge differences in the toxicity of pesticides and the amounts needed to have certain effects. We propose to differentiate this indicator accordingly.	See above	
This indicator is not currently available.	As the indicator is not currently available it is difficult to make a judgement on the needs for capacity development and other work.	
This indicator is more appropriate under target 9 regarding sustainable agriculture, as this indicator aims tor educe pesticides and nitrogen, predominately used in agriculture.		Put this indicator under target 9 as 9.0.2: 'Phase out all substances used in crop production that harm biodiversity and that may impact human health, including: pesticides, herbicides, synthetic and excessive fertilizers, and others.'
There are huge differences in the toxicity of pesticides and the amounts needed to have certain effects. We propose to differentiate this indicator accordingly.	See comment above	
The toxicity of the pesticide should also be factored in.	the toxicity of the pesticide should also be factored in	Cornell University EIQ see https://nysipm.cornell.edu/eiq/
	support for data collection needed.	
Indicator should focus on and include measures of biodiversity, health of species and populations, not just a metric of pesticides.	Indicator should focus on and include measures of biodiversity, health of species and populations, not just a metric of of pesticides.	Indicator should focus on and include measures of biodiversity, health of species and populations, not just a metric of of pesticides.
Concentration and toxicity are not considered at all in this indicator. For instance, only one usage of high concentration pesticide is much more harmful than multiple applications of very low concentration pesticide. This target is only about pesticide, and other chemicals		

such as herbicides and fertilizers are not considered at all. It should not be limited to cropland but include other space which use chemicals, such as golf courses and lawns.		

6.0.4 Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal solid waste generated by cities

6.0.4 If you selected "yes, however requires further work", please describe:	6.0.4 If you selected "yes, however requires further work on capacity-building or other work", please describe:	6.0.4 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but it has no specific relevance for mountain ecosystems and biodiversity.
Proposal : "Proportion of municipal and industrial solid waste collected and managed in controlled facilities out of total municipal/industrial solid waste generated by cities"	See above	
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
	The countries with difficulties in reporting may become the destination of the municipal solid waste from other countries that want to have a high score. We need to agree on the flows of solid waste between countries so vulnerable people in developing countries do not end up living among the garbage imported from wealthier countries.	
The controlled facilities ought to include an option for local communities to use and benefit of local wastes, not just commercial enterprises.		
These indicators are questionable, and in any case they should be gender-disaggregated.		
The indicator should have a scope for industrial solid wastes as well.	A question on operation, rather than the formulation. How can the total municipal solid waste generated by cities be determined unless it is collected?	The indicator should have a scope for industrial solid wastes as well.
complement with and indicator with the % of people that clasify their waste or produce less waste	Requieres that big waste producers do not extrrernalize thier waste.	
This indicator needs to include household, commercial and institutional waste.	Capacity building is required in this area. The development of a global and regional frameworks	Proportion of plastics being imported or entering the economy reduced.

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There is a need to have an indicator for recyclables and reusables reflected here. This indicator also only focused on waste management which means less waste/pollution leaching into natural environment, however, it does not stop the waste/plastic pollution at source. Relevant Pacific Island indicator: Household waste captured	on plastic pollution are focused on its prevention and not merely its management.	Number of single-use plastic bans increased.
		Component indicator
This indicator is not currently available.	As the indicator is not currently available it is difficult to make a judgement on the needs for capacity development and other work.	
		This indicator does not separate different types of municipal solid waste, from human excreta to electronic or other types of (hazardous) municipal waste, including hazardous hospital waste. We propose a different headline indicator for hazardous waste and wastewater.
We know that there are many irregularities in how this waste is collected and managed, so it is not just the proportion, but we also need a lifecycle analysis of what actually happens. For example we now know that countries in the global north have been dumping their solid waste in the global south in spite of claiming that they are addressing the issue. More research and monitoring is needed as well as urgent changes to production priorities, above all reducing overall production and waste. This means genuine mainstreaming of biodiversity across all sectors.	We need more research to find out exactly where the problems and blockages are to addressing this critical issue.	
Should include water treatment, not just solid waste and level of treatment	Should include water treatment, not just solid waste and level of treatment	Should include water treatment, not just solid waste and level of treatment
		This indicator is not about biodiversity and does not help with the direct measurement of the target either. This target itself is required to be considered well. The concept on One Health should be incorporated. It's too early to indicate the exact name of the indicator at this stage.

Target 7. By 2030, increase contributions to climate change mitigation adaption and disaster risk reduction from nature-based solutions and ecosystems-based approaches, ensuring resilience and minimizing any negative impacts on biodiversity

7.0.1 Total climate regulation services provided by ecosystems*

7.0.1 If you selected "yes, however requires further work", please describe:	7.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	7.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
		This target is completely wrong, and the corresponding indicator is as wrong. It puts biodiversity at the service of "solving climate". The target does not concentrate on biodiversity. To such an extent that the target itself needs to call on "minimising the impacts [of NBS??] on biodiversity". Indeed there is a serious risk of NBS causing harm to biodiversity. The most used NBS are monoculture tree plantations, with negative impacts on biodiversity. All targets in the GBF should focus in the first place on biodiversity.
This indicator is vague and intangible	See above	
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
Ecosystems can provide very effective climate regulation albeit at the expense of biodiversity (e.g. plantation forests). This indicator should perhaps include more detailed quantification that includes areas of carbon rich, natural ecosystems protected and/or restored to shift focus towards conservation and restoration that is ecologically sound.	Ecosystems can provide very effective climate regulation albeit at the expense of biodiversity (e.g. plantation forests). This indicator should perhaps include more detailed quantification that includes areas of carbon rich, natural ecosystems protected and/or restored to shift focus towards conservation and restoration that is ecologically sound.	
		The extent to which people live by regeneration of biodiverse ecosystems - thus without causing emissions.

		CBD institutions have to maintain monitoring of this. (Proposed "Total climate regulation services provided by ecosystems" is not adequate to measure or monitor how to reach "by 2030" such "contributions to climate change mitigation adaption and disaster risk reduction from [...] ecosystems based approaches."
There is not global definition of "nature based solutions", there is no globally accepted categories for "climate regulation services", there are no standard on how to measure this	It needs agreed categories and standard for a national accounting system	
This indicator appears to be insufficient for monitoring Target 7. Evidence suggests that not all measures that are labelled as 'nature-based solutions' support biodiversity or might even have adverse effects on biodiversity. A revised or additional indicator could ensure monitoring if biodiversity is included as an integral component in deployed nature-based solutions.		
This target and this indicator are inadequate as they do not necessarily contribute to implementing the CBD's objectives. Especially NBS can be very harmful to biodiversity. The indicator does not indicate anything about biodiversity conservation, sustainable use or benefit sharing.There is no CBD review to indicate contribution from NBS , and that NBS adds to climate change mitigation and adaptation benefits. We have that for ecosystems based approach.		
	We propose to monitor the Extent/Area of intact wetlands, peatlands, old growth wood and other climate relevant ecosystems. These determine the contribution of biodiversity to climate change mitigation and adaptation. If only the amount of services provided is considered, there is a huge risk that this may be done by monoculture plantations or other technical solutions that have little or no value for biodiversity, and even creates pressure/competition with species-rich ecosystems.	
Should be stated in more specific terms; e.g., biomass in ecosystems, net primary productivity, area of forest as a proxy. What about the aspect of DRR?	The indicator should be stated in more specific terms.	It is an important role of SBSTTA to provide clear definition of nature-based solution; should formally adopt the IUCN definition.

Method to measure this service.	Method to measure this service.	
		This target should be eliminated from the GBF, as it encourage bussines as usual, which is not compatible with the [Nature] right based approach
		The sole headline indicator proposed for this target focuses exclusively on the climate regulation services provided by ecosystems, and misses the crucial aspect of how biodiversity is being impacted by climate change. Suggested headline indicator: Proportion of threatened species specifically impacted by climate change. This could be derived from the IUCN Red List of Threatened Species.
The indicator should also recognize indigenous peoples and local communities contribution to climate mitigation and adaptation	The indicator should also recognize indigenous peoples and local communities contribution to climate mitigation and adaptation	
Marine species themselves such as whales can mitigate for climate change through sequestration into their bodies and through enhancement of phytoplankton growth. Allowing recovering a rebuilding of whale populations and other marine megafauna should be recognized in this indicator. So "total climate regulation services provided by ecosystems and species" Coastal and marine ecosystems regulate the climate but also provide ecosystem services in terms of coastal protection and ecosystem based adaptation for communities in the Pacific. The indicator does not really capture this.		
		The sole headline indicator proposed for this target focuses exclusively on the climate regulation services provided by ecosystems, and misses the crucial aspect of how biodiversity is being impacted by climate change. Suggested headline indicator: Proportion of threatened species specifically impacted by climate change. This could be derived from the IUCN Red List of Threatened Species.
Formulation, availability, and maintenance unclear	Indicator formulation, availability, and maintenance unclear; cannot see how such an indicator can be calculated and keep any link with the Earth	

		differentiated realities. Surely, some sort of scale, percentage, or proportion of total climate regulation needs to be developed for comparative efforts. If possible, the "total of climate regulation services" should be quantified in tCO2equivalents and specified if "removals by sinks" or "reduction of GHG emissions by sources" or other contributions. Also, climate contribution for mitigation might be very different from adaptation. It would be better to keep those two as separate indicators	
		We propose to monitor the Extent/Area of intact wetlands, peatlands, old growth wood and other climate relevant ecosystems. These determine the contribution of biodiversity to climate change mitigation and adaptation. If only the amount of services provided is considered, there is a huge risk that this may be done by monoculture plantations or other technical solutions that have little or no value for biodiversity, and even creates pressure/competition with species-rich ecosystems.
		We propose to monitor the Extent/Area of intact wetlands, peatlands, old growth wood and other climate relevant ecosystems. Concerning Target 7, we concur with those expressing concerns that "nature based solutions" has no agreed definition, and that "ecosystem-based approach" is preferable.
This indicator is not currently available and therefore it is difficult to advise on its appropriateness to report against this target. However, we do think there should be a headline indicator associated with the contribution of biodiversity to mitigation and/ or adaptation to climate change.	As the indicator is not currently available it is difficult to make a judgement on the needs for capacity development and other work.	
This indicator needs to be SMART as the current indicator would not be measurable. Moreover, as target 10 aims to use nature's contribution to increase climate change mitigation adaption and reduce risks, we suggest merging target 10 under target 7.		Change 7.0.1 to 'Extent/Area of intact wetlands, peatlands, mangroves, old growth wood and other climate relevant ecosystems.' Also, we suggest a new indicator here - 'National contribution of CO2 emissions from main sectors that are directly dependent on biodiversity use, including the agriculture, bio-energy, and mining sectors.'
Nature-based solutions (NbS) do not belong under the CBD, which has its own well-defined terminology,		

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ecosystem approaches and ecosystem-based approaches. We should not use the term NbS, especially alongside the CBD's own terminology, as this adds to the ambiguity of the term nature-based solutions. While biodiversity obviously makes a major contribution to climate change mitigation and adaptation, we must avoid the real risk that biodiversity, especially in protected areas, is used to offset continued climate emissions. this could also have a negative impact on OECMs and indigenous territories.		
What is meant and defined by total climate regulation? what data is available and how measured?		
		We propose to monitor the Extent/Area of intact wetlands, peatlands, old growth wood and other climate relevant ecosystems. Concerning Target 7, we concur with those expressing concerns that "nature based solutions" has no agreed definition, and that "ecosystem-based approach" is preferable.
		We recommend adding a headline indicator that tracks the status of ecosystems containing "Irrecoverable Carbon" as an indicator for this target. Irrecoverable carbon is carbon in ecosystems that is vulnerable to loss during a land-use conversion and if lost, could not be recovered by 2050 (timeframe by which net zero emissions are needed) See Goldstein et al 2020 for more details (https://www.nature.com/articles/s41558-020-0738-8). Indicator: State and trends in extent and condition of places providing globally important services for climate mitigation, adaptation, and disaster resilience, and trends in flows of benefits from those places. Organization: Conservation International can track annually the proportion of irrecoverable carbon that is intact.
these services should be specified	these services should be specifiec	

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This metric is not currently available	The indicator is not currently available; countries would need technical support and capacity building to measure.	
This should be segregated by species, traits and functional diversity metrics (i.e., not just bulk measures of carbon)	This should be segregated by species, traits and functional diversity metrics (i.e., not just bulk measures of carbon)	This should be segregated by species, traits and functional diversity metrics (i.e., not just bulk measures of carbon)
		Measuring the extent of intact wetlands, peatlands, old growth forest and other climate relevant ecosystems could be a better way of determining the contributions of biodiversity to mitigating climate change. The regulations services considered now do not take into account the contributions of these services for biodiversity, which leads to a risk of using this indicator as a way to promote monoculture solutions.
Food systems are a mediator to help implement and achieve this Target. Therefore, we would suggest including in addition to complementary indicator t7.1. Above-ground biomass stock in forest (tonnes/ha), another complementary indicator on "Below-ground biomass stock in agricultural and other land uses".		
The goal of the Convention is not to "minimize negative impacts" on biodiversity while helping climate change (this is the goal of UNFCCC), but rather to actually help and enhance biodiversity. The focus should be on sustainable use of biodiversity, since our convention is literally about biodiversity itself. The indicators also need to reflect the goals of the CBD, not other policy agendas.		

Target 8. By 2030, ensure benefits, including nutrition, food security, livelihoods, health and well-being, for people, especially for the most vulnerable through sustainable management of wild species of fauna and flora

8.0.1 Number of people using wild resources for energy, food or culture (including firewood collection, hunting and fishing, gathering, medicinal use, craft making, etc.)*

8.0.1 If you selected "yes, however requires further work", please describe:	**8.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**8.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant

		scales or has no specific relevance for mountain ecosystems and biodiversity.
		This target and this indicator do not contribute to implementing the CBD's objectives as this does not indicate anything about biodiversity conservation, sustainable use or benefit sharing. Instead of "people" it should say "IPLCs and other rightsholders". There the indicator should be the % of them who are able to live in a safe and sufficient way in their ecosystems. If all "people" start using biodiversity resources, then this will have a very negative impact on biodiversity. So again "complying" with the indicator can lead to negative results. IPLCs and rightsholders know how to use the resources in a nurturing way.
		We suggest the exclusion of this indicator (biased baselines)
	The developing countries the highest number of people using wild resources. Governments may be tempted to restrict the access of the most vulnerable people and give this access to companies that would be able to pay for such services.	
People's beneficial use of wild resources has to be determined in terms of fulfilling their human rights to adequate food, housing, health , livelihood, culture, etc.	Indicator should be "Number of people who fulfill by their wild resource uses their human rights to adequate food, housing, health , livelihood, culture, etc."	
An evaluation if the use of wild species in natural populations is sustainable over the long-term, specifically under comparatively rapidly changing environmental and climate conditions at an evolution-relevant time scale, requires a solid understanding of the resilience and adaptability of wild species. Information-rich empirical data are needed in the form of genomic and phenotypic (trait) data for reliable evaluations and conclusions. Well-designed, distribution range-wide reference datasets within species will provide the information-rich genomic and phenotypic (trait) data for reliable statistical evaluations and conclusions. Such collections of samples and trait data can be continuously extended to provide scale-independent results of sufficient statistical power and reliability. In turn, these datasets support versatile	The necessary sample collections, datasets and their associated standardized data infrastructures and analytical work environments do not exist today. Still, over the coming years, capacity building efforts can focus on providing international concerted progress towards the realization and implementation of such resources and functionality. Efforts towards this goal are already underway in the form of the development of an integrated digital extended data infrastructure with associated work environments by the alliance for biodiversity knowledge under the auspices of GBIF, together with the international collections community, and a wide range of stakeholders. Once developed, these datasets, data	

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application, for example, they will inform simultaneously on Goals A, B and D and several of their targets.	management infrastructures and work environments, including reporting modules can be integrated into and directly support national reporting systems. Indicators based on such capacity will be relevant and provide the necessary basis for standardization, comparability and reporting across all scales, from global to national to subnational reporting. The proposed AHTEG on indicators might provide scientific-technical advice and guidance for such capacity building.	
		This indicator will reflect the number of poor people who depend on wild resources (which may increase through migration or population increase) rather than the proper management of these resources or their equitable distribution. The indicator should focus on the sustainable management of the resources and their equitable access (not the population of people)
As mentioned, this target and this indicator do not contribute to implementing the CBD's objectives as this does not indicate anything about biodiversity conservation, sustainable use or benefit sharing. Moreover, any indicators related to sustainable use or benefit sharing should be gender-disaggregated.		
		We have grave concerns with the production- and growth oriented target as it stands now. We suggest to put sustainability at center: "Target 8. By 2030, ensure that the management of wild species of fauna and flora is sustainable, thereby providing nature's contributions to people, including nutrition, food security, livelihoods, health and well-being, for all." Our suggested indicator "803 % of species/ habitats/area under sustainable management" would reflect this.
The indicator could unnecessarily mislead people to use wild resources.		Not sure if the target is stating what we what to achieve. The focus should be on access to ecosystems that provide benefits and how sufficiently those with access are empowered to manage and use the resources sustainably.
Indicators should include trends in sustainable management of wild species of flora and fauna by indigenous peoples and local communities. Indicators could include diversity of flora and fauna used for food security, livelihoods, and health and well-being.	This should take into account the indicator 'Status and trends in the practice of traditional occupations' adopted by COP-10 (COP Decision x.43) and the related work by the International Labour Organization (ILO) and other institutions. It	

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The Indicator could be 'Status and trends in the practice of traditional occupations' adopted by COP-10 (COP Decision x.43) and the related work by the International Labour Organization (ILO) and other institutions. It should not be just percentage of population but also percentage of people who perceive that their traditional occupation are recognized and secured. Alternatively it could be "Quality and vitality of customary practices used to manage aquatic and terrestrial wild species". Source: Local Biodiversity Outlooks (produced every 4 years), plus documentation held in local registries and the ICCAs registry. An additional alternative option is to amend 8.0.1 to read: "Proportion of people using wild resources, sustainably in a manner consistent with target 4, for energy, food or culture (including firewood collection, hunting and fishing, gathering, medicinal use, craft making, etc.)* In order to ensure that benefits from sustainable use are accruing "especially for the most vulnerable", trends in use of customary practices (ICCAs, LMMAs) to manage aquatic and terrestrial wild species could be monitored.	should not be just percentage of population but also percentage of people who perceive that their traditional occupation are recognized and secured.	
It is an unclear indicator, as it can be understood that a increasing number of people use forest reasources is good for forest/biodiversity conservation!, while the objetive of the CBD is precisely the other way aorund: to use less forest resources or use in a sustainable manner. It also requires desaggregate the identity of beneficiaries by gender and by place of origen.	Only if the indicator is rephrased.	
As an alternative to 8.0.1, we suggest "Quality and vitality of customary practices (ICCAs, LMMAs) used to manage aquatic and terrestrial wild species". Source: Local Biodiversity Outlooks (produced every 4 years), plus documentation held in local registries and the ICCAs registry. In order to ensure that benefits from sustainable use are accruing "especially for the most vulnerable", trends in use of customary practices (ICCAs, LMMAs) to manage aquatic and terrestrial wild species could be monitored.	Parties may require assistance to measure this at national level	
The proposed indicator does not capture customary sustainable use of IPLCs that is in Article 10(c) of the Convention	The proposed indicator does not capture customary sustainable use of IPLCs that is in Article 10(c) of the Convention	
Need to ensure that this indicator reflect that the use of wild resources is done "sustainably" and in line with Target 4.		

As an alternative to 8.0.1, WWF proposes: "Quality and vitality of customary practices (ICCAs, LMMAs) used to manage aquatic and terrestrial wild species". Source: Local Biodiversity Outlooks (produced every 4 years), plus documentation held in local registries and the ICCAs registry. An additional alternative option is to amend 8.0.1 to read: "Proportion of people using wild resources, sustainably in a manner consistent with target 4, for energy, food or culture (including firewood collection, hunting and fishing, gathering, medicinal use, craft making, etc.)* In order to ensure that benefits from sustainable use are accruing "especially for the most vulnerable", trends in use of customary practices (ICCAs, LMMAs) to manage aquatic and terrestrial wild species could be monitored. The current headline indicator 8.0.1 provides no measurement of sustainability. At present millions of people are using timber for firewood, for example, but in many cases it is not sustainable.	Parties may require assistance to measure this at national level	
Indicator formulation, availability, and maintenance unclear. Relationship between the changes and their meaning is not clear. If the number of people using wild resources increase, is it a positive sign (e.g. because wild resources are getting more abundant). If the number of users goes down, is it positive (the resource are better "conserved") or negative (the resources are less used because they have collapsed? It is not simply the number using, but the number using sustainably and benefiting measurably. In a growing and changing global human population, this indicator is not relevant, especially relying on absolute numbers. The notion of "using" is undefined. Would increasing use be good or bad?	Formulation, availability, and maintenance unclear	
		We have grave concerns with the production- and growth oriented target as it stands now. We suggest to put sustainability at center: "Target 8. By 2030, ensure that the management of wild species of fauna and flora is sustainable, thereby providing nature's contributions to people, including nutrition, food security, livelihoods, health and well-being, for all." Our suggested indicator "803 % of species/ habitats/area under sustainable management" would reflect this.

		We have grave concerns with the target's production- and growth-oriented nature. We propose putting sustainability at centre:
		"Target 8. By 2030, ensure that the management of wild species of fauna and flora is sustainable, thereby securing nature's contributions to people, including nutrition, food security, livelihoods, health and well-being for all."
		We propose replacing indicators 8.0.1 and 8.02 with the following headline indicator: "Percentage of species/ habitats/area under sustainable management".
		In its current wording, this indicator can be misunderstood to mean an effort to drive people's needs to depend increasingly on wild resources, without clear linkages to the issues of 'sustainable management of wild species of flora and fauna'. As such the indicator may drive the unintended consequences of the increased and unsustainable use of species.
		We would propose to change this indicator to: 'Trends in number of people benefitting from verifiably sustainable management practices of wild species of fauna and flora.'
		This headline indicator could be measured through a combination of metrics proposed for Target 12 (Numbers of users that have shared benefits from the utilization of genetic resources and/or traditional knowledge associated with genetic resources with the providers of the resources and/or knowledge), with the focus on biological resources, rather than genetic, as well as the rate of implementation of tools that collate information on measurable benefits from sustainable wild use/trade practices. The latter includes the FairWild Standard (for equitable, sustainable trade in wild plants, fungi and lichen, as highlighted in SBSTTA-24-INF-20-en https://www.cbd.int/doc/c/ca58/9dba/0dc0d3ef9 f902794cb7548f3/sbstta-24-inf-20-en.docx), the BioTrade Principles, and others. Specific to the FairWild Standard implementation, the focus could be on: Number of people

		harvesting and trading wild plant, fungi and lichen products benefitting from the Premium prices and Premium Fund.
		This indicator, along with indicator 8.02, provides no quantification of the component of the target related to the sustainable management of biodiversity, and both indicators instead focus on human aspects. This gap can be addressed by the adoption of an indicator to track trends in the status of biodiversity linked to the provision of Nature's Contributions to People (NCPs). There is growing evidence that by conserving the Tree of Life and the associated phylogenetic diversity, we can maintain NCPs and capture species utilised by humans more effectively than when the Tree of Life is ignored (for example, see Molina-Venegas et al., 2020, Botanical Journal of the Linnean Society, 194:397; Molina-Venegas et al., 2021 Nature Ecology and Evolution, 5:583–588). Accordingly, the expected loss of Phylogenetic Diversity indicator (IPBES Phylogenetic Diversity indicator) is suitable to address this gap in monitoring our progress to achieving Target 8 through the conservation and sustainable use of biodiversity. This indicator is currently used by IPBES to monitor trends in NCPs (listed by IPBES for NCPs 18: maintenance of options; 14: resource provision; and 15: learning and inspiration; full details here: https://www.biorxiv.org/content/10.1101/2021.03.03.433783v1), and production and reporting at global and national levels has been committed to by the IUCN SSC Phylogenetic Diversity Task Force and partner institutions. The expected loss of Phylogenetic Diversity indicator is also suited for use as an indicator for Goal B, which also currently lacks a biodiversity-focused indicator to monitor the provision of NCPs, and full details have been noted there.
		Red List Index (impacts of utilisation) which shows trends in extinction risk of species driven by utilisation (including reductions in extinction risk resulting from increases in the sustainability of use). (see

		https://www.iucnredlist.org/assessment/red-list-index)
The current wording does not tell us whether people are using resources in a sustainable manner which has a direct impact on biodiversity.		Change 8.0.1 to 'Sustainably using wild resources, within ecological boundaries, for energy, food, trade or culture (including firewood collection, hunting and fishing, gathering, medicinal use, craft making, etc.), causing no harm to biodiversity or human health.'
This should take into account the indicator 'Status and trends in traditional occupations' adopted by COP-10 (COP Decision x.43) and the CBD Global Plan of Action on Customary Sustainable Use.	This should take into account the indicator 'Status and trends in traditional occupations' adopted by COP-10 (COP Decision x.43) and the CBD Global Plan of Action on Customary Sustainable Use.	
Again this is quantitative and we need analysis to find out exactly who is using what, to avoid the risk that IPLCs are unfairly targeted. We know that there are many unsustainable uses of such resources, so we need to disaggregate this indicator with care before using it.	As we noted it needs careful analysis to find out who is using what before the indicator is useful.	
Number of people using wild resources does not reflect whether this is sustainable or not.		
Suggest to reframe the target as "humane and sustainable management of wild species"		
		8.0.1 is not a measure of sustainability – indeed short to medium term rises in this indicator could be indicative of further damage and depletion of wildlife and biodiversity. Need for qualitative indicators. Further, with indicator 8.0.1, it is unclear whether the intended positive outcome would indeed be a reduction in the number of people relying on wildlife for their livelihoods. Encouraging the use of depleting resources is bound to have further damaging impacts on people and their livelihoods, particularly the most vulnerable. Wildlife recovery needs to be addressed as an utmost priority. Cross-link with SDG 1 and associated indicators, as efforts to bring people out of poverty can help reduce reliance on the exploitation of wildlife by vulnerable people.

| | | We have grave concerns with the target's production- and growth-oriented nature. We propose putting sustainability at centre:

"Target 8. By 2030, ensure that the management of wild species of fauna and flora is sustainable, thereby securing nature's contributions to people, including nutrition, food security, livelihoods, health and well-being for all."

We propose replacing indicators 8.0.1 and 8.02 with the following indicator: "Percentage of species/ habitats/area under sustainable management".
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| | | We have recommended changes to the language of this target and in line with those recommendations that propose putting ecological sustainability and long term human well being at the center: "Target 8. By 2030, any permitted use of wild species is proven to be ecologically, economically and socially/culturally sustainable, equitable, and contributes to human wellbeing and fulfilment of rights, including enhanced nutrition, food security and livelihoods, especially for the most vulnerable, while ensuring wild species play their optimal role in their ecosystems."

A headline indicator that only measures use by people will fail to ensure ecological sustainability.

We propose replacing indicator 8.0.1 with the following single headline indicator: "Percentage of species/ habitats/area under ecologically sustainable management that ensure species' optimal role in its ecosystem".
|
| | | As mentioned, related to the indicator for Goal B, while numbers of people benefitting from a particular natural area is an attractive indicator, it is very difficult to estimate because allocating services to people depends on the level of dependency an individual or a population has on the service (direct vs peripheral). Further, field verification of population benefitting is challenging due the high cost of conducting household surveys. In addition, monitoring the |

success of a target based on the number of people using a product or service could create a perverse incentive structure where maximizing the number of people hunting or fishing in the short term would indicate positive outcomes, overlooking or ignoring the negative impacts to the ecosystem over the mid or long term. We suggest a more suitable indicator would focus the state of the ecosystems providing the benefits. We suggest this alternative headline indicator:

Indicator: State and trends in extent, condition of places providing globally important services for food security and nutrition, and trends in flows of benefits from those places.

Organization: Recent scientific advances allow us to map the global distribution of places that can be considered "high performing" in terms of delivering ecosystem services or "Nature's Contributions to People", per IPBES. Conservation International and partners with the Natural Capital Project, Stanford University, University of Minnesota, King's College London and many additional data providers have mapped the places globally that provide the highest levels of a range of multiple ecosystem services. Advances in remote sensing capabilities and geospatial analysis techniques support the measuring of ecosystem extent and in some cases, condition on spatial and temporal resolutions that are meaningful for national-level annual monitoring programs. Flows of ecosystem services can be estimated from spatial data on ecosystem extent and condition using modelling techniques and, ideally, verified with direct observation at the national or subnational level. The collaborators listed above are working on a methodology that will allow for regular updates to the data and mapping products that would support national monitoring programs.

Lastly, we recommend that wherever possible and appropriate, drawing on the UN SEEA for

		indicators to monitor progress towards goals and targets related to NCPs.
		We have recommended the language of this target put ecological sustainability and long term human well being at the center: "Target 8. By 2030, any permitted use of wild species is proven to be ecologically, economically and socially/culturally sustainable, equitable, and contributes to human wellbeing and fulfilment of rights, including enhanced nutrition, food security and livelihoods, especially for the most vulnerable, while ensuring wild species play their optimal role in their ecosystems." A headline indicator that only measures use by people will fail to ensure ecological sustainability. We propose replacing indicator 8.0.1 with the following single headline indicator: "Percentage of species/ habitats/area under ecologically sustainable management that ensure species' optimal role in its ecosystem".
		Red List Index (impacts of utilization) --trends in extinction risk of species driven by utilization (including reductions in extinction risk resulting from increases in the sustainability of use).
Should include metrics of managed land and domestic species	Should include metrics of managed land and domestic species	Should include metrics of managed land and domestic species
A detailed methodology for this indicator needs to be developed.		
		The key issue in 8 is sustainability of use, not the productivity. We should not promote pillaging of our ecosystems. Should also capture customary sustainable use. - Trends in the practice of traditional occupations (decision X/43) linking with customary sustainable use as a crucial element of target 8
"Number of people" is a very strange way to try to measure this goal. Basically, all people on Earth use resources directly or indirectly (so the answer is the whole population of the planet). It is unclear whether an increase or a decrease in this "number of people" measured here would be a positive improvement. The focus of the target and indicator should be on the sustainability of the use of		

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biodiversity. Also, it should not be limited to wild resources; "wild resources" should be changed to "local natural resources".		
		We have recommended changes to the language of this target and in line with those recommendations propose putting ecological sustainability and long term human well being at the center: "Target 8. By 2030, any permitted use of wild species is proven to be ecologically, economically and socially/culturally sustainable, equitable, and contributes to human wellbeing and fulfilment of rights, including enhanced nutrition, food security and livelihoods, especially for the most vulnerable, while ensuring wild species play their optimal role in their ecosystems." A headline indicator that only measures use by people will fail to ensure ecological sustainability. We propose replacing indicator 8.0.1 with the following single headline indicator: "Percentage of species/ habitats/area under ecologically sustainable management that ensure species' optimal role in its ecosystem".

8.0.2 Percentage of the population in traditional employment

8.0.2 If you selected "yes, however requires further work", please describe:	8.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	8.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
It is very unclear what "traditional employment" precisely means, much less what would be the impact (can be both positive or negative) on biodiversity and on its sustainable use.		We have grave concerns with the production- and growth oriented target as it stands now.
		We suggest the exclusion of this indicator (biased baselines). [There is a lack of definition of traditional employment. In Brazil, it is known the number of the population that declares itself as

		traditional and indigenous peoples, which could be an indicator of the number of these jobs, if there is interest in this application.]
We need to define what traditional employment mean. As such employments are often considered poorly, representatives of traditional employment may have be given a bigger room in forums and workshops on biodiversity.		
Traditional employment should be clearly defined and delimited.		
Percentage of the population in traditional employment, in community based livelihood ways and with access to commons as land areas for allotment gardens and forest (allotment) gardening		
		This has similar problems to the last indicator. First traditional employment is vague and may be distorted. Second, the number/percentage of people in traditional employment does not reflect the quality of the livelihood. Focus of the indication should be on the sustainability of natural resources and their equitable distribution – not population estimates.
		We have grave concerns with the production- and growth oriented target as it stands now. We suggest to put sustainability at center: "Target 8. By 2030, ensure that the management of wild species of fauna and flora is sustainable, thereby providing nature's contributions to people, including nutrition, food security, livelihoods, health and well-being, for all." Our suggested indicator "803 % of species/ habitats/area under sustainable management" would reflect this.
Seek clarification what is meant by "traditional employment."		The focus should be on access to ecosystems that provide benefits and how sufficiently those with access are empowered to manage and use the resources sustainably.
Definition on "traditional employment"		
One question: employment is related to income or is broader and includes activities such as gathering or managing wildlife obtaining benefits?		

This should take into account the indicator 'Status and trends in the practice of traditional occupations' adopted by COP-10 (COP Decision x.43)		
Should be desaggregated by gender and plae of origen (rural, urban)	if it is desaggregated by gender and palce of origen	
		Propose to use: Trends in practice of traditional occupations (decision X/43) with the following component or complimentary indicators: Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure (SDGs 5.a.1 (a) trends in land-use change and land tenure in the traditional territories of IPLCs (decision X/43) Cultural Well-being and Cultural Vitality – cultural vitality index for indigenous and local knowledge [from the Arctic Social Development Index] Legal recognition of indigenous peoples traditional occupations (e.g. hunting-gathering, shifting cultivation, pastoralism) Existence of special programmes to strengthen indigenous peoples' traditional occupations
In order to ensure that benefits from sustainable use are accruing "especially for the most vulnerable", trends in use of customary practices (ICCAs, LMMAs) to manage aquatic and terrestrial wild species could be monitored. It is important to have a headline indicator on IPLCs' food security, nutrition and livelihoods (with disaggregated data for men and women).	Parties may require assistance to measure these.	
Relevance to target unclear; data availability and maintenance unclear. Cannot see how the changes of the percentages, up or down, could be interpreted at global level. Depending on the definition of "traditional employment" the fluctuations may be interpreted differently. E.g. an increase in the index may indicate a flooding of the employment of last resort (indicating a decrease of wellbeing in the population. A decrease may indicate that non-traditional development is taking over naturally as the area is developing. Or also reflect deruralization and social collapse. Not just the percentage of the population, gender and demographics need to be considered.	Relevance to target; data availability and maintenance unclear	

		We have grave concerns with the production- and growth oriented target as it stands now. We suggest to put sustainability at center: "Target 8. By 2030, ensure that the management of wild species of fauna and flora is sustainable, thereby providing nature's contributions to people, including nutrition, food security, livelihoods, health and well-being, for all." Our suggested indicator "803 % of species/ habitats/area under sustainable management" would reflect this.
		Suggest alternative indicator "Percentage of species/ habitats/area under sustainable management".
		It is not clear what is meant by "traditional employment" and how this is linked to securing benefits from sustainable management of wild species of fauna and flora. We would like to propose that the Biodiversity for Food and Medicine indicator, methodology for which is developed may provide an appropriate headline indicator for this Target, see: https://www.traffic.org/site/assets/files/7300/bio diversity-for-food-and-medicine-english.pdf. It is ready for global use (Red List Index) and national use (Accessibility Index).
This indicator does not include whether traditional employment is sustainable or done ecosystem based management and therefore might end up harming biodiversity and people as well.		Change 8.0.2 to 'Percentage of the population in traditional employment that causes no harm to biodiversity or human health.'
This should take into account the indicator 'Status and trends in the practice of traditional occupations' adopted by COP-10 (COP Decision x.43) and the related work by the International Labour Organization (ILO) and other institutions. It should not be just percentage of population but also percentage of people who perceive that their traditional occupation are recognized and secured.	This should take into account the indicator 'Status and trends in the practice of traditional occupations' adopted by COP-10 (COP Decision x.43) and the related work by the International Labour Organization (ILO) and other institutions. It should not be just percentage of population but also percentage of people who perceive that their traditional occupation are recognized and secured.	
		For 8.02 'Percentage of the population in traditional employment' add 'positively contributing to the sustainable conservation and protection of wild species'.

		We are concerned about the the lack of focus on the protection of biodiversity, viable ecosystems and ecological sustainability. Instead, this target and its indicators overemphasise on wildlife utilization among the solutions, when overexploitation has clearly been identified among the main drivers of wildlife decline.
		See comment in 8.0.1. Suggest alternative indicator: "Percentage of species/ habitats/area under sustainable management".
		To measure long term availability of biodiversity for human wellbeing and fulfilment of rights, especially for the most vulnerable, we propose an alternate indicator to 8.0.2 that ensures a precautionary approach to biodiversity use to ensure long-term human wellbeing while also safeguarding the equitable use of nature. We suggest that SDG indicator 2.3.2 would be a helpful metric. Indicator 2.3.2: Average income of small-scale food producers, by sex and indigenous status. In addition, SDG indicator 15.6.1: Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits, would be a useful headline or secondary indicator of progress towards this target.
		As mentioned related to the indicator for Goal B, monitoring the success of a target based on the number of people or percentage of population using a product or service could create a perverse incentive structure where maximizing the number of people hunting or fishing in the short term would indicate positive outcomes, overlooking or ignoring the negative impacts to the ecosystem over the mid or long term. As above, we suggest a more suitable indicator for this target would focus the state of the ecosystems providing the benefits. We suggest this alternative headline indicator: Indicator: State and trends in extent, condition of places providing globally important services for food security and nutrition, and trends in flows of benefits from those places.

| | | Organization: Recent scientific advances allow us to map the global distribution of places that can be considered "high performing" in terms of delivering ecosystem services or "Nature's Contributions to People", per IPBES. Conservation International and partners with the Natural Capital Project, Stanford University, University of Minnesota, King's College London and many additional data providers have mapped the places globally that provide the highest levels of a range of multiple ecosystem services. Advances in remote sensing capabilities and geospatial analysis techniques support the measuring of ecosystem extent and in some cases, condition on spatial and temporal resolutions that are meaningful for national-level annual monitoring programs. Flows of ecosystem services can be estimated from spatial data on ecosystem extent and condition using modelling techniques and, ideally, verified with direct observation at the national or subnational level. The collaborators listed above are working on a methodology that will allow for regular updates to the data and mapping products that would support national monitoring programs.

Lastly, we recommend that wherever possible and appropriate, drawing on the UN SEEA for indicators to monitor progress towards goals and targets related to NCPs. |
| | | To measure long term availability of biodiversity for human wellbeing and fulfilment of rights, especially for the most vulnerable, we propose an alternate indicator to 8.0.2 that ensures a precautionary approach to biodiversity use to ensure long-term human wellbeing while also safeguarding the equitable use of nature. We suggest that SDG indicator 2.3.2 would be a helpful metric. Indicator 2.3.2: Average income of small-scale food producers, by sex and indigenous status. In addition, SDG indicator 15.6.1: Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits, would be a useful headline or |

		secondary indicator of progress towards this target
Should include metrics of managed land and domestic species	Should include metrics of managed land and domestic species	Should include metrics of managed land and domestic species
		We propose the following headline indicators and component indicators: • New headline indicator: "Percentage of population with minimum dietary diversity" (WHO, Foodsystemsdashboard) • New component indicator: "Dietary Species Richness". The scientific evidence on this indicator from the nutrition community is strong and expanding (Lachat et al. 2018; Giles-Hanock et al. 2021 forthcoming). • New component indicator: "Availability of National Food based dietary guidelines that consider biodiversity and the biodiversity bending the curve mission". National food based dietary guidelines are increasingly used to connect nutrition goals with the environmental sustainability agenda. Taking up at least one or ideally all three of these indicators would 1) provide real SMART indicators for which data are globally increasingly available and monitored over time, 2) strengthen the connection to the nutrition and food systems agenda and emphasize the bi-directional relationship between biodiversity and nutrition, where biodiversity contributes to healthy sustainable diets, and where healthy, sustainable diets contribute to the biodiversity agenda through driving demand for sustainable use of biodiversity.
We don't understand What "traditional employment" is. This term is not used in any materials we have seen before, and this is one of our supposed areas of expertise.		
		To measure long term availability of biodiversity for human wellbeing and fulfillment of rights, especially for the most vulnerable, we propose an alternate indicator to 8.0.2 that ensures a precautionary approach to biodiversity use to ensure long-term human wellbeing while also safeguarding the equitable use of nature. We

		suggest that SDG indicator 2.3.2 would be a helpful metric. Indicator 2.3.2: Average income of small-scale food producers, by sex and indigenous status. In addition, SDG indicator 15.6.1: Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits, would be a useful headline or secondary indicator of progress towards this target.

Target 9. By 2030, support the productivity, sustainability and resilience of biodiversity in agricultural and other managed ecosystems through conservation and sustainable use of such ecosystems, reducing productivity gaps by at least [50%].

9.0.1 Proportion of agricultural area under productive and sustainable agriculture

9.0.1 If you selected "yes, however requires further work", please describe:	9.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	9.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
		This target is formulated wrongly, it does not respond to any of the three objectives of the convention. The CBD has to guard for the sustainability of the actions of any productive sector, not to enhance the productivity. Productivity is not an objective of the CBD, while sustainable use it. We therefore suggest, an indicator that monitors the proportion of agricultural area under sustainable agriculture" alone, omitting the "productive". In the understanding of the positive impacts of agroecology on biodiversity, and the negative impacts of industrial agriculture, there should be an indicator regarding the %of agriculture being managed in an agroecological way.
We must better-define the concept of sustainable use.	We must better-define the concept of sustainable use.	Proportion of agricultural areas under national regulations for sustainable use of land (?).

Will need consistent methodology, standards and certification to ensure this data is being compiled in a consistent manner to avoid inconsistent results. This indicator also has direct implications on the extent of natural ecosystems indicator and thus, should be considered as a coupled indicator to this one (e.g. countries/regions with increasing agricultural production tend to get their at the loss of natural ecosystems)	Will need consistent methodology, standards and certification to ensure this data is being compiled in a consistent manner to avoid inconsistent results. This indicator also has direct implications on the extent of natural ecosystems indicator and thus, should be considered as a coupled indicator to this one (e.g. countries/regions with increasing agricultural production tend to get their at the loss of natural ecosystems)	Measures of agricultural productivity coupled with total crop/agricultural area are also important as they can direct intensive agriculture into smaller areas to leave more land for conservation/restoration.
Proportion of agricultural area under productive and sustainable agriculture promoted to locally adapted agroecological practices		
An evaluation if use and management of species in agricultural ecosystems are sustainable over the long-term, specifically under comparatively rapidly changing environmental and climate conditions at an evolution-relevant time scale, requires a solid understanding of the resilience and adaptability of managed species in agricultural, aquacultural, fisheries and forest management systems. For such evaluations and conclusions, information-rich empirical data are needed, in the form of genomic and phenotypic (trait) data. Well-designed, distribution range-wide reference datasets within species will provide the information-rich genomic and phenotypic (trait) data for reliable statistical evaluations and conclusions. Such collections of samples and trait data can be continuously extended to provide scale-independent results of sufficient statistical power and reliability. In turn, these datasets support versatile application, for example, they will inform simultaneously on Goals A, B and D and several of their targets.	The necessary sample collections, datasets and their associated standardized data infrastructures and analytical work environments do not exist today. Still, over the coming years, capacity building efforts can focus on providing international concerted progress towards the realization and implementation of such resources and functionality. Efforts towards this goal are already underway in the form of the development of an integrated digital extended data infrastructure with associated work environments by the alliance for biodiversity knowledge under the auspices of GBIF, together with the international collections community, and a wide range of stakeholders. Once developed, these datasets, data management infrastructures and work environments, including reporting modules can be integrated into and directly support national reporting systems. Indicators based on such capacity will be relevant and provide the necessary basis for standardization, comparability and reporting across all scales, from global to national to subnational reporting. The proposed AHTEG on indicators might provide scientific-technical advice and guidance for such capacity building.	
The perceived dichotomy of productive and/vs sustainable agriculture needs further clarification as addressed by §90 & 91 CBD/SBSTTA/24/3/Add.2/Rev.1, page 29. In this context of what is meant by productivity gaps needs also better definition (please refer to CropLife International Intervention SBSTA24 Item 3 regarding Goals and Targets (online).	Productive and sustainable agriculture should be achieved by making use of the entire toolbox of technologies and practices that are available. Those actions should center around the sustainable intensification of production practices which includes improving the efficiency of use of land (not extending the use of land!) and inputs of water, fertilizers and pesticides and reducing harmful emission of inputs, including though	

genetic improvements to crops and livestock, precision agriculture, innovation in and substitution of external inputs, use of (agro)ecological practices like crop rotation, cover crops and no-till, the use of ecosystem services like natural pollination and natural pest control and the use of emission reduction technology and practices like waste water treatment and buffer strips.

The respective headline indicator and subsequent headers should be reflective of the variety of options as described above to achieve sustainability and high productivity in agriculture, which are all dependent on local growing conditions (favorable vs less favorable), i.e., climate, water availability, soil conditions and differences in pest and disease pressure and finally are depending on farmer agronomic knowledge.

To make indicators for environmentally sustainable intensification of food production relevant and measurable, actions taken like the adoption of digital innovations for optimized precision inputs, and Integrated Pest Management (IPM) strategies might be desirable options, whereas depending on local context a target on farmer responsible use training and adoption of certain practices concerning crop inputs could be more appropriate. In a nutshell we suggest several indicators that can be drawn from by countries given the different state of their individual agricultural sector.

The following could be considered as potential indicators for sustainable agriculture:
Soil
From an agricultural perspective– "Trends in increased adoption of conservation tillage" could be a useful indicator, which encompasses a variety of soil conservation practices in agriculture. Conservation tillage will lead to increased farmer profitability, stable (and no less) crop yields, less production costs, drastic reductions in fuel consumption, optimized use of inputs (fertilizers, plant protection products,…), less time needed for field tasks, improved water balance and increased water use efficiency, adapting to climate change, increased soil carbon sink effect (organic matter), less CO2 emissions / Energy, and biodiversity

friendly practices.

Another indicator could be "a soil health indicator", assessing trends with established physical, chemical and biological parameters that are measures of improved soil quality.

Such parameters should be science-based and include the following elements:

Physical: bulk density, infiltration, soil structure and macropores, soil depth, and water holding capacity as indicators of retention and transport of water and nutrients, habitat for soil microbes, estimate of crop productivity potential, compaction, water movement, and workability.

Chemical: electrical conductivity, reactive carbon, soil nitrate, soil pH, and extractable phosphorus and potassium as indicators of biological and chemical activity thresholds, plant and microbial activity, plant available nutrients, and potential for N and P loss

Biological: earthworms, microbial biomass C and N, particulate organic matter, potentially mineralizable N, soil enzymes, soil respiration, and total organic carbon as indicators of microbial activity potential and repository for C and N, soil productivity and N supplying potential

Pollination

A useful indicator could be "% of missed potential yield due to lack of pollination".

Note: Often reference is made to the Red List Index for pollinating species, but this is not a good indicator since red list species generally play a marginal role in crop pollination. Thus, an ecosystem services related indicators is suggested as being more appropriate.

Innovation

A useful indicator could be "Adoption rate of precision agriculture".

Additional Indicators could also be developed to assess "trends in pesticide use training for farmers". Additionally, measures to assess trends in "land use stewardship" that have a positive impact on biodiversity such as crop rotation, use of cover crops, adoption of conservation tillage, and other measures supporting habitat for birds and insects such as hedges and flower strips. Other activities relevant for the stewardship life cycle are

	summarized here: https://croplife.org/wp-content/uploads/pdf_files/Crop-Protection-Stewardship-Vision-2020.pdf	
The CBD defines sustainable use as a desirable end state. In that sense Target 9 tries to assure that agriculture is practiced in a way that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations. The indicator is not very useful as it implies that sustainable is equivalent with not declining long-term biological diversity. In agriculture sustainability is used in the sense of long term crop productivity, but not whether the long term diversity of the agroecosystem is protected or conserved.		We should have an indicator that measures biodiversity on agricultural land, both a farm scale as well as on landscape scale. Farm Land Biodiversity Index, World Agroforestry https://www.worldagroforestry.org/blog/2020/10/27/farmland-biodiversity-score-rwandas-report-convention-biological-diversity ; Agrobiodiversity Index Bioversity https://www.bioversityinternational.org/abd-index/
Productivity is no biodiversity-related indicator, it could be really negative for biodiversity		
Productivity is not an objective of the CBD, while sustainable use it. We therefore suggest, an indicator that monitors the proportion of agricultural area under sustainable agriculture" alone, omitting the "productive".	Productivity is not an objective of the CBD, while sustainable use it. We therefore suggest, an indicator that monitors the proportion of agricultural area under sustainable agriculture" alone, omitting the "productive".	
Need a clear operational definition of sustainable agriculture. This definition should have scope to disallow conversion of natural ecosystems.		May task the Satoyama Initiative to provide information or conduct survey on socio-ecological production landscapes globally.
This indicator will need to recognise and monitor the huge contributions of small scale producers. For example, SDG indicators 2.3, 2.4 and 2.5 are highly relevant for customary sustainable use. Data generated for relevant indicators under this target need to be disaggregated for IPLCs and monitored through CBMIS.		
Productivity concept should be redefined. As it is currently used, productivity = tones of 'x' products. Productivity also should include: biodiversity of soil, production, etc.		
RFN believes that this target should encompass transformation of the entire food system, addressing not just sustainable production, but also soil health, food waste and loss, and sustainable diets. Monitoring this will require additional headline indicators, as proposed. Further to the comment above, in order to comprehensively address the entire food system, we also must reference and include aquaculture as well as 'blue' food aspects. Relevant headlines indicators would be: 1. Productive area under agroecology or ecosystem	Many Parties may require assistance to collect at national level	

approaches* (this would encompass fisheries and aquaculture). This would be a new indicator, but one that covers a critical issue 2. Sample food consumption survey data per country OR Global Volume of animal feed per capita (already collected by FAO) or, land footprint per kg protein. Those would measure the demand/diets side of food systems.		
The indicator should be expanded to include other ecosystems and to include those that employ customary and sustainable use	The indicator should be expanded to include other ecosystems and to include those that employ customary and sustainable use	
Missing links between food systems and people, such as benefits to livelihoods, human health and wellbeing. How do you define "productivity gaps"? The focus on intensified productivity does not reflect the multiple benefits arising from natural solutions and enhancing or sustaining soil biodiversity. Sustainable fisheries is not referred to in Target 9 but in Target 8, while aquaculture and sustainable forest management are mentioned under Target 9. Both fisheries and forestry are extractive and act largely in undomesticated areas, therefore fisheries management plans (Ecosystem approach to fisheries) are as much needed as forest management plans to achieve Target 1 on spatial planning. Formulation could be "areas under sustainable management plans". PROPOSED edits: Target 9. By 2030, support the productivity, sustainability and resilience of biodiversity in agricultural and other managed ecosystems through conservation and sustainable use of biodiversity in such ecosystems, reducing productivity gaps by at least [50%]. Relevant but difficult to quantify. Relevant Pacific Island indicator: Land under cultivation (% of total land area under cultivation)	No linkage between the Soil Biodiversity Action Plan (SBSTTA 7) and Targets in the GBF. Target 9 is one spot that the action plan could be mentioned and linked. How do you measure 'productive and sustainable agriculture'? Capacity development and training, much needed to support sustainable soil biodiversity and monitoring.	
WWF believes that this target should encompass transformation of the entire food system, addressing not just sustainable production, but also soil health, food waste and loss, and sustainable diets. Monitoring this will require additional headline indicators, as proposed. Further to the comment above, in order to comprehensively address the entire food system, we also must reference and include aquaculture as well as 'blue' food aspects.	Many Parties may require assistance to collect at national level	

Relevant headlines indicators would be: 1. Productive area under agroecology or ecosystem approaches* (this would encompass fisheries and aquaculture). This would be a new indicator, but one that covers a critical issue. 2. Sample food consumption survey data per country OR Global Volume of animal feed per capita (already collected by FAO) or, land footprint per kg protein. Those would measure the demand/diets side of food systems.		
SDG indicator 2.4.1 Need an operational definition of sustainable. The CBD defines sustainable use as a desirable end state. In that sense Target 9 tries to assure that agriculture is practiced in a way that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations. The indicator implies that sustainable is equivalent with not declining long-term biological diversity. In agriculture sustainability is used in the sense of long term crop productivity, but not whether the long term diversity of the agroecosystem is protected or conserved		We should have an indicator that measures biodiversity on agricultural land, both a farm scale as well as on landscape scale. Farm Land Biodiversity Index, World Agroforestry https://www.worldagroforestry.org/blog/2020/10/27/farmland-biodiversity-score-rwandas-report-convention-biological-diversity ; Agrobiodiversity Index Bioversity https://www.bioversityinternational.org/abd-index/
Productivity is not an objective of the CBD, while sustainable use it. We therefore suggest, an indicator that monitors the proportion of agricultural area under sustainable agriculture" alone, omitting the "productive".	Productivity is not an objective of the CBD, while sustainable use it. We therefore suggest, an indicator that monitors the proportion of agricultural area under sustainable agriculture" alone, omitting the "productive".	
We suggest an indicator that monitors the proportion of agricultural area under sustainable agriculture" alone, omitting "productive".	See above	
Reword as "Proportion of agricultural area certified as sustainable" the emphasis should be placed on ensuring 'sustainability'- as phrased it does not ensure that changing trends in 'productivity' are also 'sustainable'.	Reword as "Proportion of agricultural area certified as sustainable" as phrased it does not ensure tha changing trends in 'productivity' also infer that this is 'sustainable'- and emphasis should be placed on ensuring 'sustainability'.	Add Wild Bird Index (farmland species), produced by BirdLife/RSPB/EBBCC and USGS
Indicator needs to be directional - i.e. 'Increased proportion.' Productivity is not an objective of the CBD, while sustainable use is. We therefore suggest an indicator that monitors the proportion of agricultural area under sustainable agriculture" alone, omitting the "productive".		Change 9.0.1 to 'Proportion of agricultural area under sustainable regenerative agriculture.'
This indicator will need to recognise and monitor the huge contributions of small scale producers. For example, SDG indicators 2.3, 2.4 and 2.5 are highly relevant for customary sustainable use. Data generated for relevant	Yes, capacity building to recognise and monitor the huge contributions of small scale producers. For example, SDG indicators 2.3, 2.4 and 2.5 are highly relevant for customary sustainable use.	

indicators under this target need to be disaggregated for IPLCs and monitored through CBMIS. Here is relevant text from the SDGs: 2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment 2.3.1 Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size 2.3.2 Average income of small-scale food producers, by sex and indigenous status 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality. 2.4.1 Proportion of agricultural area under productive and sustainable agriculture 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed 2.5.1 Number of plant and animal genetic resources for food and agriculture secured in either medium or long-term conservation facilities 2.5.2 Proportion of local breeds classified as being at risk, not-at-risk or at unknown level of risk of extinction.	Data generated for relevant indicators under this target need to be disaggregated for IPLCs and monitored through CBMIS. Here is relevant text from the SDGs: 2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment 2.3.1 Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size 2.3.2 Average income of small-scale food producers, by sex and indigenous status 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality. 2.4.1 Proportion of agricultural area under productive and sustainable agriculture 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed 2.5.1 Number of plant and animal genetic resources for food and agriculture secured in either medium or long-term conservation facilities 2.5.2 Proportion of local breeds classified as being at risk, not-at-risk or at unknown level of risk of extinction.	
Productive is a problematic word if it merely means brute yield, so it needs to be defined in terms of biodiversity including agricultural biodiversity and related livelihoods. The same is true of sustainable - are we referring to brute yields or to benefits for sustainable ecosystems and	as stated, we need to delete or properly define productive and sustainable.	

livelihoods for example? Thus we need definitions for these words. We could replace both productive and sustainable by talking about agroecology.		
Reframe the target as "humane and sustainable use of such ecosystems"; Adding farming animal welfare indicators and AMR proper use in farming animals indicators into consideration		
We would like this indicator to move away from its focus on 'productivity'. There should be an indicator measuring uptake in agro-ecology, agro-environment and organic farming.		
We suggest an indicator that monitors the proportion of agricultural area under sustainable agriculture" alone, omitting "productive".	See above	
		Indicator: State and trends in extent, condition of places providing globally important services for food security and nutrition, and trends in flows of benefits from those places. Organization: Recent scientific advances allow us to map the global distribution of places that can be considered "high performing" in terms of delivering ecosystem services or "Nature's Contributions to People", per IPBES. Conservation International and partners with the Natural Capital Project, Stanford University, University of Minnesota, King's College London and many additional data providers have mapped the places globally that provide the highest levels of a range of multiple ecosystem services. Advances in remote sensing capabilities and geospatial analysis techniques support the measuring of ecosystem extent and in some cases, condition on spatial and temporal resolutions that are meaningful for national-level annual monitoring programs. Flows of ecosystem services can be estimated from spatial data on ecosystem extent and condition using modelling techniques and, ideally, verified with direct observation at the national or subnational level. The collaborators listed above are working on a methodology that will allow for regular updates to the data and mapping products that would support national

| | | monitoring programs.

Lastly, we recommend that wherever possible and appropriate, drawing on the UN SEEA for indicators to monitor progress towards goals and targets related to NCPs. |
|---|---|---|
| While we agree with a 50% target, there needs to be a clear definition of a) productive and b) sustainable. The present wording implies the priority is productivity (50% improvement) without setting a similar quantitative target for any of the multiple indicators that would likely fall under the definition of sustainable (e.g., 50% reduction in GHG emissions, 50% reduction in nutrient and sediment runoff, 50% increase in habitat connectivity etc.). Absent a clear definition and attempt to provide guidance on measurement this will likely lead to countries privileging the things they already measure (productivity) and neglecting the things that actually matter for biodiversity, the focus of the CBD. It will also likely be necessary to create national-level benchmarking for a multi-faceted target (possibly to be undertaken by the USFAO or other expert body). | The indicator would only be relevant for global reporting and enhancing standardization and comparability if it is expanded and applied as described in our above comments on the baseline target/indicator. | |
| Should include aquaculture in freshwater and marine areas | Should include aquaculture in freshwater and marine areas | Should include aquaculture in freshwater and marine areas |
| Firstly, separate headline indicators should be added for aquaculture and production forests. Current component indicators "9.1.4. Aquaculture production" and "9.1.5. Area of forest under sustainable management" can be used for this purpose and added as headline indicators.
Secondly, the original Indicator 9.0.1 on sustainable agriculture is too narrow to reflect the commitment to biodiversity in managed ecosystems that is included in Target 9. We therefore suggest that the following underlined text should be added "Proportion of biodiverse agricultural area under productive and sustainable agriculture."
Another possibility is to have an additional headline indicator: 9.0.2., focusing on domesticated genetic diversity. This headline indicator should measure genetic diversity in domesticated species, their breeds and varieties, their wild relatives, and associated agricultural species (soil microbes, pollinators, insectivores).
We believe that the component indicator 9.1.3 "Number of plant and animal genetic resources in collections" fails to fully take into consideration the roles and status of biodiversity as considered in Target 9 as it only refers to | Capacity building work is necessary for countries to be able to monitor trends in genetic diversity of domesticated species and their wild relatives in agricultural and other managed systems. Currently, only the number of samples in ex situ facilities is used as a global indicator of the maintenance of genetic diversity. Mechanisms need to be put in place for measuring in situ diversity. | We suggest strengthening the critical link here with landscape approaches of food systems by including as a component indicator, the current complementary indicator t1.17 "Percentage of cropped landscapes with at least 10% natural land'".
We also suggest to include another complementary indicator i.e. the "Soil biodiversity threats index" (https://esdac.jrc.ec.europa.eu/content/potential-threats-soil-biodiversity-europe).
We also suggest to add other component indicators to make sure that the remaining natural ecosystems and species populations, crucial for our ability to restore resilient ecosystems that can provide food, fibre, carbon and water regulation under current and future climates, are conserved. The remaining natural ecosystems are the primary – and often also the only – sources of seed for the vast majority of known tree species. We propose component indicator: "Number of tree species for which identified seed sources exist across their |

ex situ diversity and fails to mention diversity that is actively being used and conserved through use in sustainable production systems. Just by keeping the genetic resources within conservation facilities will not achieve the target and would be counter intuitive. Therefore, we believe there needs to be a broader or additional indicator that also measures the genetic diversity of domesticated crops and breeds within the agricultural areas. A possible additional indicator could be measuring the "trends in genetic diversity of domesticated species and their wild relatives in agricultural and other managed systems" to see how biodiversity is diverse within ecosystems.		range". Here the parties can use or build on existing OECD guidelines on tree seed (] OECD. 2013. Guidelines on the Production of Forest Reproductive Materials. https://www.oecd.org/agriculture/forest/publicati ons/ .)
The productivity is out of the scope of the Convention and it should be removed from the target. Thus indicators also should not include the "productive". Also, it should not focus on only agricultural area but also other productive landscapes.		

Target 10. By 2030, ensure that nature-based solutions and ecosystem approach contribute to regulation of air quality, hazards and extreme events and quality and quantity of water for at least [XXX million] people

10.0.1 Population living in areas with clean air and clean and accessible water*

10.0.1 If you selected "yes, however requires further work", please describe:	10.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	10.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
		NBS is an unclear concept, with many negative consequences. We cannot base targets, and therefore also not the related indicators, on this concept.
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
		Population who can live with clean air and clean and accessible water without depriving them away from others or from biodiversity's ability to regenerate.

		CBD should maintain monitoring. But it is not true to assume that the target 10 that what is called 'nature-based solutions' would somehow "contribute to regulation of air quality, hazards and extreme events and quality and quantity of water".
As mentioned before, any indicators related to sustainable use and benefit sharing should be gender-disaggregated.		
The prerequisite is that areas with clean air and accessible water exist – then the people can benefit from it. It is therefore sufficient to look at this, and omit the population that lives there.	The prerequisite is that areas with clean air and accessible water exist – then the people can benefit from it. It is therefore sufficient to look at this, and omit the population that lives there.	
Clean water and clean air may be results of processes other than nature-based solutions or ecosystem approaches.		
		NbS is a market-oriented indicator which encourage business as usual. This is contrary to biodiversity conservation goals
"clean" can represent a range of "cleanness". Accessibility may be physical (sources close to villages) and also price. Add "that is supplied as an ecological service" to it separates out desalinization plants	see above	
The prerequisite is that areas with clean air and accessible water exist – then the people can benefit from it. It is therefore sufficient to look at this, and omit the population that lives there.	The prerequisite is that areas with clean air and accessible water exist – then the people can benefit from it. It is therefore sufficient to look at this, and omit the population that lives there.	
The prerequisite is areas with clean air and accessible water, which people can benefit from. It is sufficient to monitor these areas and not refer to the population living there.	See above	
Targets 10 are more appropriate under target 6 and 7, as the aim of target 10 to ensure that nature-based contributions regulate clean air and water can be reached through the targets under 6 and 7.		Merge 10 under 6 and 7.
people don't always have a choice about where they live, and not clear how this may link to investments in NbS, rather than actions to improve air quality/reduce emissions	as above	
The prerequisite is areas with clean air and accessible water, which people can benefit from. It is sufficient to	See above	

monitor these areas and not refer to the population living there.		
		As mentioned related to the indicator for Goal B, while numbers of people benefitting from a particular natural area is an attractive indicator, it is very difficult to estimate because allocating services to people depends on the level of dependency an individual or a population has on the service (direct vs peripheral). Further, field verification of population benefitting is challenging due the high cost of conducting household surveys. In addition, for some of nature's contributions to people, the benefits should not be limited to a subset of the global population because of how essential the need is for things like clean drinking water or clean air. Therefore, we suggest instead an alternative set of headline indicators: Indicator: State and trends in extent and condition of places providing globally important services for the regulation of water quantity, quality, location, and timing, and trends in flows of benefits from those places. Organization: Recent scientific advances allow us to map the global distribution of places that can be considered "high performing" in terms of delivering ecosystem services or "Nature's Contributions to People", per IPBES. Conservation International and partners with the Natural Capital Project, Stanford University, University of Minnesota, King's College London and many additional data providers have mapped the places globally that provide the highest levels of a range of multiple ecosystem services. Advances in remote sensing capabilities and geospatial analysis techniques support the measuring of ecosystem extent and in some cases, condition on spatial and temporal resolutions that are meaningful for national-level annual monitoring programs. Flows of ecosystem services can be estimated from spatial data on ecosystem extent and condition using modelling techniques and, ideally, verified with direct observation at the national or subnational level. The collaborators

		listed above are working on a methodology that will allow for regular updates to the data and mapping products that would support national monitoring programs. Lastly, we recommend that wherever possible and appropriate, drawing on the UN SEEA for indicators to monitor progress towards goals and targets related to NCPs.
The link to ecosystem services is not apparent in this indicator. Better to focus on percentage of population benefiting from protection of sourcewater areas.	This indicator is not yet available and would have to be developed.	
		This is not about biodiversity. This target and indicators are needed to be reconsidered from the context of how to use biodiversity sustainably. It is too early to indicate the exact name of the indicator at this stage.
10.0.2 Ecosystems providing reduced coastal erosion, flood protection and other services)*		
10.0.2 If you selected "yes, however requires further work", please describe:	**10.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**10.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
Indicator can be disaggregated to mountain relevant scales. By using indicator 10.0.2 and disaggregating it to mountains at multiple scales, countries support the reduction of disaster-related loss and damage to mountain communities, in particular linked to risks due to climate change and other drivers, promote integrated (spatial) planning and management based on ecosystems' health and integrity and support sustainable development and support policy measures that safeguard mountain ecosystem services.		
		NBS is an unclear concept, with many negative consequences. We cannot base targets, and therefore also not the related indicators, on this concept.
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
As with nature based solutions for climate mitigation, there will need to be some qualifiers on this to avoid the perverse incentive to use artificial/plantation forests (for	As with nature based solutions for climate mitigation, there will need to be some qualifiers on this to avoid the perverse incentive to use artificial/plantation forests (for example) as a	

example) as a means to increase the output of this indicator at the expense of biodiversity.	means to increase the output of this indicator at the expense of biodiversity.	
Flood regulation could be captured by an Index of green water storage * number of people downstream (from Mulligan 2016) Unitless risk reduction index * number of people within protective distance (from Chaplin-Kramer et al. 2019)		
There is no metric here just "ecosystems". This needs to assess for example the increase area or population at risk from degraded ecosystems.		
As mentioned, this target and this indicator do not contribute to implementing the CBD's objectives as this does not indicate anything about biodiversity conservation, sustainable use or benefit sharing.		
Include "improving water quality, protecting and restoring critical habitats"		
		same comment as previous
The target should include peoples contribution to nature. Indigenous peoples wishes to highlight approaches which are ecosystem-based, human rights based, as well as culture-based including their inter-linkages. These approaches avoid the potential for rebranding harmful practices as "nature-based solutions".	The target should include peoples contribution to nature. Indigenous peoples wishes to highlight approaches which are ecosystem-based, human rights based, as well as culture-based including their inter-linkages. These approaches avoid the potential for rebranding harmful practices as "nature-based solutions".	
A consideration could be to add some indicators based on the NbS definition e.g. actions to protect, sustainably manage and restore national or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.	Parties may require assistance to measure at national level	
Formulation, availability, and maintenance unclear	see above	
In principal it is appropriate to measure the ecosystem service benefits derived from ecosystems as a headline indicator for T10. Though in its current form it is not clear what the metric would be - in particular how individual ecosystems and associated services would be accounted for and/or reflected in one overarching metric (presumably of a measure of 'ecosystem services'). Secondly, whilst the scope of this indicator aligns to the current framing of the target, we would recommend expanding this element		

to recognise the full suite of regulating ecosystem services benefits (i.e. including climate mitigation).		
We find the term ecosystem services problematic, because it highlights human requirements from ecosystems, whereas ecosystems have many different functions that do not directly serve people, or are not yet understood but may be discovered to do so. The totality of an ecosystem, its integrity, includes many different interactive functions, which the term services does not reflect.	We have to address the difference between ecosystem functions and services as noted above.	
		We suggest this alternative headline indicator: Indicator: State and trends in extent and condition of places providing globally important services for climate mitigation, adaptation, and disaster resilience, and trends in flows of benefits from those places. Organization: Conservation International can track annually the proportion of irrecoverable carbon that is intact.
Unclear what unit of measurement is/would be.	Would be challenging to roll up globally.	
How is this to be measured? It should be clear in the indicator. Also, disaster risk reduction is already mentioned in another target, so this is a duplication and is not clear.		

Target 11. By 2030, increase benefits from biodiversity and green/blue spaces for human health and wellbeing, including the proportion of people with access to such spaces by at least [100%], especially for urban dwellers

11.0.1   Average share of the built-up area of cities that is green/blue space for public use for all

11.0.1 If you selected "yes, however requires further work", please describe:	11.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	11.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.

		We suggest the exclusion of this indicator (biased baselines), especially for punishing unfairly developing countries.
Perhaps not all green/blue space is created equally so if some simple categorizations that identify quality of green/blue space for biodiversity, this might help improve its relevance in that regard instead of just mowed fields for instance.	Perhaps not all green/blue space is created equally so if some simple categorizations that identify quality of green/blue space for biodiversity, this might help improve its relevance in that regard instead of just mowed fields for instance.	
Average share of the wild, virgin and built-up areas of cities that is green/blue space for public use for all.	People having access to allotment gardens and spaces where to create forest allotment gardens for community oriented uses. Indicator: Access to green/blue spaces which is equitable in respect to how people sustain regeneration of such spaces, taking also into account all the rights recognised for people on lands, forests and waters which they need to live.	
While we generally agree on the indicator, we suggest to also look at the distribution and accessibility. How about proportion of built-up area of cities with green/blue spaces within 500m?	While we generally agree on the indicator, we suggest to also look at the distribution and accessibility. How about proportion of built-up area of cities with green/blue spaces within 500m?	
should be desaggregated by cities ring		
We agree that in addition to providing benefits to people, such urban spaces should be managed in such a way as to maximise their contribution to biodiversity protection - e.g. through planting of native species, providing space for migrant birds etc.		
While we generally agree on the indicator, we suggest to also look at the distribution and accessibility. How about proportion of built-up area of cities with green/blue spaces within 500m?	While we generally agree on the indicator, we suggest to also look at the distribution and accessibility. How about proportion of built-up area of cities with green/blue spaces within 500m?	
We propose refining this indicator to look at distribution and accessibility of green/blue spaces by measuring the proportion of built-up area of cities with green/blue spaces within 500m.		
May be bet to frame as "new built-up areas" rather than existing areas which are very difficult to green		
We propose refining this indicator to look at distribution and accessibility of green/blue spaces by measuring the proportion of built-up area of cities with green/blue spaces within 500m.	See above	

The indicator should clearly state that the share of built-up area and green/blue space has prioritized the use and improvement of existing infrastructure and nature-based infrastructure.	In order for this indicator to be reported globally, national reporting should focus on applying strategic environmental impact assessments and integrated, multi-sectoral land and seascape planning, which will require further capacity building efforts.	
It does not need to be "public use for all" from the standpoint of biodiversity. This only applies to urban parks basically, but we need to consider the benefits of gardens and other kinds of green spaces, as well as access to nature other than urban parks. Likewise, it is very strange that the Target itself goes out of its way to specify "urban dwellers".		

Target 12. By 2030, increase by [X] benefits shared for the conservation and sustainable use of biodiversity through ensuring access to and the fair and equitable sharing of benefits from the utilization of genetic resources

12.0.1   Numbers of users that have shared benefits from the utilization of genetic resources and/or traditional knowledge associated with genetic resources with the providers of the resources and/or knowledge

12.0.1 If you selected "yes, however requires further work", please describe:	12.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	12.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
Number of users can be a completely equivocal indicator. What if these users have been forced to share, or it was without their knowledge and/or consent, as is often the case? Please specify this in the indicator. Again an example of an indicator which can actually lead to the opposite effect of the one desired!		
Proposal : "Numbers of users that have shared benefits for the conservation and sustainable use of biodiversity from the utilization of genetic resources and/or traditional knowledge associated with genetic resources with the providers of the resources and/or knowledge	See above	
The interests of the vulnerable population need to be protected so they are sufficiently represented among the users.		

Numbers of users and communities that have shared maintenance and diverse uses of local biodiversity rich areas with the providers of the resources and/or traditional knowledge		
As under C.0.1, we would like to highlight the potential difficulties in comparing data between countries due to 1) the different scope of obligations in the ABS laws of different countries which result in different definitions of "utilisation" and consequently of "users" and the 2) different degree of access and utilization which might also have an impact on the number of users. Benefits for conservation and sustainable use of biodiversity created from research on genetic resources generally have a larger impact beyond the direct sharing of such benefits with providers. If the indicator is intended to measure increase in benefits shared for conservation and sustainable use more globally under Target 12, then a broader indicator should be considered. As mentioned under Goal C, it should also not be forgotten that many countries have decided not to regulate access to and benefit sharing from utilisation of genetic resources under their national sovereignty. Utilisation of such non-regulated resources also contributes to Target 12 and should be taken into account in the indicator.	See above.	An indicator which is more targeted to measuring the efficacy of different ABS approaches in contributing to conservation and sustainable use of biodiversity could be developed, to track utilisation resulting in solutions or information that can (best) support biodiversity conservation.
1. The total amount should be capable of being disaggregated so that the following can be observed: (i) users according to country/region, user type and industry; (ii) monetary vs. non-monetary sharing; (iii) GR vs TK; (iv) flow of benefits according to provider country/region.		
We propose to add an option for disaggregating the results of this indicator along the distinctions between commercial and non-commercial users (and outcomes), as well as shared monetary and non-monetary benefits. In this way, the to be expected high proportion of users sharing non-commercial and non-monetary research data, results, publications and further benefits with providers will become visible and quantifiable. "Number of datasets published by ex-situ facilities through data aggregators such as INSDC databases, BOLD or GBIF accessible has increased." The increased number of datasets on data platforms such as INSDC, BOLD or BOLD would be a suitable metric. Increased availability and accessibility to objects and related information is key	A focus for this indicator should be to especially increase the valuation of non-monetary benefits that are already shared today from non-commercial basic research such as taxonomy.	

not only for many post-2020 goals, targets and indicators, but also for AICHI Targets 19 & 9 and SDGs 14 & 15		
		Again an indicator that focuses on the number (population) of users is likely to distort the process from something that enhances the value of ES / uses to simply where a lot of people live and are dependent upon benefits from biodiversity. A focus on value and equitable sharing would be better.
		Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted (Number of countries at the global level). These data should be available at national and CBD levels. The objective of the CBD is to ensure that this mechanism works, but there is no objective to increase productivity levels via the Nagoya Protocol or ABS in general.
Both the number of user-provider agreements and proportion of users sharing the benefits (whatever the form) should be monitored.	Ways to document relevant transaction could be a challenge.	
The indicator looks well, however we can work on average of number of users that haven´t share benefits vs number of users that have shared benefits … and use % as indicator	Have a percentage as an indicator could help to give more clarity about the real impact of Nagoya Protocol implementation. And work more in what means "fair and equitable" at the local level.	
should be desagreegated by gender and place of origen		
Disaggregated data by IPLC, men and women We also propose additional indicators to measure benefit sharing: ● Number of IPLC and other groups involved/engaged in ABS regimes as either providers or recipients. ● Types of benefit-sharing (monetary/non-monetary) included in agreements.		
		Benefit-sharing with IPLCs should be broadened to include benefits arising from the use of biological resources and ethical bio-trade, payments for environmental services such as watershed management and broad societal benefits such as clean water for cities; and carbon sequestration from customary forest management. Propose: Number of Countries that require

		disclosure, FPIC and benefit sharing prior to granting intellectual property rights over inventions and works based on indigenous and local knowledge, genetic resources or biological resources of indigenous peoples and local communities.
The indicator is ok, but the question is should it be from the users that share benefit, or should it be from the providers that have received benefits – the question here is who would be best suited to confirm that benefits have really been shared? Therefore, I think it should be community, resource owners and T.K holders that should confirm .		Replace the text 'Users that have shared' to 'providers that have received' in the current indicator.
Disaggregated data by IPLC, men and women WWF proposes additional indicators proposed to measure benefit sharing: ● Percentage of benefits shared to IPLC and other custodian groups ● Number of IPLC and other groups involved/engaged in ABS regimes as either providers or recipients. ● Types of benefit-sharing (monetary/non-monetary) included in agreements.		
Formulation, availability, and maintenance unclear. How to define a shared benefit is unclear	Formulation, availability, and maintenance unclear	
		12.0.3 Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted (Number of countries at the global level). These data should be available at national and CBD levels. The objective of the CBD is to ensure that this mechanism works, but there is no objective to increase productivity levels via the Nagoya Protocol or ABS in general.
		The objective of the CBD is to ensure the mechanism for access and benefit sharing works; there is no objective to increase productivity levels via the Nagoya Protocol or ABS in general. We propose a single indicator for target 12 (see 12.0.3)
		We propose for "biological resources and ecosystem services" to be included in the headline indicator.

The wording is clumsy because it could be read that it is only the users that are beneficiaries, rather than the providers.		
Again this is purely quantitative because the benefits may be of very different value or nature according to how they are shared and who precisely with. Thus it needs a lot more analysis and disaggregation before it can be useful.	it is not yet of value, unless analysed in greater depth as to who benefits and how.	
		The objective of the CBD is to ensure the mechanism for access and benefit sharing works; there is no objective to increase productivity levels via the Nagoya Protocol or ABS in general. We propose a single indicator for target 12 (see 12.0.3)
Should include "biological" resources in addition to genetic resources.		

12.0.2 Number of access and benefit-sharing permits or their equivalent granted for genetic resources (including those related to traditional knowledge)

12.0.2 If you selected "yes, however requires further work", please describe:	12.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	12.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
Proposal "Number of access and benefit-sharing permits or their equivalent granted for genetic resources (including those related to traditional knowledge) for the conservation and sustainable use of biodiversity"	See above	
The multinational companies have more power than the populations with traditional knowledge. How could we ensure such permits represent fairly their interests and that those were not even without pressures?	The transnational aspect is important and vulnerable populations that are victims of systemic violence may not be represented in such number.	
		Indicator: Number of people whose human rights have become better fulfilled by such secured access to diversity of plants, animals, fungi and other life, which allows this diversity to regenerate. CBD may cooperate with UN human rights system to maintain this indicator.

		("Number of access and benefit-sharing permits" does not necessarily reflect "increase by [X] benefits shared for the conservation and sustainable use")
The indicator here is intended in part to measure how ensuring access and fair and equitable benefit sharing increases benefit sharing towards conservation and sustainable use. For this purpose, it is insufficient and misleading as it is focused purely on ABS regimes which regulate access, and assumes that increasing ABS regulation will lead to more benefits for conservation and sustainable use. This does not reflect the range of approaches that may be adopted by countries, including those that exercise their sovereign right to decide not to regulate access and benefit sharing. Many countries grant access without requiring prior informed consent so as to focus on the creation of value via unencumbered use of its genetic resources; this contribution to enabling access to genetic resources to allow benefit creation and sharing should also be captured in the indicators. Experience has shown that increased bureaucratic measures in fact discourage or prevent access thereby decreasing the potential to create benefits to be shared. Instead of solely including quantitative indicators measuring number of permits and access regulations, the focus should be on effective access to ensure value creation. We recommend prioritising qualitative indicators focussed on such effective access which enables the productive use of genetic resources. For those countries which have implemented access measures, the following elements could be added as indicators to measure the extent to which their implementation is actually resulting in access and utilisation: • The ratio of requested and granted access requests • The number of access permits granted within a reasonable timeframe, also taking into consideration criteria such as the number of access permits whose conditions enabled the actual use of genetic resources in R&D projects; • The number of access permits granted to public institutions and private organisations.	See above.	See above

This needs a companion indicator indicating the average time taken to obtain a permit or equivalent. This should be capable of being disaggregated so that the following can be observed: (i) providers according to country/region; (ii) users according to type and industry; (iii) whether commercialization permitted; (iv) benefit sharing modalities		
Standardized data on granted access permits, especially with respect to Art. 8a NP would be a good indicator for the increase of granted access permits internationally.		
This is a valuable indicator but the legislative, administrative and policy frameworks have to be inclusive; it needs an indication of how inclusive the mechanism of applying for permits is		
There has to be regulation for access to avoid patenting of traditional knowledge which can reduce benefit sharing for the IPLCs, women etc. Indicators related to sustainable use and benefit sharing should be gender-disaggregated.		
		Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted (Number of countries at the global level). These data should be available at national and CBD levels. The objective of the CBD is to ensure that this mechanism works, but there is no objective to increase productivity levels via the Nagoya Protocol or ABS in general.
should be desaggregated by gender and place of origen	should be desaggregated by gender and place of origen	
		Propose: Number of internationally-recognized certificates of compliance (IRCC) that identify indigenous peoples and local communities as the source of resources or knowledge and provide evidence of PIC, FPIC and MAT.
		Why ABS permits and not ABS agreements? ABS permits can be an indicator of legislative and policy frameworks in place in country (domestic implementation) but does not really mean that ALL such permit is leading up to benefit sharing. Some may be ABS permit but may not even reach a stage of benefit sharing (some countries look at the actual benefit sharing at a much later stage)

Formulation, availability, and maintenance unclear	see above	
		12.0.3 Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted (Number of countries at the global level). These data should be available at national and CBD levels. The objective of the CBD is to ensure that this mechanism works, but there is no objective to increase productivity levels via the Nagoya Protocol or ABS in general.
It is not clear what exactly is covered by access and benefit sharing, for example genetic resources alone, or genetic resources and traditional knowledge.	The GBF will need stronger rights language to ensure the Nagoya Protocol commitments are applied, as indicated by recent IIED research: https://pubs.iied.org/sites/default/files/pdfs/2021-04/20156IIED.pdf	
Again this indicator is quantitative not qualitative and requires a lot more definition of the different quality of permits and who benefits, before it can be used.		
		See comments on 12.0.3
Number of users (12.0.1)and number of permits are very similar measures. Either would be fine. But this target needs a measure of actual benefits delivered. This should include non-monetary benefits such as training programs and trained scientists to enable countries to benefit from their own utilization of genetic resources. See answer to C.0.2.	As described above.	
Should include contractual agreements with IPLCs and pertain to biological resources as well.		

12.0.3 Extent to which legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits have been adopted*

12.0.3 If you selected "yes, however requires further work", please describe:	12.0.3 If you selected "yes, however requires further work on capacity-building or other work", please describe:	12.0.3 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant

		scales or has no specific relevance for mountain ecosystems and biodiversity.
We suggest to mention FPIC and MAT in addition, as important principles of ABS regulations. So it would read: "12.0.3 Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted (Number of countries at the global level). These data should be available at national and CBD levels"		
Proposal: "Extent to which legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits for conservation of biodiversity have been adopted	See above	
		We suggest the exclusion of this indicator, because it is not measurable (it is very subjective)
As CBD obliges states to ensure conservation and sustainable use with fair and equitable sharing of benefits "taking into account all rights over" the concerned diversity of plants, animals, fungi and microbes, thus we propose the indicator to be: "Extent to which fair and equitable sharing of benefits from conservation and sustainable use of biodiversity fulfills human rights related to the regenerating diversity of plants, animals, fungi and microbes"	As presented above, the monitoring has to be "taking into account all rights over" the concerned diversity of plants, animals, fungi and microbes, and the indicator should be amended accordingly.	
		This indicator assumes that ABS regulation helps ensure access and fair and equitable benefit sharing, and that increasing such regulation will automatically contribute to increasing benefits for conservation under Target 12. This however does not reflect the reality that many such regulations in fact hinder access and therefore decrease the potential to create benefits to be shared. It also does not reflect the sovereign rights of countries to decide if and how they want to regulate ABS. Some countries, for instance, have decided not to control access and to focus on the creation of value or benefits – including for biodiversity conservation and sustainable use – via unencumbered use of their genetic resources. Many countries grant access without requiring prior informed consent. These

approaches and their contribution to the creation of benefits for conservation should also be captured in the indicators.
Instead of solely including quantitative indicators measuring the number of regulations, we recommend prioritising qualitative indicators focussed on different scenarios for granting access to genetic resources and their respective potential for enabling the productive use of genetic resources. The focus should be on efficacy and effectiveness e.g. workable policies and regulations and impact.

Since legal certainty is of key importance in encouraging utilisation and the creation of value in the context of biodiversity, this indicator could be reformulated to:

"Extent to which information in the ABS-CH relating to legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits is complete and up-to-date".

This would also support the implementation of Article 14, paragraph 2, of the Protocol, and decisions relating to ensuring that such information is put into the Clearing House , such as:
* decision NP 3/3 on ABS procedures (https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.cbd.int%2Fdoc%2Fdecisions%2Fnp-mop-03%2Fnp-mop-03-dec-03-en.pdf&data=04%7C01%7Cdaphne.yongdherve%40iccwbo.org%7C00b29e17931047aecc9008d9171da2a1%7Cc541a3c6520b49ce82202228ac7c3626%7C0%7C0%7C637566238314683320%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=aNj7MttbjcICp03NNPxrK9ikjvbP4HWJ25uuBB%2BxQFg%3D&reserved=0)
* decision NP 3/1 on ABS permits or their equivalents (https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.cbd.int%2Fdoc%2Fdecisions%2Fnp-mop-03%2Fnp-mop-03-dec-01-en.pdf&data=04%7C01%7Cdaphne.yongd

		herve%40iccwbo.org%7C00b29e17931047aec c9008d9171da2a1%7Cc541a3c6520b49ce822 02228ac7c3626%7C0%7C0%7C63756623831 4688315%7CUnknown%7CTWFpbGZsb3d8ey JWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTi I6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&amp ;sdata=DlR6mfxw%2FO6MY%2Bt%2BqfxKf%2 BSbUEU3tB5%2B40JhaIPyZ0s%3D&rese rved=0), paragraph 6; Another indicator could also measure the extent to which Article 6 of the Nagoya Protocol has been implemented - and notably Article 6(3), which sets out the criteria which ABS measures should fulfil, as such criteria will help enable utilisation leading to benefits for conservation.
		The experience of research community is that legislative, administrative or policy frameworks that seek to ensure fair and equitable sharing of benefits often have an opposite chilling effect. The indicator should not measure the extent to which such measures have been "adopted" rather, they should focus on the extent to which they have "enabled" ABS, for example, by measuring the "Extent to which legislative, administrative or policy frameworks have enabled (a) access to and utilization of genetic resources; and (b) fair and equitable sharing of benefits".
Legislation specific to regulate access to genetic resources and traditional knowledge		
In principle, we agree with this indicator – it is the only one that focusses on the implementation of the CBD's objective and not on increasing productivity. We suggest to mention FPIC and MAT in addition, as important principles of ABS regulations. 12.0.3 Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted (Number of countries at the global level). These data should be available at national and CBD levels	In principle, we agree with this indicator – it is the only one that focusses on the implementation of the CBD's objective and not on increasing productivity. We suggest to mention FPIC and MAT in addition, as important principles of ABS regulations. 12.0.3 Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted (Number of countries at the global level). These data should be available at national and CBD levels	
This is procedural, but the results should be monitored.		

Just to clarify " at national level" or "parties" after frameworks	Same than above	
RFN proposes alternative wording: "Trends in National policies, laws, programes and projects supporting access and benefit-sharing provisions with IPLCs".		
Propose amendments: Number of countries that adopt legislative, administrative or policy frameworks for the implementation of the Nagoya Protocol and the CBD and related international instruments, and recognize community protocols and procedures and customary laws	Propose amendments: Number of countries that adopt legislative, administrative or policy frameworks for the implementation of the Nagoya Protocol and the CBD and related international instruments, and recognize community protocols and procedures and customary laws	
It is somewhat working toward that indicator but largely fails to address noncompliance issues. Therefore, instead of listing ABS compliance mechanisms, there should be a monitoring or compliance report that shall indicate the success and effectiveness of target 12.	Revise the text to reflect compliance report and monitoring instead of just legislative, administrative and policy framework. These legislations can be in place but if no enforcement then the indicator may not be giving accurate picture of the progress of the Target.	
WWF proposes alternative wording: "Trends in National policies, laws, programmes and projects supporting access and benefit-sharing provisions with IPLCs".		
Formulation, availability, and maintenance unclear. Framework "adopted" may not = framework "exercised." "adopted" alone is not sufficient. Needs to be complemented by "implemented and enforced"	see above	
In principle, we agree with this indicator – it is the only one that focusses on the implementation of the CBD's objective and not on increasing productivity. We suggest to mention FPIC and MAT in addition, as important principles of ABS regulations. 12.0.3 Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted (Number of countries at the global level). These data should be available at national and CBD levels	In principle, we agree with this indicator – it is the only one that focusses on the implementation of the CBD's objective and not on increasing productivity. We suggest to mention FPIC and MAT in addition, as important principles of ABS regulations. 12.0.3 Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted (Number of countries at the global level). These data should be available at national and CBD levels	
We suggest mentioning FPIC and MAT as important principles of ABS regulations. The objective of the CBD is to ensure that this mechanism works, but there is no objective to increase productivity levels via the Nagoya Protocol or ABS in general. Propose amending 12.0.3: Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing	We suggest mentioning FPIC and MAT as important principles of ABS regulations. The objective of the CBD is to ensure that this mechanism works, but there is no objective to increase productivity levels via the Nagoya Protocol or ABS in general.	Propose a single indicator for target 12: Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted (Number of countries at the global level). This data should be made available at national and CBD levels.

of benefits based on FPIC and MAT have been adopted (Number of countries at the global level). This data should be made available at national and CBD levels.		
Coverage of legislative, administrative and policy frameworks should include other benefit sharing instruments, e.g. the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), ethical Bio-trade and payments for environmental services.	Coverage of legislative, administrative and policy frameworks should include other benefit sharing instruments, e.g. the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), ethical Bio-trade and payments for environmental services.	
We suggest mentioning FPIC and MAT as important principles of ABS regulations. The objective of the CBD is to ensure that this mechanism works, but there is no objective to increase productivity levels via the Nagoya Protocol or ABS in general.	as above	Propose a single indicator for target 12: Extent to which fully functioning legislative, administrative or policy frameworks to ensure fair and equitable sharing of benefits based on FPIC and MAT have been adopted (Number of countries at the global level). This data should be made available at national and CBD levels.
Definition of fair and equitable will be problematic if not specified	Definition of fair and equitable will be problematic if not specified. This will require standardization and significant capacity development	Definition of fair and equitable will be problematic if not specified. This will require standardization and significant capacity development
While putting laws/measures in place to implement international agreements is a necessary step, just having them in place won't tell you much about the amounts of benefits that are actually being shared. Sometimes these laws can actually undermine benefit sharing if they are so cumbersome that no one ever accesses materials under them. Also, the indicator could be explicitly expanded to include subnational measures by non-governmental entities, perhaps most importantly, indigenous peoples and local communities. Biodiversity community protocols are proliferating around the world, they have demonstrated to be a useful tool for IPLCs' engagement in ABS agreements, and their number worldwide should be relatively easy to monitor. To this end, we propose to include in this indicator, or add another one as follows: "Number of IPLCs that have developed biodiversity community protocols or other tools for engaging in ABS regimes as either providers or recipients and/or the number of national level implementation mechanisms that formally recognize IPLC protocols".		We would like to suggest an additional headline indicator as follow: Name of the indicator: 12.0.4: "Monetary and non-monetary benefits arising from the use of genetic resources that are being shared". Organizations: ABS national focal points under the CBD and the Nagoya Protocol (who could pull together non-confidential, aggregated information); Secretariat of the Plant Treaty (for funds disbursed by the benefit sharing fund); research organizations and private enterprises (some of which already publish their benefit-sharing activities; governments of the countries where they are based could request them to do so via the resolution adopting the Post 2020 framework and in subsequent COP resolutions).

Target 13. By 2030, integrate biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies and accounts at all levels, ensuring that biodiversity values are mainstreamed across all sectors and integrated into assessments of environmental impacts

13.0.1 Extent to which national targets have been adopted for integrating biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies and accounts at all levels, ensuring that biodiversity values are mainstreamed across all sectors and integrated into assessments of environmental impacts*

13.0.1 If you selected "yes, however requires further work", please describe:	13.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	13.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
		According to decision 14.3, mainstreaming was to be a key part of the GBF. In our opinion, the elements involved should be part of this framework. Therefor we would have more targets relating to this, and a lot more indicators as well. Trying to solve huge structural issues by responding to a specific indicator is impossible. On the specific indicator: even though theoretically other "values" could be taken into account, in practice this leads to monetarising biodiversity. This is problematic because: it is an unproven hypothesis that such valuation leads to improved biodiversity status knowing the "economic value" of biodiversity actually makes that the comparison to planned profitable projects results negative, and destruction happens. We need indicators that measure how biodiversity is assigned key importance, e.g. designation of no-go areas for corporate projects because of intrinsic/spiritual values
		Number of Environonental Impact Assessment Reports oficially submitted and approved to national public authorities
This is an extremely important measure but will need careful thought on the methodology - i.e. how will this be	This is an extremely important measure but will need careful thought on the methodology - i.e. how	

measured in a meaningful and consistent way across countries?	will this be measured in a meaningful and consistent way across countries?	
The ways how states integrate "biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies and accounts at all levels" as "mainstreamed across all sectors" have to be verified to be such that different sectors' policies, regulations, etc. can not distort the content of the totality of the CBD obligations.	Also in this respect it has to be ensured that the ways how states integrate "biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies and accounts at all levels" as "mainstreamed across all sectors" are verified to be such that different sectors' policies, regulations, etc. can not distort the content of the totality of the CBD obligations.	
The indicator should focus on the number of sectors (predefined) that have adopted mainstreaming policies etc (most countries already have national targets but translating targets into action is the sticking point		
		This indicator aligns well with the Edinburgh Declaration's call for effective biodiversity mainstreaming across all sectors and with the significant role that subnational governments, cities and local authorities play in the mainstreaming of biodiversity actions.
There is an important difference between integration, mainstreaming and alignment. For this target and indicator to contribute to CBD implementation policies, regulations and national accounting systems should be aligned with the CBD, which requires broader actions than just integration or mainstreaming.		
Both the target and the indicator need to acknowledge that values are not only financial but also spiritual or other non-monetary values (e.g. contribution to physical and mental health). We suggest to insert the word "diverse" before "values" in both target and indicator to reflect this.	Both the target and the indicator need to acknowledge that values are not only financial but also spiritual or other non-monetary values (e.g. contribution to physical and mental health). We suggest to insert the word "diverse" before "values" in both target and indicator to reflect this.	
		This is procedural, but the outcome must be evaluated.
Who defines the biodiversity values?, do IPLCs and women participate in this definition?		
	Parties may require assistance to measure at national level	
The work of IPBES on diverse knowledge systems and multiple values of nature needs to be reflected. As the Target refers to biodiversity values, it should explicitly	the work of IPBES on diverse knowledge systems and multiple values of nature needs to be reflected. As the Target refers to biodiversity values, it should	

mention multiple values of biodiversity emanating from diverse knowledge systems. Propose to replace 'biodiversity' to 'biological and cultural values' and to insert 'cultural and social' impacts after environmental	explicitly mention multiple values of biodiversity emanating from diverse knowledge systems. Propose to replace 'biodiversity' to 'biological and cultural values' and to insert 'cultural and social' impacts after environmental	
The challenge is to keep the 'values' and not look at economic or monetary value of biodiversity alone. Headline indicator could also include: - Number of countries and competent organisations that that have integrated and applied into their decision-making processes, generally agreed standards, including those contained in: - the 2012 CBD Voluntary Guidelines for the Consideration of Biodiversity in Environmental Impact Assessments and Strategic Environmental Assessments in Marine and Coastal Areas; - The 2008 FAO International Guidelines for the Management of Deep Sea Fisheries in the High Seas	Parties may require assistance to measure at national level	
Relationship to SDG indicator 15.9.1 needs clarification; would support this as "yes" if these are the same	The biodiversity values referenced here need to definitely include cultural values – not sure that they do?	
Both the target and the indicator need to acknowledge that values are not only financial but also spiritual or other non-monetary values (e.g. contribution to physical and mental health). We suggest to insert the word "diverse" before "values" in both target and indicator to reflect this.	Both the target and the indicator need to acknowledge that values are not only financial but also spiritual or other non-monetary values (e.g. contribution to physical and mental health). We suggest to insert the word "diverse" before "values" in both target and indicator to reflect this.	
Both the target and the indicator need to acknowledge that values are not only financial. We suggest inserting the word "diverse" before "values" in both target and indicator to reflect this.		
As worded this indicator is not measurable as the mention of 'Extent to which...' is unclear, leading to uncertainties in what the aspect to measure is, and the list of areas for integration is incredibly broad. Therefore, we are recommending this be rephrased as "The proportion of countries using spatially explicit action plans across all sectors of government to guide the conservation of biodiversity and minimise negative impacts on biodiversity' which could be accompanied by an indicator 'Proportion of government ministries with biodiversity integrated into legislation'.		A simple but more specific Indicator would be 'The proportion of countries using spatially explicit action plans to guide the conservation of biodiversity and minimise negative impacts across all sectors of government'. Another could be 'Proportion of government ministries with biodiversity integrated into legislation'
Both the target and the indicator need to acknowledge that values are not only financial but also spiritual or other non-monetary values (e.g. contribution to physical and mental health). We suggest inserting the word "diverse"		Change 13.0.1 to 'Number of countries with mechanisms in place to integrate all biodiversity values into policies, regulations, laws, fiscal measures, planning, development processes,

before "values" in both target and indicator to reflect this. Biodiversity values also have to be integrated into the financial and economic system as well as into law, and trade agreements.		poverty reduction strategies and accounts at all levels, ensuring that all biodiversity values are mainstreamed across all sectors and integrated into assessments of environmental impacts, as well as enhancing policy coherence (synergies and interlinkages, while minimising negative interlinkages) with national and international policies, including trade agreements, MEAs and SDGs.'
This indicator should should indeed be relevant but this all depends on the quality of the national targets and their integration in national reports and the data used to back them up. Also biodiversity mainstreaming has not yet been properly defined or applied. indeed there is not yet a common appreciation of just how radical the changes it requires actually are. Governments face many challenges and potential contradictions between the demands for growth and the urgent need to halt further degradation of biodiversity	Not yet - there is a need to build understanding of what is involved and the capacity to implement it	
what is meant by extent? and this is covering a huge range of different mechanisms, needs to be simplified. E.g No of national policies/regulations which require net positive impact outcomes		
We would like to see the multiple values of biodiversity reflected in this target and its indicators; not just instrumental/financial values, but also spiritual, aesthetic, psychological, etc. It is crucial to include recognition of both tangible and intangible benefits from biodiversity, such as carbon sequestration value, aesthetic and cultural value, contribution to ecosystem services, contribution to human wellbeing etc. (not just about assigning a dollar value): see rebalance.earth initiative (https://www.rebalance.earth/) There is a sound evidence base showing a close link between mental health and exposure to nature, which should be considered for the development of associated indicators. See for instance 'Nature and mental health: An ecosystem service perspective' (2019) and 'Minimum Time Dose in Nature to Positively Impact the Mental Health of College-Aged Students, and How to Measure It: A Scoping Review' (2020). Also add the establishment of independent national oversight bodies to hold Governments to account over the consideration of biodiversity values in regulation/policy		

decision-making. Further, there is a need for the development of standardized metrics to measure and value impacts and dependencies on biodiversity by public and private financial institutions and businesses.		
Both the target and the indicator need to acknowledge that values are not only financial. We suggest inserting the word "diverse" before "values" in both target and indicator to reflect this.	See above	
"Extent to which" needs clarification. Perhaps focus on number and/or scope of policies in place.		
The role of the finance sector is key to achieving this Target, and, while is it addressed in the Long Term Approach to Mainstreaming and in the Resource Mobilisation Panel of Expert's Third Report (SBI/3/5/Add.3) it is overlooked here. We recommend that the Headline Indicator makes specific mention of the finance sector. For example, the text could read: "…ensuring that biodiversity values are mainstreamed across all sectors, including the finance sector, and integrated into assessments of environmental impacts*"		
The detailed methodology for this headline indicator needs to be developed. UNCTAD stands ready to contribute to the development of a methodology. We are pleased to take note of the proposed component indicator 13.1.1. (The number of countries that have incorporated the BioTrade Principles and Criteria) which can play an important role in informing this headline indicator.		
We would suggest being more specific about which type of policies need to be looked at or also included in this indicator. Therefore, we suggest making sure that the following elements are included in component indicators or otherwise, the headline indicators divided into these four elements: 13.0.1: "Number of countries that included biodiversity in their food, nutrition and agricultural policies" 13.0.2: "Number of countries that included biodiversity in their national land restoration policies and programmes" (Jalonen et al. 2018, https://doi.org/10.1111/conl.12424). 13.0.3: "Number of countries that include food, nutrition and agricultural policies into their NBSAP" (Juventia et al.		

2020).
13.0.4: "Number of countries that articulate their NBSAP and other environmental instruments at the national and subnational levels with the regional planning tools of productive sectors such as agriculture, infrastructure, mines and energy to reduce land use conflicts".

We would also like to provide some specific recommendations related to policy and mainstreaming biodiversity into policies. The concept of 'mainstreaming across all sectors' needs to bear in mind the need to promote coordination across sectors and levels of governance. This refers not only to those sectors working directly with environmental issues, but also with those sectors whose interventions affect directly or indirectly natural resources. Lack of coordination (or policy fragmentation) is a main bottleneck. Therefore, there need to be mechanisms to promote dialogue and collaboration between actors and it is key to have a harmonization of policy goals across critical sectors that influence natural resources governance.

We suggest the following additional headline indicator:

13.0.5: "Number of countries that have promoted and/or achieved a harmonization of policy goals across critical sectors that influence natural resources governance."

This is not a measurable indicator, and should be reframed for clarity. The current draft is basically a rewording of the Target itself.		
13.0.2 Integration of biodiversity into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting		
13.0.2 If you selected "yes, however requires further work", please describe:	**13.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**13.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
		According to decision 14.3, mainstreaming was to be a key part of the GBF. In our opinion, the elements involved should be part of this

		framework. Therefor we would have more targets relating to this, and a lot more indicators as well. Trying to solve huge structural issues by responding to a specific indicator is impossible. On the specific indicator: Monetarising biodiversity is problematic because: it is an unproven hypothesis that such valuation leads to improved biodiversity status knowing the "economic value" of biodiversity actually makes that the comparison to planned profitable projects results negative, and destruction happens.
		Number of environmentally friendly activities certificated by public authorities.
	Some countries would need financial and capacity building support to be able to report.	
		Efficiency of economy in sustaining life in its diversity and fulfilling economic human rights while using and wasting minimum money for other purposes. This CBD has to maintain the monitoring of this in cooperation with the UN human rights system.
We propose to include ABS-related accounts into the SEEA. This is an alternative to trying to track and accumulate dispersed and heterogeneous information from ABS-agreements. Instead, SEEA accounting will measure realized extents and outcomes of research collaborations, capacity building, technology transfers and investments into structural expansion of relevant research infrastructures at a national level, with the possibility to aggregate for global reporting.		
This indicator should include accounting and reporting systems on all levels of government to account for the critical role of subnational governments, cities and local authorities in biodiversity action.		
This does not take non-monetary values into account – need to extend the indicator	This does not take non-monetary values into account – need to extend the indicator	
	Capacity-building definitely needed at the National level reporting.	

Add after accounting, "budgeting" and reporting systems..."and other relevant approaches".	SEEA framework is one of the methodologies that could help standardize. However it does not fully reflect sustainable use of biodiversity into national accounting as it is not standardized with the CBD taxonomy. There is no need to limit this to the use of SEEA, as any integration of biodiversity by national and local governments into expenditure accounts can be beneficial, regardless of the data classification system used. In addition, budgeting frameworks should be the top priority for mainstreaming to prevent further negative investments in biodiversity conservation.	
Should take into account non-monetary values	Should take into account non-monetary values	
	SDG ind.15.9.1	
This does not take non-monetary values into account – need to extend the indicator	This does not take non-monetary values into account – need to extend the indicator	
Need to also take non-monetary values into account.		
UCCLAN recommends to either adjust this indicator or to add a new indicator to include the ultimate monitoring and mainstreaming tool for biodiversity accounting, which is to develop and implement an alternative measure of wealth that takes the planetary and human well being into account. Including biodiversity values into national accounting systems will not take into account the benefits from biodiversity for human well-being and health, hence undervaluing biodiversity when compared to short term financial gains, while an alternative measure of wealth will take other aspects of biodiversity values into account.		Change 13.0.2 to 'A new inclusive measure of wealth that accounts for biodiversity, planetary boundaries, and human well-being. has been developed and agreed upon by 2023 and is implemented by 2025, accounting for the multiple values of biodiversity (based on IPBES values assessment).'
Seeking to give a financial value to biodiversity in national accounting is not the answer here. A lot more work is needed to take account of the importance of ecosystem integrity and biodiversity in seeking to genuinely integrate here. We also have to accept that there are not always going to be tradeoffs and that ecosystem integrity has to take precedence now, because there is no room for more destruction or offsetting.		
For 13.0.2, it will be necessary to ensure that support and training are provided to the appropriate government organizations on SEEA. SEEA has strong potential to		

become the global standard for environmental reporting, and will also facilitate communication on economy-related data on biodiversity to business.		
Need to also take non-monetary values into account.	See above	
	The SEEA (System of Environmental Economic Accounting) is the UN statistical standard for the development of a system of national environmental-economic accounts. SEEA Ecosystem Accounting aims to measure five different elements of ecosystems and their contributions to humans: 1) ecosystem extent 2) ecosystem condition; 3) ecosystem services; and 4) monetary assets (i.e., monetary value of all ecosystems within an ecosystem accounting area) and 5) thematics such as land, water, carbon, and biodiversity. This standard was adopted as an international statistical standard under the United Nations in March 2021, providing countries with the integrated statistical framework for a) organizing biophysical data; b) measuring ecosystem services, tracking changes in ecosystem assets; and c.) linking this information to economic and other human activity. Some 100 countries have expressed interest in SEEA implementation and there are efforts underway to support them in data development to do so. For example, the Earth Observation for Ecosystem Accounting Initiative (EO4EA) of the Group on Earth Observations is developing guidelines for "account ready data" bringing together the data and accounting communities to coordinate efforts. Bringing together biodiversity experts/CBD Focal Points with national SEEA statistical experts could be explored as a way to share relevant information.	

Target 14. By 2030, achieve reduction of at least [50%] in negative impacts on biodiversity by ensuring production practices and supply chains are sustainable		
14.0.1 Potential population and species loss from terrestrial and marine human modification*		
14.0.1 If you selected "yes, however requires further work", please describe:	14.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	14.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
		What needs to be measured here are not species etc. These have been measured in target 2&3. For this target, we need to measure the (reduction in) the negative impacts, per sector and even per multinational business. The objective of this target needs to be that the aggregate impact of all production practices is at sustainable levels.
		Species population dynamic trends on terrestrial and marine ecosystems with human activities
Can this be scaled to measure and assess impacts of trade (e.g. teleconnections of consumption/production in one area and its impacts to another part of the world). Also, not clear on how this can be consistently measured - will need additional investments in systematic biodiversity observations to adequately track this.	Can this be scaled to measure and assess impacts of trade (e.g. teleconnections of consumption/production in one area and its impacts to another part of the world). Also, not clear on how this can be consistently measured - will need additional investments in systematic biodiversity observations to adequately track this.	
		The extent in which in each area the rights to biodiversity saving sustainable uses with equitable sharing of benefits get implemented as stronger than rights to use the area for other purposes.

CBD has to maintain monitoring of this in cooperation with the UN Human Rights System. |
| An evaluation if production practices and supply chains are long-term sustainable with no or only a certain level of negative impacts is currently not sufficiently possible. This is the case, specifically under comparatively rapidly | The necessary sample collections, datasets and their associated standardized data infrastructures and analytical work environments do not exist today. Still, over the coming years, capacity | |

changing environmental and climate conditions at an evolution-relevant time scale. Reliable evaluations of this indicator require a solid understanding of the adaptability of species which are impacted, by production systems and supply chain networks. Furthermore, evaluations of the integrity of supply chains require reliable, tamper-proof and long-term persistent trait data, cp. genomic and/or bio-geochemical data obtained from biological materials within the supply chains. Well-designed, distribution range-wide reference datasets within species will provide the information-rich genomic and phenotypic (trait) data for reliable statistical evaluations and conclusions. Such collections of samples and trait data can be continuously extended to provide scale-independent results of sufficient statistical power and reliability. In turn, these datasets support versatile application, for example, they will inform simultaneously on Goals A, B and D and several of their targets.	building efforts can focus on providing international concerted progress towards the realization and implementation of such resources and functionality. Efforts towards this goal are already underway in the form of the development of an integrated digital extended data infrastructure with associated work environments by the alliance for biodiversity knowledge under the auspices of GBIF, together with the international collections community, and a wide range of stakeholders. Once developed, these datasets, data management infrastructures and work environments, including reporting modules can be integrated into and directly support national reporting systems. Indicators based on such capacity will be relevant and provide the necessary basis for standardization, comparability and reporting across all scales, from global to national to subnational reporting. The proposed AHTEG on indicators might provide scientific-technical advice and guidance for such capacity building.	
What populations – we assume species and not humans? Need to clarify. Also, modification is not only linked to production practices but to other interests such as housing and tourism.	What populations – we assume species and not humans? Need to clarify. Also, modification is not only linked to production practices but to other interests such as housing and tourism.	
How to set the baseline? How will the linkage between this effect on the ground and corporate efforts be established?		Supply chain impact must be rigorously assessed; e.g., following the Natural Capital Protocol.
Proposal interesting, but formulation, availability, and maintenance unclear This target could be read as not relating directly to "ensuring production practices and supply chains are sustainable". Miss a component that addresses production practices and supply chains – it is a lag indicator that will measure what has happened to species, not the reduction in impacts. The issue here is presumably measuring whether the prod. practice and supply chain impacts are reducing. STAR could, presumably, be used to assess change in threats over time across a range of threats. The key here is to align the Red List Threat Classification system (that Star draws upon) with the CBD targets. This could be a useful piece of work relevant to a range of targets. The term "potential" point to a sort of "risk assessment" qualifying what the potential risk is and how it is measured.		

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This indicator does not relate to prod. practices and supply-chains. It needs to be complemented by "as a result of adopted and implemented policies, legislative and administrative frameworks."		
What populations – we assume species and not humans? Need to clarify. Also, modification is not only linked to production practices but to other interests such as housing and tourism.	What populations – we assume species and not humans? Need to clarify. Also, modification is not only linked to production practices but to other interests such as housing and tourism.	
Need to clarify that "populations" refers to species and not humans, and that any measurement of the level of "modification" includes those linked to production practices as well as to other interests such as housing and tourism.	see above	
Targets 14 and 15 are more appropriate under other targets, 6, 13, and 17. Target 17 on reducing incentives harmful for biodiversity, should stimulate sustainable production and consumption.		See 6 on plastic
The word 'potential' is important here as we must strictly apply the precautionary approach in view of the fact that we are now pressing on planetary boundaries, causing climate change impacts and continuing to destroy biodiversity. For example we are very concerned about proposals to mine the deep sea beds, because: we know very little about them, including the species that live there, except that ecosystems and species at these depths develop very slowly and the impacts of seabed mining could be very long-lasting. We have now to avoid short-term advantage at the expense of long-term and possible permanent damage including extinctions.	Using deep seabeds as an example, we need to understand far more about these ecosystems and the species that inhabit them before we even consider mining for example, so this should be put on hold or banned for now.	
Need to clarify that "populations" refers to species and not humans, and that any measurement of the level of "modification" includes those linked to production practices as well as to other interests such as housing and tourism.	See above	
It may be easier to focus on habitat loss through changes in the Human Modification Index rather than extrapolating to species and populations.		Human Modification Gradient (Kennedy et al. 2019), The Nature Conservancy
Without standardized baselines (periods of reference, biodiversity metrics per trophic level and habitat (terrestrial, marine, freshwater)) this indicator will not be meaningful. This may also need to include "species gains" and not just simple aggregated biodiversity metrics	Without standardized baselines (periods of reference, biodiversity metrics per trophic level and habitat (terrestrial, marine, freshwater)) this indicator will not be meaningful. This may also need to include "species gains" and not just simple aggregated biodiversity metrics as a result of	Without standardized baselines (periods of reference, biodiversity metrics per trophic level and habitat (terrestrial, marine, freshwater)) this indicator will not be meaningful. This may also need to include "species gains" and not just simple aggregated biodiversity metrics as a

as a result of changes may be an increase in numbers of undesired species (an increase in unwanted biodiversity)	changes may be an increase in numbers of undesired species (an increase in unwanted biodiversity)	result of changes may be an increase in numbers of undesired species (an increase in unwanted biodiversity)
In line with the proposed genetic diversity indicators (under Target 2), this indicator should be further specified as follows: 14.0.1: "Potential loss of species and their distinct populations from terrestrial and marine human modification" This underlines the fact that individual populations can be irreplaceable due to their distinct features, even if the species are still found elsewhere.		
It is too narrow to focus on species loss, but rather should focus on ecosystems. Also, this the only indicator weakened by the word "potential", which should be removed.		

14.0.2 Corporate sustainability reporting includes impacts on biodiversity*

14.0.2 If you selected "yes, however requires further work", please describe:	14.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	14.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
		It is not the business sector that needs to report on production, but the state who needs to verify supply chains and production practices, as well as their impacts on producers and consumers. Corporate reporting will always make its results seem more positive than they are. There need to be regulations and independent verification of their implementation. This needs to be adapted in the goal and the indicator.
		Number of any registry or activities certificated by public
As with all indicators, the important element will be consistent methodology or standards in this case to ensure that any CSR that includes impacts on biodiversity meets some threshold defined standards.	As with all indicators, the important element will be consistent methodology or standards in this case to ensure that any CSR that includes impacts on biodiversity meets some threshold defined standards.	

How do we measure impact on Biodiversity? We should agree on common taxonomy and metrics.		
		The extent to which corporate activities and their extraterritorial impacts get independently, impartially and externally monitored so that states can transparently ensure them to comply duly with states' CBD and human rights obligations.

CBD has to maintain monitoring of this in cooperation with UN Human Rights System.

(Corporations producing "sustainability reporting including impacts on biodiversity" does not by itself in any manner ensure that such reporting would actually contribute to save biodiversity or its sustainable use with equitable sharing of benefits but can be used by the corporation for other purposes - even to justify the violations and distort the implementation and public understanding of what CBD obligations mean) |
| This is an inadequate indicator (and target), also because there is no verification mechanism, and many corporations do not even comply with sustainability reporting. | | |
| It is not the business sector that needs to report on production, but the state who needs to verify supply chains and production practices, as well as their impacts on producers and consumers. | It is not the business sector that needs to report on production, but the state who needs to verify supply chains and production practices, as well as their impacts on producers and consumers. | |
| | | Reporting can include anything and thus cannot be used to evaluate progress towards the target achievement. Need to look at actual changes on the ground.
Supply chain impact must be rigorously assessed; e.g., following the Natural Capital Protocol. |
| SUGGESTED CHANGE: "Corporate sustainability reporting and financial regulating reporting includes disclosure of impacts on biodiversity and increase net biodiversity positive " | | |
| and other local ecosystems: water sources, soil, etc. | | |

| | | The overall target should be measured by a headline indicator focusing on monitoring the rate and total area of conversion of the remaining natural terrestrial ecosystems, which allows traceability of ecosystem risk commodities and transparency of their supply chains.

RFN suggests an alternative headline indicator, to measure global conversion of natural ecosystems. The indicator proposed monitors all natural ecosystems in a comprehensive way: "Natural vegetation in terrestrial ecosystems (forest, savannahs and grasslands, wetlands, woodlands, mangroves, peatlands, saltmarshes), converted due to land-use change - ha per year"
-RFN suggests a specific stand-alone target on the finance sector to be added to the draft global biodiversity framework, including respective indicators. As a result, no reference to the finance sector is made here. |
| | | Corporate sustainability reporting does not necessarily reflect any tangible impact nor progress of the target. The overall target should be measured by a headline indicator focusing on monitoring the rate and total area of conversion of the remaining natural terrestrial ecosystems, which allows traceability of ecosystem risk commodities and transparency of their supply chains.

WWF suggests an alternative headline indicator, to measure global conversion of natural ecosystems. The indicator proposed by WWF monitors all natural ecosystems in a comprehensive way: "Natural vegetation in terrestrial ecosystems (forest, savannahs and grasslands, wetlands, woodlands, mangroves, peatlands, saltmarshes), converted due to land-use change - ha per year"*
* WWF is currently in the process of analysing available datasets to inform this indicator, and could maintain this.
* WWF suggests a specific stand-alone target on the finance sector to be added to the draft global biodiversity framework, including respective indicators. As a result, no reference to the finance sector is made here. |

Formulation, availability, and maintenance wholly unclear		
		It is not primarily the business sector that needs to report on production, but the state who needs to verify supply chains and production practices, as well as their impacts on producers and consumers.
In addition to the business sector reporting on the impacts of its activities, we consider that Parties also need to verify supply chains and production practices. We propose an additional high level indicator for the state to report on how it has verified supply chains and production practices, as well as their impacts on producers and consumers		
It is not clear whether the indicator as phrased reflects on what is needed in terms of an increase in the use of sustainability standards and good practices. Specific initiatives in this regard could be included, covering a range of commitments, including in the sector of use and trade of wild specific of fauna and flora.		
This indicator is not currently available	As the indicator is not currently available it is difficult to make a judgement on the needs for capacity development and other work.	
		See answer to 14.0.1 - Indicators on sustainability corporate sustainability reporting could be placed there as an indication of the impact of biodiversity taxes and regulation.
I would have selected no but want to say why! Corporate sustainability reporting is completely inadequate for the purpose. Where are the processes for verification? Corporations have the obligation to increase profits and we now know that this usually means increasing impacts on biodiversity as well as climate, therefore there is a major conflict of interest problem here. As it stands this indicator should not even be considered.		
What corporates report on managing biodiversity does not reflect actual potential impacts, and very difficult until there is a unified and universally agreed biodiversity metrics	as above	
		14.0.2 on measuring impacts on biodiversity through reporting will fall short of reducing those impacts. CSR needs to avert impacts on biodiversity by including environmental and

			social safeguards for all investments. Strengthening companies' requirements to avert impacts on biodiversity and assessing uptake of those new requirements seems like a more adequate approach.
In addition to the business sector reporting on the impacts of its activities, we consider that Parties also need to verify supply chains and production practices. We propose an additional high level indicator for the state to report on how it has verified supply chains and production practices, as well as their impacts on producers and consumers.	See above		
Percentage of corporations including biodiversity impact assessments in annual reporting.	data are not readily available.		
There are two points we would like to make here: 1: Simply requiring corporates to report on biodiversity impacts is not a sufficient indicator for this Target. We recommend that this indicator is based on requiring corporates not only to report on their impact on biodiversity, but also to demonstrate progressive improvement towards a net positive impact. The metric for measurement/source of information would still be the reports, but the actual indicator that shows we are moving closer towards the target should be improved impact, communicated through these reports. 2: Financial institutions should also be required to report on biodiversity impacts, and be demonstrating net positive impacts. Financial institutions should either be included in this Headline Indicator, or in a new, additional Headline Indicator for this Target. Not including the financial sector as a part of this Target and suite of indicators will make the aim of this Target (reduction in negative impacts) very difficult to achieve – arguably impossible. Ideally, the role of financial institutions should be included in the language of the Target. As mentioned in our comments on Headline Indicator 13.0.1, both the Long Term Approach to Mainstreaming and the Resource Mobilisation Panel of Expert's Third Report (SBI/3/5/Add.3) make substantial input on the importance of the finance sector.	It is likely that parties and the financial sector will need capacity building and knowledge development to achieve this target and be able to report of these indicators. As one example, the TNFD will be working on developing metrics for reporting on biodiversity impact, and Parties may need support on how best to engage with the finance sector.		
Only corporate sustainability reporting is too specific to indicate progress in this Target.			

Target 15. By 2030, eliminate unsustainable consumption patterns, ensuring people everywhere understand and appreciate the value of biodiversity, and thus make responsible choices commensurate with 2050 biodiversity vision, taking into account individual and national cultural and socioeconomic conditions.

15.0.1 Biomass material footprint per capita

15.0.1 If you selected "yes, however requires further work", please describe:	15.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	15.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
It is not clear how this indicator is oriented? Is a high biomass considered to be a sign of well-functioning ecosystems and therefore positive? Or is a high biomass a sign of too-much-consumption, and therefor negative? It would also be important to look at other footprints as well, such a the land footprint.		Other indicators are missing. especially regarding equitable consumption. This can be done by measuring % of the population living at standards above what the planet can sustain, and % of population below poverty line.
		We have restrictions not against the indicator properly, but mainly against the Target itself that must be excluded.
	The most vulnerable countries relying on their natural resources to grow may avec bad scores. It would translate into higher interest rate on their debt.	
"Biomass material footprint per capita" has to be complemented with other indicator: The extent in which in each area the rights to biodiversity saving sustainable uses with equitable sharing of benefits get implemented as stronger than any rights to over-consume area's resources for other purposes.	"Biomass material footprint per capita" has to be complemented with other indicator: The extent in which in each area the rights to biodiversity saving sustainable uses with equitable sharing of benefits get implemented as stronger than any rights to over-consume area's resources for other purposes.	
This is a highly inadequate target and indicator as it does not indicate anything about biodiversity status. If overall consumption grows, CBD objectives will not be reached. Moreover, the role of governments in regulating and providing proper incentives for both sustainable production and consumption and marketing is ignored in the target. This indicator should be linked to an indicator on perverse incentives.		

Firstly, it might be good to look at other footprints as well, such a the land footprint. Secondly, we feel another indicator is needed to monitor the number of states that have put regulations in place to encourage the use of biodiversity-friendly products (such as organically farmed products) in relation to products sourced with a bigger negative impact on biodiversity. We deplore that there is no responsibility for states in the target the way it is currently worded.	Firstly, it might be good to look at other footprints as well, such a the land footprint. Secondly, we feel another indicator is needed to monitor the number of states that have put regulations in place to encourage the use of biodiversity-friendly products (such as organically farmed products) in relation to products sourced with a bigger negative impact on biodiversity. We deplore that there is no responsibility for states in the target the way it is currently worded.	
		Why not use the ecological footprint, which is annual reported and widely used?
An indicator on material consumption inequality would be helpful to ensure progress is made toward convergence of levels of consumptions	Parties will require assistance to collect this data at national level	
This is a good indicator but it requires more than public awareness to deliver improvements - greater regulation of harmful consumer products - including through redirection of subsidies and the use of fiscal deterrents - will contribute to influencing public behaviour It is important to measure regulation and legislation initiatives of countries in order to eliminate unsustainable consumption (not enough that people have understanding --an educational rather than biodiversity value indicator?) In addition, an indicator on material consumption inequality would be helpful to ensure progress is made toward convergence of levels of consumptions (at levels that are within planetary boundaries). For this reason, WWF proposes an additional headline indicator: ""Material consumption inequality"*	Parties will require assistance to collect data at national level	
Relationship to SDG indicators 8.4.1 and 12.2.1 needs clarifying Unsustainable consumption patterns are the problem and need to be eliminated. However, it is unrealistic to expect that this could happen in the next 8-9 years. This goal is too important to be formulated in a manner that invites for failure	Relationship to SDG indicators 8.4.1 and 12.2.1 needs clarifying With the caveats included, this will be very difficult to measure.	
Firstly, it might be good to look at other footprints as well, such a the land footprint. Secondly, we feel another indicator is needed to monitor the number of states that have put regulations in place to encourage the use of biodiversity-friendly products (such as organically farmed products) in relation to products sourced with a bigger negative impact on biodiversity. We	Firstly, it might be good to look at other footprints as well, such a the land footprint. Secondly, we feel another indicator is needed to monitor the number of states that have put regulations in place to encourage the use of biodiversity-friendly products (such as organically farmed products) in relation to products sourced	

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deplore that there is no responsibility for states in the target the way it is currently worded.	with a bigger negative impact on biodiversity. We deplore that there is no responsibility for states in the target the way it is currently worded.	
Propose that the indicators should also look at other footprints as well, such as the land footprint. Propose another indicator to monitor the number of states that have put regulations in place to promote biodiversity-friendly production.	See above	
		This indicator may be very difficult to translate and implement at the national level. A more appropriate (and perhaps more measurable) indicator are changes in demand that reflect responsible consumption (e.g. reduction in demand for illegal and unsustainable wildlife, increased demand for sustainably harvested wildlife resources)
This indicator calls for monitoring (and reducing) the biomass material footprint per capita, without monitoring the biomass material footprint under target 14 - sustainable production-. As sustainable consumption relies on the availability and access to alternative sustainable options and not the other way around, this indicator should be included under target 14. In addition, sustainable production can only successfully be reached through a mix of financial incentives, taxes, regulation, and enforcement that stimulate sustainable production, while limiting activities harmful for biodiversity, which are addressed under target 13 and 17.		see answer 6
This headline indicator seems to insufficiently reflect the target. Sustainable consumption patterns should be measured and the indicator could focus on monitoring the demand for wildlife used for direct human consumption (subsistence and commercial), associated risks for the health and welfare of both humans and animals, and assessing the availability of alternative food sources, in urban contexts in particular.		
Propose that the indicators should also look at other footprints as well, such as the land footprint. Propose another indicator to monitor the number of states that have put regulations in place to promote biodiversity-friendly production.	See above	
This requires careful segregation by types of species populations and habitat (marine, freshwater, terrestrial)	This requires careful segregation by types of species populations and habitat (marine,	This requires careful segregation by types of species populations and habitat (marine,

		freshwater, terrestrial) and substantial capacity development on standard methods	freshwater, terrestrial) and substantial capacity development on standard methods
			Better indicators for sustainable consumption could relate to environmental literacy and biodiversity awareness (related to Aichi Target 1).
			This target does not address the drivers of unsustainable consumption, and puts the burden on consumers to make more sustainable choices. For example, it fails to tackle the topic of accessibility of sustainable alternatives – the most environmentally friendly preference/green products are not accessible, available, or affordable in many countries and for many sectors of society. Access to alternatives should also be captured.
We believe the proposed headline indicator is not sufficient on its own to measure overall progress of the target and would like to suggest adding another headline indicator related to sustainable dietary consumption as follow: • 15.0.2: Percentage of population with minimum dietary diversity (WHO, Foodsystemsdashboard)			We believe the proposed headline indicator is not sufficient on its own to measure overall progress of the target and would like to suggest adding another headline indicator related to sustainable dietary consumption as follow: • 15.0.2: Percentage of population with minimum dietary diversity (WHO, Foodsystemsdashboard)
One of the stated goals of the GBF process is to make it clear and understandable. This indicator is very unclear and unfamiliar terminology even for those of us who have worked in conservation for years. It is not clear whether use of biomass is good or bad. Sustainable use is sustainable. This needs to be clarified greatly. Also, another indicator on appropriate information display would be useful for ensuring responsible choices.			

Target 16. By 2030, establish and implement measures to prevent, manage or control potential adverse impacts of biotechnology on biodiversity and human health reducing these impacts by [X]		
16.0.1 Extent to which necessary legal, administrative, technical and other biosafety measures are in place to prevent, manage and control potential adverse impacts of biotechnology on biodiversity*		
16.0.1 If you selected "yes, however requires further work", please describe:	**16.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**16.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
Proposal: "Extent to which means to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts that could affect the conservation and sustainable use of biological diversity, taking also into account the risks to human health.	See above	
	Big companies should also report on this indicator.	
The impacts of each LMOs cannot be presumed or guessed in advance, and must be assessed case by case. It is not possible to have laws or regulations that pre-emptively manage those impacts. Instead, the indicator should measure how many Parties have in place effective regulatory biosafety frameworks, which will enable them to conduct a sound case-by-case risk assessment and, ultimately, decide if and which legal, administrative and technical measures need to be put in place to manage the negative impacts identified.	As noted by many Parties during the discussion, capacity and resources to implement the Protocol are a major obstacle and these should be addressed to enable progress on this indicator (once reframed)	
	Legal measures should be oriented to the regulation and management of activities, not only to the adverse impacts that may be generated.	
There need to be aspect to evaluate enforcement.	The capacity building needed here is not necessarily additional work for biodiversity, but more general societal issue of society in order.	
Just to add " at the national level"		

Should consider the 'Percentage of Parties who has established legislations or policies that address IPLCs concerns about biotechnology and possible introduction of LMOs on IPs traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and resources, with their full and effective participation'	Should consider the 'Percentage of Parties who has established legislations or policies that address IPLCs concerns about biotechnology and possible introduction of LMOs on IPs traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and resources, with their full and effective participation'	
PRRI is of the view that this indicator should read: "16.0.1 Extent to which necessary legal, administrative, technical and other biosafety measures are in place to prevent, manage and control potential adverse impacts of LMOs"	idem	
Indic. formulation, availability, and maintenance unclear "in place" is not enough. These measures also need to be "implemented and enforced".	Indic.formulation, availability, and maintenance unclear	
Propose amending the Target to ensure it is consistent with the indicator. Replace "or" with "and" to read "prevent, manage and control" (the language used in the indicator).		
The impacts of each LMOs cannot be presumed or guessed in advance, and must be assessed case by case. Hence it is not possible to have laws or regulations that pre-emptively manage those impacts. Instead, the indicator should measure how many Parties have in place effective regulatory biosafety frameworks, which will enable them to conduct a sound case-by-case risk assessment and, ultimately, decide if and which legal, administrative and technical measures need to be put in place to manage the negative impacts identified.		Target 16 is currently negatively framed and fails to recognise that biotechnologies can contribute to environmental conservation and protection. This is important as Target 16 should be coherent with the Convention and aligned with the recognised need to identify new tools to support conservation, including tools derived from biotechnology. Acknowledging biotechnologies' potential positive impact would be consistent with the principle of a case-by-case risk assessment and with the language of the Convention, given that different biotechnologies' impacts would vary according to the products developed and their implementation. We suggest the full implementation of the Cartagena Protocol or equivalent regulatory frameworks by Parties as an indicator, as it would enable appropriate assessment and management of the potential negative impacts associated with LMOs. The Framework should also include an indicator to measure capacity building and cooperation among Parties, as these are fundamental to support the implementation of the Protocol.
Propose amending the Target to ensure it is consistent with the indicator. Replace "or" with "and" to read		

"prevent, manage and control" (the language used in the indicator)		
Should be revised to state "modern biotechnology" or "living modified organisms resulting from biotechnology" instead of just "biotechnology" to be consistent with CBD Article 8(j) and the definitions and scope in the CPB.	The tracking of countries that are Partied to the CP or countries that have adopted biotech/biosafety regulatory frameworks would provide a good indicator of the number of countries that are adopting measures to ensure adequate level of protection from the use and release of LMOs may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health	
The Cornell Alliance for Science finds the following gaps in the indicator: a) it inaccurately assumes there is an impact that needs reduction; and b) the language used in the indicator is inconsistent and goes beyond the scope of the Convention on Biological Diversity and its agreements.

The indicator inaccurately assumes that biotechnology has caused adverse impacts on biodiversity and human health. In fact, 25 years of safe use of products resulting from biotechnology and a global scientific consensus reveal the absence of scientific evidence of any adverse impacts on biodiversity or human health resulting from biotechnology.

Secondly, biotechnology is a broad technology with many applications, only some of which are relevant to the objectives of the Convention and its sub agreements. Specifically, the language "to prevent, manage and control adverse impacts of Biotechnology" is inconsistent with the Convention on Biological Diversity and goes beyond its scope. Instead of 'adverse impacts of Biotechnology', the indicator should focus on 'risks associated with the use and release of living modified organisms resulting from biotechnology', as stated in Article 8G of the Convention.

As such, the Cornell Alliance for Science suggests the indicator should read, "Extent to which necessary legal, administrative, technical and other biosafety measures are in place to prevent, manage and control the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts that could affect the conservation and sustainable use of biological diversity, taking also into account the risks to human health." | In order to align the target with article 8 of the Convention, and facilitate reporting and enhance standardization, we propose that the indicator should quantify the number of parties that have in place the "means to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts that could affect the conservation and sustainable use of biological diversity, taking also into account the risks to human health". | |

The specific biosafety measures will depend upon risk assessments on specific LMOs. Therefore, the relevant measures to prevent, manage, control, etc.would be those that are necessary to address a risk identified in a risk assessment.		
Target 16 and its headline indicator should address both the risks and benefits of biotechnology on biodiversity, consistent with Articles 16 and 19 of the CBD. See suggested indicator below.		Extent to which programs are in place to both minimize the risks and maximize the benefits of biotechnology on biodiversity.
"extent to which" requires refinement. Inclusion at the end: ", especially with regard to indigenous peoples and local communities"	Most countries have inadequate capacity to address these issues.	

Target 17. By 2030, redirect, repurpose, reform or eliminate incentives harmful for biodiversity, including [X] reduction in the most harmful subsidies, ensuring that incentives, including public and private economic and regulatory incentives, are either positive or neutral for biodiversity

17.0.1 Biodiversity relevant taxes, charges and fees on payments for ecosystem services and on biodiversity relevant tradable permit schemes as a percentage of GDP

17.0.1 If you selected "yes, however requires further work", please describe:	17.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	17.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
Biodiversity relevant taxes, charges and fees are good, but they should not relate to PES. PES experience has shown that this leads to the beliv that ecosystems should be conserved only in as far as they are being payed for, ultimately leading to their destruction if a PES projects comes to an end. Tradable permit schemes constitute mercantilisation of nature and should not be allowed, much less be considered a positive indicator.		
We must better-define both conceptions: Payment for Environmental Services and Payment for Ecosystem Services, which are not clear.	First of all, both conceptions - Payment for Environmental Services and Payment for Ecosystem Services - should be well-defined for being distinguished and clear.	
Such taxes, charges and fees would be an additional burden on the most vulnerable populations. They should apply to companies relying ecosystem services.	Such taxes, charges and fees would be an additional burden on the most vulnerable populations. They should apply to companies relying ecosystem services.	

		The extent of elimination of all commercial rights or measures which allow or encourage use of money to practices which damage biodiversity. CBD has to maintain monitoring of this.
This indicator is of relevance, especially with regard to commercial users and actors, which often understand using available ecosystem services would cause no costs for society.		
This is a highly inadequate and regressive target and indicator, as there is no evidence of the effectiveness of PES and tradeable permit schemes. These mechanisms are highly disputed in science.		
Tax should be used with the view to redirect undesirable practices to favorable ones. The emphasis should not be on the amount of tax revenue, but how these changes occurred. If designed right, the revenue from tax on environmental impacts should reduce as progresses are made in redirecting.		
REPLACE FOR "Biodiversity relevant positive incentives including relevant fiscal incentives, regulatory fees, payments of ecosystem services, public investments, among other, as a percentage of GDP"	The data required to report on this indicator should include al sources of positive incentives for biodiversity and not limited to the ones described. The biodiversity positive part is very important as in most countries biodiversity related revenues are not earmarked for biodiversity conservation or not fully earmarked, and therefore their increase is not expected to have a further positive impact unless this is addressed. There is an overlap with the indicator on national public expenditures, and this would need to be taken into account to avoid double-counting.	
		This indicator should be totally rephrased as % or amount of perverse subsidy redirected or eliminated
RFN proposes the following additional/alternative headline indicators for target 17: -Incentives, including subsidies and taxes, that are harmful to biodiversity -Appropriate economic disincentives, including taxes and fines, to deter actions that are harmful to biodiversity -Appropriate positive economic incentives, including biodiversity-motivated subsidies and payments for	Important to include suggestions above, and of course Parties will require assistance to measure our proposed indicators at national level	

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ecosystem services -Increase in positive incentives directed at local level initiatives, including promoting IPLC contributions, to conservation and sustainable use		
Subsidies for petroleum production have a double impact on the planet by supporting ongoing fossil fuel use and harm through climate change and virgin plastics production is a byproduct of the petroleum industry. Specifically add petroleum production as one of the sectors to target.		
WWF proposes the following additional/alternative headline indicators for target 17: - Incentives, including subsidies and taxes, that are harmful to biodiversity - Appropriate economic disincentives, including taxes and fines, to deter actions that are harmful to biodiversity - Appropriate positive economic incentives, including biodiversity-motivated subsidies and payments for ecosystem services - Increase in positive incentives directed at local level initiatives, including promoting IPLC contributions, to conservation and sustainable use	Parties will require assistance to measure our proposed indicators at national level	
Indic. formulation, availability, and maintenance unclear This approach to biodiv. conservation has been criticized and need a lot more consideration before being accepted, first locally, where the related consequences are felt and then globally. Particularly on tradable permits	Indic. formulation, availability, and maintenance unclear	
The indicator should include direct and indirect financial investment schemes and opportunities that benefit biodiversity, such as green bonds, or adjustment of discount rate to make investments in biodiversity and climate more favorable.		Change 17.0.1 to 'Biodiversity relevant taxes, fiscal measures, financial investments opportunities, discount rates, charges and fees on payments for ecosystem services and on biodiversity relevant tradable permit schemes as a percentage of alternative measure of wealth.'
We must definitely apply biodiversity relevant taxes as well as abolish perverse incentives. However, we find the term ecosystem services problematic, because it highlights human requirements from ecosystems, whereas ecosystems have many different functions that do not directly serve people, or are not yet understood but may be discovered to do so. The totality of an ecosystem, its integrity, includes many different interactive functions, which the term services does not reflect. And we do not accept biodiversity relevant tradable permit schemes under any circumstances, as these again		

actually mean offsets, which mean degradation of biodiversity somewhere in exchange for offering to 'protect' it elsewhere.		
There could be an indicator assessing financial bodies and institutions (World Bank, IMF, EIB etc.) that use biodiversity criteria as a pre-requisite for investment and/or develop policies aimed at ensuring no harm to biodiversity (or preferably positive impacts) by international investment entities. Monitoring elements that assess how incentives are redirected, repurposed, reformed or eliminated are also required, to ensure coherence with target 13 wording. The OECD's environmental tax indicator (https://data.oecd.org/envpolicy/environmental-tax.htm) could be used as one of the indicators to assess trends in the development and application of public finance incentives that promote biodiversity conservation and sustainable use.		
	May require development of national biodiversity finance plans	
This requires careful segregation by types of species populations and habitat (marine, freshwater, terrestrial) and substantial capacity development on standard methods	This requires careful segregation by types of species populations and habitat (marine, freshwater, terrestrial) and substantial capacity development on standard methods	This requires careful segregation by types of species populations and habitat (marine, freshwater, terrestrial) and substantial capacity development on standard methods
"biodiversity relevant" taxes, charges, fees, etc, may be a useful broad catch-all category for units of measurement, but is not specific enough as an indicator for this Target. This Target focusses on addressing two key issues: 　1: Biodiversity harmful incentives (aka perverse incentives) (redirect/repurpose/reform/eliminate) 　2: Positive incentives for biodiversity Headline Indicators for this target should therefore be focussing on 　1: A reduction in harmful incentives (taxes, charges, fees, etc) 　2: An increase in biodiversity positive incentives (taxes, charges, fees, etc.) Parties should be explicitly reporting on both harmful incentives, as well as positive incentives, rather than just "biodiversity relevant" taxes.		It is well understood that this work, previously under Aichi Target 3, has not been achieved, and not well reported on. This is likely due to the technical and political obstacles to addressing this issue. We believe that achieving this target and reporting on these indicators will require capacity building and additional technical resources for many Parties.
This indicator is not stated in a way that would be measurable or clear in purpose. Is it the tax rate? Or total tax amount, etc? And does "biodiversity relevant" mean helpful or harmful? These "tradable permit schemes" are		

also unfamiliar even to our experts. This one needs work in general before it can be a useful indicator.		
17.0.2 Potentially harmful elements of government support to agriculture, fisheries and other sectors (environmentally harmful subsidies) as a percentage of GDP		
17.0.2 If you selected "yes, however requires further work", please describe:	**17.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**17.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
The indicator should more monitor regulatory incentives and fiscal regimes. It lacks clarity on which sectors should be monitored. It lacks clarity that there can also be other incentives which are not necessarily support, e.g. in terms of regulatory incentives.		
		We suggest the exclusion of this indicator (biased baselines)
As with all indicators, careful standards will be needed in order to classify which subsidies lead to harmful outcomes - need consistent standards to ensure consistent tracking and comparison across regions/nations.	As with all indicators, careful standards will be needed in order to classify which subsidies lead to harmful outcomes - need consistent standards to ensure consistent tracking and comparison across regions/nations.	
This is a highly inadequate and regressive target, and the indicator should more properly address regulatory incentives and fiscal regimes.		
		"Harmful" need to be clearly defined.
DELETE "ELEMENTS" AND REPLACE BY "INCENTIVES" elements is not very clear what does it mean. INCLUDE "OTHER COUNTRY SPECIFIC RELEVANT SECTORS", as the list shouldn't be limited to those mentioned. REPLACE "environmentally" FOR "biodiversity". The environmental is a very broad concept, we need to focus on those areas with the most direct impact on biodiversity, not on all environmental harmful subsidies.	This work has proven very difficult to undertake in the past, and specific focus should be given to technical support and capacity building for this. BIOFIN has developed guidance for countries to work on an assessment of harmful subsidies and is currently supporting countries to work on this. This guidance can be shared with all CBD Parties.	

SUGGESTED TEXT: It should read "Potentially harmful incentives of government support to agriculture, fisheries and other country specific sectors (harmful subsidies for biodiversity) as a percentage of GDP		
To be more specific about the decreasing rate of these incentives.	Same	
This indicator is relevant, however, there are no baseline data available in the Pacific island countries and would need support and assistance with collecting and analysis of the data.		
Indic. formulation, availability, and maintenance unclear	see above	
maybe also in absolute terms, the reference to GDP is questionable	maybe also in absolute terms, the reference to GDP is questionable	
This indicator is not currently available, the word 'potentially' makes identification of elements to measure unclear- to be clearer this could be rephrased to' environmentally harmful government subsidies and incentives to agriculture, fisheries and others sectors as a percentage of GDP.' The key sectors to include should be as listed by the CBD CoP13 decision XIII/3 , agriculture, forestry, fisheries and aquaculture, tourism, energy and mining, infrastructure, manufacturing and processing, and health.		
This indicator should include direct and indirect financial investments that are currently harmful for biodiversity, including provision of insurance for investments in activities harmful for biodiversity and climate. Moreover, the indicator should specifically call for a full turn around rather than trying to give a percentage of GDP. Perhaps the indicator should be that a plan for eliminating the harmful elements, including financial investment elements, has been adopted by the party and includes a concrete timeline.		Change to 17.0.2 to 'Harmful elements of direct and indirect government support to agriculture, fisheries and other sectors, including fossil fuel, and infrastructure are phased out or redirected by 2025.' Complementary indicators could read as following: T17.7 Number of countries that shift taxation to natural resources (from labor) T17. 8 Elimination and reduction of harmful subsidies under the WTO Agreement T17.9 Number of countries divesting from activities harmful for biodiversity' e.g., divesting from fossil fuels and companies that their supply chains are contaminated with deforestation.
It should be potentially and ACTUALLY harmful.... as this damage is happening now and the subsidies need to be	as above	

stopped immediately. As the Dasgupta report notes, subsidies harmful to biodiversity overall stand at 4-6 trillion USD per year.		
Harmful subsidies are often difficult to identify and subject to dispute. Using a third-party assessment would be relatively unbiased, but that may differ from national reporting methods. OECD methodology (currently only applicable to OECD countries) may be a good place to start.	data are not currently available for most countries. A national income threshold could be applied to reduce burden on small countries and not substantially affect the global assessment.	
We note that this Headline Indicator specifically mentions only agriculture and fisheries (although it does state "and other sectors"), and that Complementary Indicators only mention agriculture and fossil fuels (and there are no additional Component Indicators). Either this Headline Indicator should mention other critical sectors (e.g. forestry, extractive and energy industries, infrastructure, tourism), or at least ensure that Component and/or Complementary Indicators include these additional sectors. In addition, percentage of GDP may not be the most useful way to measure this, as a very small percentage of a very large GDP could still inflict huge damage to biodiversity, and not necessarily in the country providing the subsidy. Changes in the absolute level of such subsidies by country should therefore also be considered as a possible indicator or indicator component.		Our response to 17.0.1 is equally valid here: It is well understood that this work, previously under Aichi Target 3, has not been achieved, and not well reported on. This is likely due to the technical and political obstacles to addressing this issue. We believe that achieving this target and reporting on these indicators will require capacity building and additional technical resources for many Parties.
It should clearly include heavy industry and tourism industry.		

Target 18. By 2030, increase by [X%] financial resources from all international and domestic sources, through new, additional and effective financial resources commensurate with the ambition of the goals and targets of the framework and implement the strategy for capacity-building and technology transfer and scientific cooperation to meet the needs for implementing the post-2020 global biodiversity framework

18.0.1 Official development assistance, public expenditure and private expenditure on conservation and sustainable use of biodiversity and ecosystems*

18.0.1 If you selected "yes, however requires further work", please describe:	18.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	18.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.

Private expenditure should not be in the same indicator. IF there is an indicator on private expenditure, then it should be complemented with the information on what are the benefits these private entities obtain through their expenses. In no case should money for offsetting count as biodiversity finance. Money to rebuild what one destroyed is not a positive contribution.		
		Implementing national contributing for Global Funding [x%], when developed countries. Implementing national demands for Global Funding [x%], when developing countries. [Seek an indicator that monitors the increase in the exchange of experiences between countries, including training offers]
Such assistance must consider the social aspects of conservation and sustainable use of biodiversity and ecosystems and be linked with the objective to decrease poverty.	A proportion of such assistance needs to be dedicated to the poorest communities and populations.	
More investment is needed to support not only monitoring of progress against the goals set out in the GBF, but to develop novel tools, approaches and technologies needed to protect and restore biodiversity. The wording of the indicator should include a mention of expenditure for science and research.		
It is important to support all whose impacts actually strengthen biodiversity or its sustainable use with equitable share of benefits. But it is not easy to verify whether the overall impacts of what is advertised or declared to be financing conservation are rarely independently verified to be what they say to be - including also the impacts of how the concerned money has been made and the impacts of how far such conservation rather just transfers the damage from one area to other or how it may displace people away from more sustainable livelihood practices to more unsustainable practices, etc. Thus instead of the amount of money consumed, better indicator might be whether the overall impacts of the financing actually strengthen the rights of such ways of life which conserve and sustainably use biodiversity with equitable sharing of the benefits and makes them in each area more strongly implemented than the commercial rights to consume the area.	As noted above instead of the amount of money consumed, better indicator might be whether the overall impacts of the financing actually strengthen the rights of such ways of life which conserve and sustainably use biodiversity with equitable sharing of the benefits and makes them in each area more strongly implemented than the commercial rights to consume the area.	

We propose to include under this headline indicator reporting on the mobilization of public and private financial contributions to the maintenance and further development of key digital data infrastructures operated under FAIR principles and accessible via web interface. Potential data sources are the annual budgets of data portals such as INSDC, GBIF or BOLD.

Rationale: The combined Scoping Study 2&3 on 'DSI' and the recommendations for capacity building of the AHTEG on 'DSI' clearly highlight the significance of INSDC databases for scientists worldwide for the capacity-building and technology transfer and scientific cooperation to meet the needs for implementing the post-2020 Global Biodiversity Framework. The importance of data infrastructures, as e.g. GBIF, has been highlighted within this document repeatedly, the relevancy of data aggregated via BOLD systems was pointed out, e. g. in the Global Biodiversity Outlook 4. However, it cannot and should not be taken for granted that these essential data portals are secured in the long run, as increasing data directly translates into increased operational and maintenance costs which often are not secured in the long run. Investments in these critical infrastructures are essential not only for post-2020 monitoring elements, or the goals of the CBD and SDGs as such, but also to respond in a timely manner and effectively to pandemics and epidemics affecting public, plant and animal health on a global scale.

In addition, we propose to report financial expenditures and investments under this indicator for the maintenance and continuing development of basic research infrastructures engaged in and critical for biodiversity research.

Rationale: Basic research infrastructures such as universities ,and more specifically natural history collections and similar ex-situ collections are essential for capacity-building, technology transfer and scientific cooperation. They are essential for meeting the needs of the implementation of the post-2020 Global Biodiversity Framework. National research infrastructures act as facilitators for the monitoring of most post-2020 items. COP parties agreed to the BIOFIN assessment for which AICHI Targets and SDGs are key elements. Without adequate funding of research infrastructures, capacity building efforts and related SDGs cannot be sustained. Furthermore, it would remain entirely unclear how the

monitoring framework should effectively be translated into action without secured basic funding of the research infrastructures, which are required for implementing those actions and programmes and sustaining these in the long run. See also recommendations for capacity building of the AHTEG on 'DSI'.		
This is a highly inadequate target and indicator, which is not in line with CBD commitments as it mixes private and public expenditure, while CBD commitments refer to public expenditure only. There also is no way to measure the long-term impacts of private expenditure "on" conservation and there are no good data.		
The funds must reach the entities that are actually implementing the work. Following the international finance flow to recipient countries or government budget allocation to biodiversity is not good enough. The funded received by organizations directly implementing the work must be reported (e.g., annual financial report of environmental NGOs). This will discount the inefficiency of transaction costs and should lead to more effective use of financial resources.	Financial management and reporting by those organizations working on the ground or implementing the biodiversity projects and programs directly.	
SUGGESTED TEXT AT THE END OF SENTENCE: "...and National Finance Plans completed and under implementation."	For countries to report on this indicator they will need to follow a BIOFIN-like process in order to assess their national expenditure from all sources. It is well known that private expenditures are very complex to measure currently, we may keep a target for public expenditure and ODA, while for private sector having companies report on this is a more realistic target, at least by 2025.	
Additional indicator could be "trends in the mobilization of financial resources, promoting mobilization to IPLC's including women and youth. Data disaggregation is also required.		Some alternative indicators from the Human Rights in the Post-2020 Biodiversity Framework: * Data disaggregation of all financial contributions for biodiversity to count direct support for IPLCs * Increase recognition of monetary and non-monetary contributions arising from collective actions of IPLCs * Increase in direct funding and support for capacity building and technology transfer for IPLCs * Trends in recognition of monetary and non-monetary contributions arising from collective actions of IPLCs * Trends in direct funding for IPLCs * Trends in capacity building with IPLCs

		* Trends in technology transfer with IPLCs "
requires that private sector do not capture decision making and policies	requires that private sector do not capture reporting processes	
We suggest an additional indicator: "Trends in the mobilization of resources to vulnerable stakeholders such as women, youth and IPLC"		
Should also recognize the monetary and non-monetary contributions arising from collective action of IPLCs	Should also recognize the monetary and non-monetary contributions arising from collective action of IPLCs	
WWF suggests an additional indicator: "Trends in the mobilization of resources to vulnerable stakeholders such as women, youth and IPLC*"		
Effective implementation of the GBP requires increased financial resources, that also needs to be distributed equitably, including at the local level.		Change 18.0.1 to 'Official development assistance, public expenditure and private expenditure on conservation and sustainable use of biodiversity and ecosystem, which are equitably distributed and reach the local level where action is needed.'
It requires data disaggregation for funding to support the collective action of IPLCs, women and youth, as well as qualitative case studies from CBMIS.	Yes, data disaggregation can also be complemented by CBMIS and case studies to measure outcomes and impacts.	
Such expenditures must genuinely (with proof) be applied to the conservation and sustainable use of ecosystems - and the fair and equitable sharing of the benefits. We have to be careful to avoid their application to protected areas that may be used for offsetting, for example in deals between large conservation organisations and corporations seeking to destroy biodiversity elsewhere and / or continue to emit greenhouse gases.	as indicated above	
reframe as "humane and sustainable use of biodiversity and ecosystems"		
ODA does not guarantee integration of biodiversity considerations and funding. In its April 2020 report, the OECD offered recommendations for improving the assessment, tracking and reporting of biodiversity finance. These should be considered in the development of indicators to measure the trends in the mobilization of financial resources from public international financial flows. The UNDP Biodiversity Financing Initiative (BIOFIN) also offers solutions to biodiversity financing, alongside		

outcomes and impacts assessments, which could be adapted for use as indicators.		
More investment is needed to support not only monitoring of progress against the goals set out in the GBF, but to develop novel tools, approaches and technologies needed to protect and restore biodiversity. The wording of the indicator should include a mention of expenditure for science and research: "Official development assistance, public expenditure and private expenditure on conservation and sustainable use of biodiversity and ecosystems, inlcuding expenditure towards scientific research"		
Expenditures should also include those relevant to the third objective of the convention, i.e., transfer of relevant technologies to increase the benefits arising out of the utilization of genetic resources.	As above.	Add to the end of the indicator "and for training and transfer of technologies to increase the benefits arising out of the utilization of genetic resources
	Methodologies needed for calculating private expenditure on conservation.	
Should explicitly include "standardized methods for data collection and information management"	Should explicitly include "standardized methods for data collection and information management"	Should explicitly include "standardized methods for data collection and information management"
We have two points to raise here: 1: We believe that this one draft Headline Indicator should be split into three Headline Indicators: 1: Official Development Assistance 2: Public (domestic) expenditure 3: Private expenditure 2: We also note that there is no Headline, Component or Complementary Indicator measuring how many countries have developed a national biodiversity finance plan. A NDPF would directly support the direct achievement of Targets 13, 14, 17 and 18 and Goal D, as well as the broader achievement of the post 2020 Global Biodiversity Framework as a whole. It should be included as an indicator under one of these Targets.	With reference to Headline Indicator on expenditure: This may be difficult for some parties to report on without assistance, however, methodology does exist for reporting on biodiversity expenditure (e.g. BIOFIN's biodiversity expenditure review methodology, and Rio Markers for ODA). Currently, this makes reporting on ODA and public domestic expenditure relatively easy. While this same methodology can be applied to private expenditure (e.g. BIOFIN's biodiversity expenditure review methodology can be applied to the private sector), the current challenge with measuring private expenditure is that this data is not readily or consistently available to Parties/governments. However, work under Target 14 would make reporting on private sector expenditure much easier. With reference to our additional comment on the need for national biodiversity finance plans: The previous global resource mobilization strategy for the Strategic Plan for Biodiversity 2011-2020 and the Aichi targets encouraged countries to	

	develop National Biodiversity Finance Plans. Unfortunately, many countries have not done so. According to the CBD reporting framework, only 12% of parties developed elements of a finance plan, mainly because of lack of government capacity and financing for the planning process. Countries with support from the UNDP BIOFIN programme – which provided a methodology, technical support, a community of practice and capacity building, as well as financial resources - have developed national biodiversity finance plans, and are now starting to implement elements of these plans.	

Target 19. By 2030, ensure that quality information, including traditional knowledge, is available to decision makers and public for the effective management of biodiversity through promoting awareness, education and research

19.0.1 Biodiversity information index*

19.0.1 If you selected "yes, however requires further work", please describe:	19.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	19.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
Using traditional knowledge is very important for useful biodivercity conservation		
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
This indicator is based on remote sensing from space. It does not take other aspects, such as traditional knowledge, into account, and needs to be accordingly extended.		
		Number of biodiversity information data from technical and scientific sources, including citizen science.
This indicator is conceptual only but feasible to develop - would need existing measures such as amount of GBIF data globally and nationally but also, critically a quantifiable measure of the number of biodiversity observation systems in operation at the national scale. These systems are essential to ensure sustained and	This indicator is conceptual only but feasible to develop - would need existing measures such as amount of GBIF data globally and nationally but also, critically a quantifiable measure of the number of biodiversity observation systems in operation at the national scale. These systems are	Its relevant but needs work - suggest, given the nature of this index, that GEO BON and its key network partners such as GBIF/OBIS, etc. be tasked with working on such an index. As an alternative, GEO BON also recommends as per its statement in SBSTTA, that a quantifiable indicator tracking the number of adequately

adequate data supply for many of the proposed targets/indicators.	essential to ensure sustained and adequate data supply for many of the proposed targets/indicators.	supported national Biodiversity Observation Networks can be a good indicator for Target 19. And Target 19 needs to include investments in biodiversity observations to ensure effective implementation over the next decade.
To avoid recreating a new index, the indicator here should rely on the already extensive existing efforts to provide information to guide action on biodiversity. The work of IPBES and IUCN should be recognised here and the indicator should measure to what extent the information provided by these international expert bodies is taken up. Information production in itself is not useful if it is not then used. It could measure whether the recommendations of IPBES are reflected in national action plans and whether the species on the IUCN red list are protected by national legislations. It should also measure knowledge exchange and collaboration initiatives among scientific institutions and investments in scientific research, as a proxy for how much available information is taken up and used.		This indicator does not capture uptake and use of information, which would measure outcomes rather than outputs and so be more useful to assess impacts.
		The extent to which such ways of understanding and using Earth's life in its diversity and living with it which are best adapted to allow the local diversity of life to regenerate are respected as ways how the diversity of life in the area needs to be understood and treated. CBD has to maintain monitoring of the sustainability of different ways of understanding (Empirical research does not support assumptions that amount of persons' or of society's information on biology would help them to live more sustainably. Rather there prevails an opposite global correlation that averagely the more somebody has biological education or information, the less sustainable are the overall impacts of one's life and consumption - whereas the impacts of the ways of life of the poorest who have least biological knowledge or information, are often more sustainable.)
We propose to expand the data evaluated for this indicator by information associated with scientific collections: 1) the number of specimens preserved, managed and accessible in the ex-situ facilities		

themselves and 2) the number of datasets published by ex-situ facilities through data aggregators such as INSDC databases, BOLD or GBIF. Rationale: Ex-situ facilities are important aggregators of biodiversity related knowledge, and essential infrastructures for associated research and for scientists worldwide. Increased accessibility to objects and related information is key not only for many post-2020 goals, targets and indicators, but also for AICHI Targets 19 & 9 and SDGs 14 & 15.		
This target and indicators are highly inadequate and not in line with COP decisions to respect, protect and share the benefits of traditional knowledge. Moreover, the indicators should be gender disaggregated.		
This indicator is based on remote sensing from space. It does not take other aspects, such as traditional knowledge, into account, and needs to be accordingly extended.	This indicator is based on remote sensing from space. It does not take other aspects, such as traditional knowledge, into account, and needs to be accordingly extended.	
Trends in availability of biodiversity-related indigenous and local knowledge and FPIC mechanisms. There is no component of the headline indicators addressing traditional knowledge and FPIC safeguards for its use from the legtimate knowledge holders The following indicator adopted by COP-7 is relevant: 'Status and trends of linguistic diversity and numbers of speakers of indigenous languages' also in light of the UN Decade on Indigenous Languages and associated work by UNESCO to operationalize the indicator.		
This indicator is based on remote sensing from space. It does not take other aspects, such as indigenous and local knowledge, into account, and needs to be accordingly extended.	This indicator is based on remote sensing from space. It does not take other aspects, such as indigenous and local knowledge, into account, and needs to be accordingly extended.	
	Indicator formulation, availability, and maintenance unclear In addition, the indicator should include "the extent to which access to environmental/biodiversity information is established through national laws"	
This indicator is based on remote sensing from space. It does not take other aspects, such as traditional knowledge, into account, and needs to be accordingly extended.	This indicator is based on remote sensing from space. It does not take other aspects, such as traditional knowledge, into account, and needs to be accordingly extended.	
This indicator needs to be expanded to also account for use of traditional knowledge		

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		There is a need to include an Index of Biodiverstiy Awareness as a Headline Indicator against this goal. Several examples have been developed and peer-reviewed including E.g. 1. Millard J Gregory RD Jones K & Freeman R. (2021) The species awareness index as a conservation culturomics metric for public biodiversity awareness. Conserv Biol https://doi.org/10.1111/cobi.13701. Plus see BIP website. 2. "Number of Countries with national biodiversity monitoring systems in place". Can build off the baseline reported in Moussy et al 2021 Conservation Biology.
This indicator is based on remote sensing. It does not take into account other aspects, such as traditional knowledge, and needs to be extended.		
It needs to address biological, cultural and knowledge diversity, for example by taking into account the joint work on biological and cultural diversity of the CBD and UNESCO and the Sharm El Sheik to Kunming Action Agenda for Nature and People. The following indicator adopted by COP-7 is relevant: 'Status and trends of linguistic diversity and numbers of speakers of indigenous languages' also in light of the UN Decade on Indigenous Languages and associated work by UNESCO to operationalize the indicator.	It needs to address biological, cultural and knowledge diversity, for example by taking into account the joint work on biological and cultural diversity of the CBD and UNESCO and the Sharm El Sheik to Kunming Action Agenda for Nature and People. The following indicator adopted by COP-7 is relevant: 'Status and trends of linguistic diversity and numbers of speakers of indigenous languages' also in light of the UN Decade on Indigenous Languages and associated work by UNESCO to operationalize the indicator.	
We have to remember that traditional knowledge is embedded in the ecosystem(s) of which it is part, and the people whose cultural knowledge it is part of need to be consulted and involved this process, and also be asked to give their free prior and informed consent for its use. They should also be involved if they wish to be in developing the processes of awareness, education and research, which should never detach the knowledge from its source.	as noted above.	
The index does not exist at this point but there is already extensive efforts to provide information to guide action on biodiversity. The work of IPBES and IUCN should be recognised here and the indicator should measure to what extent the information provided by these international expert bodies is taken up. It could measure whether the recommendations of IPBES are reflected in		The information generated by the Biodiversity Information Index will be indeed relevant to measure progress towards target 18. However, science is not just a tool for data acquisition, management and sharing; it can also deliver solutions. To meet this target and the ambitious goals proposed by the Framework, it is

national action plans and the species on the IUCN red list are protected by national legislation. It should also measure knowledge exchange and collaboration initiatives among scientific institutions and investments in scientific research, as a proxy for how much available information is taken up and used.		necessary to obtain greater support for scientific research and cooperation. Therefore, we suggest indicators to measure knowledge exchange and collaboration initiatives among scientific institutions and investments in scientific research.
This indicator needs to be expanded to also account for use of traditional knowledge.	See above	
Given this indicator is marked as under development or needs to be developed, we suggest two considerations. First, the use of traditional knowledge must be governed by the holders of traditional knowledge. Second, the indicator should take into account the amount of documentation, preferably by IPLCs, of traditional knowledge related to biodiversity use and management increased and actually used in national strategies.	Capacity building efforts will need to be built for those extracting the traditional knowledge as well as for the traditional knowledge holders to understand the why and who will be using the knowledge.	
This needs to be defined for marine, freshwater, and terrestrial habitats and populations	This needs to be defined for marine, freshwater, and terrestrial habitats and populations	This needs to be defined for marine, freshwater, and terrestrial habitats and populations
		Need a headline indicator on traditional knowledge
This "biodiversity information index" does not appear on internet searches, so we understand it is still to be developed. If so, when it is eventually created, it should include cultural knowledge on sustainable use of biodiversity, and not just species data.		
It is difficult to endorse this as a headline indicator as there is to date no information about what it will consist of. GBIF would be very interested in supporting development of such an indicator including suggestions for components of data completeness that can be derived from the progress of data sharing through GBIF.	Detailed work is required, as mentioned above, to clarify what this indicator is intended to measure.	

19.0.2 Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessments

19.0.2 If you selected "yes, however requires further work", please describe:	19.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:	19.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant

		scales or has no specific relevance for mountain ecosystems and biodiversity.
How shall we measure it?		We suggest to rethink the indicator to something measurable.
As far as education is the prevailing education, its impacts have not been sustainable but have rather driven the loss of global biodiversity further and further to such scales of global biodiversity loss, which would never have been possible without modern education and science on nature.	We need to learn rather how other life-heritages ways of understanding Earth's diversity of life have been more sustainable than our European ways.	
We propose to expand the data evaluated for this indicator by information about the number of bachelor, master & PhD degrees granted in biodiversity relevant research disciplines at the national level. The proposed data source are national data on education. Rationale: Successful degrees are closely linked with functioning basic research infrastructures in academia and associated with ex-situ collections. An increasing number of successful degrees (bachelor, master, PhD) is a good indicator for the promotion of education and availability of required (biodiversity) experts (see general comments and recommendations for capacity building in the AHTEG report on 'DSI').	This indicator requires standardized national data, e.g on available funding for basic research infrastructures. Typically, international research collaborations unite scientists from multiple countries. We propose the development of an indicator that measures increases in the research funding for basic research infrastructures at the national level (also see general comments). Increased funding allocated for basic research infrastructures on national level would be a good metric and is already established as a metric for the basic assessment in BIOFIN. OECD statistics and national reports on annual investments in research infrastructures (by academic / non-academic institutes including ABS relevant sectors and/or by realised scientific research projects in or with partners from countries providing genetic resources, involving access to and utilisation of GR) would surely be a suitable approach to highlight the enormous amount of capacity building, scientific collaboration and joint research activities taking place already, but data on this likely is tedious to collect. GEF and other multilateral agencies or similar programmes e.g. such as the SCBD financed GTI Barcoding Training, might be suitable auxiliary data sources, but surely cover only a small proportion of actual capacity building, scientific collaborations and related activities.	
		There is mismatch between the target and indicator. The quality of environmental education as in the indicator is important to

		support strong conservation policies and to avail sufficient human resources for conservation. To deliver the quality information to decision-makers, different vector will be more efficient; e.g., IPBES assessment, policy recommendations from experts/organizations.
Just to add "Culturally appropriate"		
It needs to include education on indigenous and local knowledge.	It needs to include education on indigenous and local knowledge.	
Should consider non-formal education and other culturally-appropriate methodologies	Should consider non-formal education and other culturally-appropriate methodologies	
This indicator could include education towards both sustainable development and the restoration of nature.		
It needs to include education on indigenous and local knowledge.	It needs to include education on indigenous and local knowledge.	
reframe as "humane and sustainable development, including gender equality and nature rights"		
"extent to which" needs definition and unit of measurement.		
It is a great idea to include education, but this current indicator is not about biodiversity. The focus in the CBD should always be on biodiversity, which is the objective of the convention, so these ideas like "citizenship education" should be clearly about the responsibilities of citizens towards living in harmony with nature. Also, the Target mentions traditional knowledge, and it should be included in the indicator.		

Target 20. By 2030, ensure equitable participation in decision-making related to biodiversity and ensure rights over relevant resources of indigenous peoples and local communities, women and girls as well as youth, in accordance with national circumstances

20.0.1 Land tenure in the traditional territories of indigenous peoples and local communities

20.0.1 If you selected "yes, however requires further work", please describe:	20.0.1 If you selected "yes, however requires further work on capacity-building or other work", please describe:	20.0.1 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.
This target is hugely disappointing! It needs to be strengthened a lot. It needs to include FPIC and the right to say no, it needs to include structural participation in biodiversity decision making at national, regional and local policy levels, and in the definition of NBSAPs.	We suggest to monitor "The extent of Land tenure and the traditional territories of indigenous peoples and local communities that have been legally recognised and protected" We suggest also to refer also to The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)	
Traditional occupations by which the communities have adapted to live by area's local diversity of life in ways which allows it to regenerate have to be also respected as indicators of the sustainability of tenure.	Traditional occupations by which the communities have adapted to live by area's local diversity of life in ways which allows it to regenerate have to be also respected as indicators of the sustainability of tenure. These are important for global reporting also for others to learn sustainablity of life from them.	
The target and indicator are inadequate. Aside from the need for a separate target on land tenure and access, it should also be ensured access and governance are addressed in the indicators. There also should be a specific target on gender action in the GBF with adequate indicators.		
We suggest to monitor "The extent of Land tenure and the traditional territories of indigenous peoples and local communities that have been legally recognised and protected", (e.g. in Colombia and Brazil under constitutions of 1991 and 1988 respectively.) We suggest also to refer also to The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)	We suggest to monitor "The extent of Land tenure and the traditional territories of indigenous peoples and local communities that have been legally recognised and protected", (e.g. in Colombia and Brazil under constitutions of 1991 and 1988 respectively.) We suggest also to refer also to The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)	
	The target contains two separate issues.	

This indicator requires data disaggregation for IPLCs and women. Complementary outcome indicators related to these targets can be monitored through community-based monitoring and information systems (CBMIS) applying the indicators identified in the Indigenous Navigator monitoring tool (see above). It should also synergizes with SDG 1.4.2: 'Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'.		
should be desaggregated by gender		
This indicator requires further work, for example the inclusion of disaggregated data -but not limited to that.		
We suggest to monitor "The extent of Land tenure and the traditional territories of indigenous peoples and local communities that have been legally recognised and protected". Propose to refer to the following: SDG 5.a.2 : Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control FAO Land Portal: Trends in the implementation of the Voluntary Guidance on the Responsible Governance of Tenure (FAO; Land Portal) UN Decade on Family Farming: Number of countries where the legal framework (including customary law) improves women's rights to land ownership and/or control; access to other natural resources and productive assets, information, infrastructure, services and markets	We suggest to monitor "The extent of Land tenure and the traditional territories of indigenous peoples and local communities that have been legally recognised and protected". Propose to refer to the following: SDG 5.a.2 : Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control FAO Land Portal: Trends in the implementation of the Voluntary Guidance on the Responsible Governance of Tenure (FAO; Land Portal) UN Decafe on Family Farming: Number of countries where the legal framework (including customary law) improves women's rights to land ownership and/or control; access to other natural resources and productive assets, information, infrastructure, services and markets	
Requires disaggregated data for men and women.		
Formulation, availability, and maintenance unclear Attention to individual land tenure rights. They can lead to land or ocean grabbing by larger financial interests. There is a need to favour "community-based" rights. It is important to specify "The extent to which land tenure	Formulation, availability, and maintenance unclear Need to define land tenure arrangements	

by indigenous people and local communities is legally recognized and secured."		
We suggest to monitor "The extent of Land tenure and the traditional territories of indigenous peoples and local communities that have been legally recognised and protected", (e.g. in Colombia and Brazil under constitutions of 1991 and 1988 respectively.) We suggest also to refer also to The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)	We suggest to monitor "The extent of Land tenure and the traditional territories of indigenous peoples and local communities that have been legally recognised and protected", (e.g. in Colombia and Brazil under constitutions of 1991 and 1988 respectively.) We suggest also to refer also to The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)	
We suggest monitoring "The extent of land tenure in the traditional territories of indigenous peoples and local communities that have been legally recognised and protected".	We suggest referring to The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security.	
We suggest monitoring the extent and increase of the area under secure land tenure to illustrate the progress.		Change 20.0.1"The extent and incremental area (Mha) of Land tenure and resources rights and the traditional territories of indigenous peoples and local communities that have been legally recognised and protected"
Yes. It synergizes with SDG 1.4.2: 'Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'.	Capacity building to synergize with the operationalization of 1.4.2: 'Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'.	
As we now know, indigenous territories are vital to the conservation and sustainable use of biodiversity and also to ecosystem integrity, yet there are many such territories that have not yet been recognised or are being invaded or part of them set aside for mining claims for example, while they also face illegal logging and other such activities. So we need to now how secure their tenure actually is. The word tenure has some ambiguities which need clarifying here - tenure can legally just be for a certain number of years or under certain conditions and this needs to be clarified. The Voluntary Guidelines on the responsible Governance of tenure of land, fisheries and forests in the Context of national food security may be useful here: http://www.fao.org/3/i2801e/i2801e.pdf . Finally 'Land tenure in the territories' is ambiguous and needs clarification.	as above answer.	

"The lands of IPLCs, including farmers, pastoralists and herders, are often important areas for in situ conservation of the remaining varieties and breeds" (IPBES). However, proposed indicator 20.0.1 should specify '…given the expectation that this will in the majority of cases be beneficial to biodiversity'. There should be a qualitative indicator monitoring land management methods and practices that have a positive impact on biodiversity, as simply measuring ownership wouldn't necessarily guarantee sustainability.		
We suggest monitoring "The extent of land tenure in the traditional territories of indigenous peoples and local communities that have been legally recognised and protected".	We suggest referring to The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security	
Forthcoming research by Conservation International experts and others (Shrestha, et al. (2021) pre-publication) proposes an "adapted bundles of rights" framework which makes the theoretical distinction between the right to: (1) use and access, (2) manage, (3) exclude external actors from accessing, and/or (4) alienate (i.e., lease or sell lands). Using this framework, they characterize tenure rights over collectively held lands as varying along a continuum ranging from IPLC as an owner (possess the four bundles of rights) to a proprietor/holder (possess all the bundles but the right to alienate) to a claimant/manager (possess all the bundles but right to exclude and alienate), or a user with only access and use rights, i.e., the most limited bundles of tenure rights. These analysis and others may be useful to consider at this indicator is developed.		
Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure (SDG indicator 1.4.2) CBD indicator: Trends in land-use change and land tenure in the traditional territories of IPLCs (COP decision X.43)		
		This is not about biodiversity specifically. Land tenure for IPLCs is an important issue, but the focus under CBD should be on the biodiversity aspect. In this regard, the targets itself needs to be changed from the standpoint of biodiversity.

20.0.2 Population with secure tenure rights to land		
20.0.2 If you selected "yes, however requires further work", please describe:	**20.0.2 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**20.0.2 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
This does not specify WHO has secure tenure rights. It could be many private landowners, but at the expenses of IPLCs, whereby again this would become a counterproductive indicator.		
Tenure security is important right also for saving the biodiversity. But the security and sustainability of tenure can not be reduced to western land titles.	Different heritages of using and holding the land have to be respected equally according their sustainability	
If only one headline indicator were to be retained for Target 20, it should be the most comprehensive among all the current headline indicators, which would be HI 20.0.2 Headline indicator "Population with secure tenure rights to land". (All other currently listed headline indicators are extremely important and should at minimum be retained as component indicators.) If headline indicator 20.0.2 is to be retained, however, to ensure global standards and consistency, with a view to avoiding duplication of reporting efforts and ensuring the widest reach among different national contexts, this indicator should be directly aligned with tier II SDG indicator 1.4.2: "Indicator 1.4.2: Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure"		Headline indicator 20.0.2 should be directly aligned with SDG indicator 1.4.2: "Indicator 1.4.2: Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure" Metadata for SDG 1.4.2: https://unstats.un.org/sdgs/metadata/files/Metadata-01-04-02.pdf Custodian for SDG 1.4.2: UN-Habitat and World Bank IAEG tier for SDG 1.4.2: Tier II
Data disaggregation required	Capacity building to synergize with the operationalization of SDG 1.4.2: 'Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'.	
should be disaggregated by gender		

The SDG indicator wording is better: Propose to use SDG1.4.2: Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure	The SDG indicator wording is better: Propose to use SDG1.4.2: Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure	
Urbanization and deruralization likely reduces the size of the population with secure land tenure rights. How is that interpreted?		
This is only really relevant to rural land users (not those living in urban areas) so should make that clear, and think indicator 20.0.1 is better for tracking land tenure.		
		Change 20.0.2. to 'Incremental number of Indigenous People and local communities (by women, individual, and community) with secure collective tenure and resources rights to land, forests, and water.'
Yes. It synergizes with SDG 1.4.2: Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'.	Capacity building to synergize with the operationalization of SDG 1.4.2: 'Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure'.	
Population is far too vague a term to use here and needs defining!		
Land tenure is a complex concept with many dimensions. To make this more specific and actionable, it would be helpful to include: Land tenure security including the full recognition of rights (use, access, management, exclusion, alienation) in the traditional territories of IPLCs according to their self determination.		
Considerable overlap between this indicator and 20.0.1 – Headline indicators should not include both.		
(a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure (SDG indicator 5.a.1)		
This indicator needs to be made gender-responsive, in line with the target. The indicator should be rephrased as: 20.0.2: "Population with secure tenure rights to land by gender"		

This appears to be basically the same as the first indicator in this target. They could be combined for clarity and streamlining. Similar to the first indicator, the focus should be on biodiversity.		This appears to be basically the same as the first indicator in this target. They could be combined for clarity and streamlining. Similar to the first indicator, the focus should be on biodiversity.

20.0.3 Extent to which indigenous peoples and local communities, women and girls as well as youth participate in decision-making related to biodiversity*

20.0.3 If you selected "yes, however requires further work", please describe:	**20.0.3 If you selected "yes, however requires further work on capacity-building or other work", please describe:**	**20.0.3 If you think this indicator is not relevant or has significant gaps, would you suggest an alternative? Please indicate the exact name of the indicator and the name of the organization that maintains it.**
		Indicator might be of overall relevance for measuring progress on the goal, but either cannot be disaggregated to mountain relevant scales or has no specific relevance for mountain ecosystems and biodiversity.
We suggest to change the indicator to: "Extent to which the rights, roles and insights of indigenous peoples and local communities, women and girls as well as youth in the protection of biodiversity are respected and enacted in decision-making related to biodiversity." We also suggest to add an indicator to monitor if any actions to protect biodiversity do not respect people's rights. Another indicator should be the amount of people killed or seriously threatened because of defending their environment. Of course this indicator should aim for zero.		
		We suggest to rethink the indicator to something measurable.
How don we measure such indicator?		
While participation is important, even more important is the sustainability and cultural equality of the practice how decisions are made. Diversity of cultures of understanding Earth's life in its diversity and of deciding about it have to be treated equally. It is a deep problem that currently the 'participation' consists of a process where anyone from world's diverse life-heritages who wants to contribute to the consideration	World needs to learn sustainablity equally from its diverse life-heritages which have adapted to live sustainably by the regeneration of their area	

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on how we should live with the diversity of Earth's life is forced to adopt such forms of communication and decision making, which are inherited from the European colonial heritage, which has led to the diversity of Earth's life becoming undermined.		
This indicator should, in addition, take into consideration the equity with which IPLCs, youth and women are able to participate in data and knowledge collection and generation for conservation and sustainability (e. g. as part of the post-2020 monitoring); in associated research; and in applications based on such data, infrastructures and expertise, including analyses, interpretations, decisions and reporting.		
Just participation is not sufficient, it should be effective and equitable and respect human rights, including in particular the right to FPIC.		
We suggest to change the indicator to: "Extent to which the rights, roles and insights of indigenous peoples and local communities, women and girls as well as youth in the protection of biodiversity are respected and enacted in decision-making related to biodiversity." We also suggest to add an indicator to monitor if any actions to protect biodiversity do not respect people's rights – given reports from a number of countries, this seems very important. "Number of protected areas or other conservation measures that have disrespected UNDRIPs and led to eviction, deprivation of traditional rights and violence."	We suggest to change the indicator to: "Extent to which the rights, roles and insights of indigenous peoples and local communities, women and girls as well as youth in the protection of biodiversity are respected and enacted in decision-making related to biodiversity." We also suggest to add an indicator to monitor if any actions to protect biodiversity do not respect people's rights – given reports from a number of countries, this seems very important. "Number of protected areas or other conservation measures that have disrespected UNDRIPs and led to eviction, deprivation of traditional rights and violence."	
The quality of participation is key.		
We suggest to change the indicator to: "Extent to which the rights, roles and insights of indigenous peoples and local communities, women and girls as well as youth in the protection of biodiversity are respected and enacted in decision-making related to biodiversity." We also suggest to add an indicator to monitor if any actions to protect biodiversity do not respect people's rights – given reports from a number of countries, this seems very important. "Number of protected areas or other conservation measures that have disrespected UNDRIPs and led to eviction, deprivation of traditional rights and violence.""		

requires capacity building and empowerment of women and girls		
RFN suggests an alternative indicator: "Number of Parties reporting on IPLCs and their full and effective participation in the implementation of the post-2020 GBF at all levels".	Parties may require assistance to collect at national level	
There are specific mechanism in the CBD in relation to IPLCs that could be reflected. T20.1 Equitable participation of IPLCs in decision-making related to biodiversity Options for indicators could be: Number of Parties reporting on inclusion of IPLCs in the updating, implementation and monitoring of NBSAPs, and their full and effective participation in the implementation of the post-2020 GBF at all levels Number of Parties with designated Focal Point of Art. 8(j) and related provisions	There are specific mechanism in the CBD in relation to IPLCs that could be reflected. T20.1 Equitable participation of IPLCs in decision-making related to biodiversity Options for indicators could be: Number of Parties reporting on inclusion of IPLCs in the updating, implementation and monitoring of NBSAPs, and their full and effective participation in the implementation of the post-2020 GBF at all levels Number of Parties with designated Focal Point of Art. 8(j) and related provisions	
Relevant Pacific Island country indicator: Women in environmental leadership (% women in government leadership roles)		
The indicator for this target needs also to measure the number of decision-making and leadership positions related to biodiversity held by women and IPLC, participation and inclusion. WWF proposes an alternative indicator: "Number of Parties reporting on inclusion of IPLCs in the updating, implementation and monitoring of NBSAPs, and their full and effective participation in the implementation of the post-2020 GBF at all levels".*	Parties may require assistance to collect at national level	
Formulation, availability, and maintenance unclear	see above + It is important to specify that also the "right of IPLCs, women, girls and youth to participate in decision-making related to biodiversity is secured in national laws and regulations".	
We suggest to change the indicator to: "Extent to which the rights, roles and insights of indigenous peoples and local communities, women and girls as well as youth in the protection of biodiversity are respected and enacted in decision-making related to biodiversity." We also suggest to add an indicator to monitor if any actions to protect biodiversity do not respect people's	We suggest to change the indicator to: "Extent to which the rights, roles and insights of indigenous peoples and local communities, women and girls as well as youth in the protection of biodiversity are respected and enacted in decision-making related to biodiversity." We also suggest to add an indicator to monitor if any actions to protect biodiversity do not respect	

rights – given reports from a number of countries, this seems very important. "Number of protected areas or other conservation measures that have disrespected UNDRIPs and led to eviction, deprivation of traditional rights and violence."	people's rights – given reports from a number of countries, this seems very important. "Number of protected areas or other conservation measures that have disrespected UNDRIPs and led to eviction, deprivation of traditional rights and violence."	
We suggest amending the indicator to: "Extent to which indigenous peoples and local communities, women and girls as well as youth participate in decision-making related to biodiversity and their rights, roles and views, including free, prior and informed consent, are taken into account and respected." We also suggest adding an indicator to monitor if any actions to protect biodiversity do not respect people's rights: "Number of protected areas or other conservation measures that have disrespected UNDRIPs and led to eviction, deprivation of traditional rights and violence."	See above	
This indicator is not currently available	As the indicator is not currently available it is difficult to make a judgement on the needs for capacity development and other work.	
		Change 20.0.3 to "Extent to which the rights, roles and insights of indigenous peoples and local communities, women and girls as well as youth in the protection of biodiversity are respected and enacted in decision-making related to biodiversity." Add an indicator "Number of (marine and land)protected areas or other conservation measures that have disrespected UNDRIPs and led to eviction, deprivation of traditional rights."
Participate is a vague word which can include responding to a government survey. Participation must be effective, involve FPIC and provide real power to indigenous peoples and local communities, women and girls as well as youth in these processes, which should place them and their knowledge and cultures at the centre of the decision-making processes, otherwise 'participation' can easily become disempowering and basically meaningless.	Further work is needed on this directly with IPLCs etc and this word participation needs definition.	
what is meant by extent?		

Indicator 20.0.3 should clarify that the intended outcome is to ensure educational opportunities are extended to everyone, including IPLCs, women, girls and youth.		
We suggest amending the indicator to: "Extent to which indigenous peoples and local communities, women and girls as well as youth participate in decision-making related to biodiversity and their rights, roles and views, including free, prior and informed consent, are taken into account and respected." We also suggest adding an indicator to monitor if any actions to protect biodiversity do not respect people's rights: "Number of protected areas or other conservation measures that have disrespected UNDRIPs and led to eviction, deprivation of traditional rights and violence."	See above	
"extent to which" requires clarification and metric.	This indicator is not currently available.	
Will need reference to the quality of participation "are able to fully and effectively participate...": Extent to which indigenous peoples and local communities, women and girls as well as youth in the are able to fully and effectively participate in decision-making related to biodiversity. Meaningful indicators on youth participation & rights are crucial, but might likely not yet be operationalized. These will have to be developed with the full & effective participation of youth through a separate process such as through the work of the expert group on indicators. We also see many missing elements in this target relating to different substantive and procedural rights including: - Land and environmental defenders - Recognition of the right to a safe, clean, healthy and sustainable environment - Gender equality - Intergenerational equity - Access to information - Access to justice / Access to justice, remedy, and redress mechanisms for human rights violations relating to biodiversity loss and conservation activities		
Legislation to ensure equitable participation can be an element of the target.		

Biodiversity conservation always needs to be through the harmonized solution of biodiversity protection and social economic issues. I wish Best of Luck to all of us.

The information provided is sourced from the following document produced by UNEP and partners (https://www.grida.no/publications/543).

The indicators which have been identified and which are considered of major importance for protecting mountain biodiversity have now been highlighted as relevant in the survey.
However, this does not imply that the other indicators do not have relevance for the monitoring of the overall goal, it just might be they do not play a specific role for mountain biodiversity or the indicator cannot be disaggregated to mountain relevant scales.

In general, indicators that are effective for monitoring biodiversity in mountains will be crucial to protect highly valuable mountain ecosystems, which are in many ways relevant to protect biodiversity on a global scale (relevance of mountains to downstream ecosystems and ecosystem services delivered etc.).
It is hugely counterproductive to discuss the indicators before the agreement og the goals. Many indicators will become completely irrelevant, what a waste of precious negotiation time!
beware of indicators which may cause the contrary effect of the envisaged!

Incorporate who is responsible for providing the information, and make sure there is no conflict of interest in the provision of such information.
There are too many indicators to make this feasible and effective for countries with limited resources

Given that many Parties expressed concern and/or confusion on the current list of 41 Headline Indicators and expressed the need for a much smaller list. We recommend that a criteria-driven process be implemented to select a small set of Headline Indicators. The indicator selection criteria should include existing or highly feasible methodology, sustained institutional support for the indicator and the production of the required data; indicator can be disaggregated to the national scale without bias (e.g. indicator produces locally valid results), indicator is directly relevant (i.e. fit for purpose) to the target in question. Current assessments of available indicators have fallen short from identifying which of these can produce locally/nationally valid results. Just because a global indicator can be disaggregated does not always mean it should. Also, there are a number of indicators produced at the national scale (e.g. South Africa's National Biodiversity Institute) that should be considered as possible indicators for many of the targets. These include Ecosystem Protection Level and Ecosystem Threat Level indicators. These and others are based on fairly basic national data sources and thus have potential for feasible implementation in many countries. Other countries such as China, Colombia, Mexico and many others also have much to offer in terms of available indicator methodologies which should be up for consideration and upscaling. We have seen analyses on the use of indicators in national reports show the strong preference for national data and indicators - this is unlikely to change and thus, applying upscaled methodologies with data standards is another way to achieve comparability and aggregation/disaggregation but with greater ownership/trust by the Parties for the indicators in use.

Further, the Headline Indicators even if meeting the above stated criteria, can still fail if there is not sufficient commitments to sustain the data production needed for them to be produced and tracked. Thus, the Monitoring Framework needs to clearly articulate the need for systematic observation data and that Target 19 includes specific reference (and its own indicator) in that regard.

There are deep problems with the Headline Indicators as they neglect the CBD obligations and present such unsustainable models of monitoring which are not derived from the CBD obligations on monitoring but displace the CBD requirements of monitoring by such 'Results Based Management' type of monitoring models and requirements which have guided the commercial management of the Earth in highly unsustainable ways.

Whereas the CBD has set a comprehensive whole of its objectives, obligations also for implementation and monitoring, now however the balanced totality of these CBD requirements have been neglected, undermined and displaced by other goals, targets, concepts and monitoring which are nowhere transparently derived from the balanced totality of CBD obligations.

Particularly violated are various such CBD obligations, whose implementation would have been most crucial to prevent global biodiversity loss acceleration which is

driven by the over-consumption of the rich states and elites and commercial rights of the corporations but which are now side-lined by other goals and targets.

Proposed post-2020 GBF goals, targets and monitoring have become arbitrarily selected to become implemented and monitored by the available resources instead of the CBD obligations, whose implementation would have been crucial to bend the curve of accelerating global biodiversity loss.

When one in this way first selects and formulates 'indicators' to whose monitoring those who have most money want to invest and only after that starts to formulate more in detail what would be the 'goals' or 'targets' which those indicators could best indicate, the official CBD processes become captured for other purposes, which those who have money like the corporations are most ready to finance.

The UNCCD is very grateful for the opportunity to contribute to this process and stands ready to explore and enhance synergies for maximum impact. We wish all involved in this process success. We have therefore focused our responses in this survey to those indicators where we can contribute to this objective.

In the Edinburgh Declaration*, subnational governments, cities and local authorities commit to "aligning biodiversity strategies and actions, and [their] monitoring and reporting efforts with National Biodiversity Strategies and Action Plans (NBSAPs), within [their] subnational, city and local competencies". The set of indicators listed in this survey provides only little indication on if and how the monitoring efforts by subnational governments, cities and local authorities are integrated.

The revised Singapore Index on Cities' Biodiversity (also known as the 'City Biodiversity Index') includes the indicator "Connectivity Measures or Ecological Networks to Counter Fragmentation". Habitat connectivity is of particular importance in urban areas as well as in urban-rural interfaces. To our understanding, the set of indicators included in this questionnaire does not cover this aspect sufficiently. We therefore propose to modify an existing or add a new indicator to cover connectivity accordingly.

The revised Singapore Index on Cities' Biodiversity contains several of the indicators listed in this survey. Hence, cities should be encouraged to use the Singapore Index on Cities' Biodiversity for tracking their progress on achieving the goals of the Post-2020 Global Biodiversity Framework.

*Please refer to CBD/SBI/3/19 as well as CBD/SBI/3/INF/25
https://www.cbd.int/doc/c/0b09/511f/8eeb6c298438b93c6b20af91/sbi-03-19-en.pdf
https://www.cbd.int/doc/c/33b8/046b/e7e37d94e2dd5c9314c1fba5/sbi-03-inf-25-en.pdf

We support the concerns expressed by many Parties that work on indicators for a set of goals and targets that is far from agreed is premature, also because it is clear from the discussions the proposed goals and targets themselves are seen by many Parties as highly inadequate, regressive and not in line with the CBD and its objectives and CBD COP decisions and other governmental commitments like the SDGs. The Monitoring framework, and the Strategic Plan in general, should support the implementation of the CBD, but many of the proposed targets and indicators fail to do this and are entirely disconnected from existing CBD commitments. The proposed Global Biodiversity Framework should first be reviewed, re-ordered and altered profoundly, as suggested by many Parties, and aligned with the CBD and its objectives, and subsequently the Monitoring Framework should be aligned with the Global Biodiversity Framework as an instrument that supports the implementation of the CBD objectives and related commitments and COP decisions. These general comments also apply to the survey that was filled out by our senior gender expert Juana Vera Delgado, whom we asked to fill out the survey separately and specifically look at the gender dimensions of the proposed indicators.

- We align with the CBD Alliance and other organisations who have voiced string concerns to the procedure. We feel it is not appropriate to design indicators at a point in time where there is still no agreement on the targets of the GBF.
- We participate in this survey in good faith but would like to stress that our comments on the indicators do not mean endorsements of the goals and targets, and that changes may be necessary in the indicators if the goals and targets are changed.
- We would also refer to the statement made by the CBD Alliance relating to item 3, in which it was pointed out that the current draft goals and objectives are a regression of the Aichi targets, such as in action targets 1, 2, 3, 4, 8, 9, 14, 15, 17 (and possibly more).
- The current GBF still has significant gaps in implementing the CBD in its entirety Notably, the draft GBF does not address the obligations stated under Art 3, 4b, 7c and 8l, which compel parties not to do damage to the biodiversity of other countries. This includes the impacts of consumption, trade and telecoupling by industrialized countries on other countries, and would need additions to the indicator framework
- Similarly, there are no indicators on other elements of the GBF. It would be good to have indicators on implementation beyond those related to NBSAPs. We notably support Finland's proposal to have an indicator on the number of ministries involved in implementing the NBSAPs as an important contribution to establishing a whole of government approach.
- The questionnaire merely asks if the proposed indicators make sense. It only gives limited opportunity to suggest further indicators. It also does not ask if there are indicators which could be downgraded or given up in order to limit the number of indicators.

- Some expressions need to be very clearly defined in order to be monitored – e.g. sustainability of farming or forestry, or "forests" as opposed to plantations.
- A very important indicator would be one that ensures that none of the actions undertaken to achieve the 30 by 30 target or any other nature conservation targets contravenes existing human rights obligations.
The targets must be stated more simply.

The approach of achievement assessment by components does not seem valid. A target should be stated to mean single thing, and it has to be assessed holistically. Separating qualifiers on particular aspects and conditions should not be handled separately.
The ICCA Consortium identified important gaps in the Goals and Targets of the Updated Zero Draft which has implications for the adoption of the headline indicators.

1. The post-2020 GBF should harmonize with the United Nations' rights-based approach. We would therefore propose the inclusion of a headline indicator related to the right to a healthy, safe and clean environment, for example: 'The number of States that recognize the right to a healthy environment through their constitutions, legislation or as parties to legally binding regional treaties that include the right.'

2. A process under the auspices of the Working Group on Article 8(j) and Related Provisions in parallel with and in addition to the AHTEG on the monitoring framework is desirable to continue the development of and operationalization of indicators related to traditional knowledge and indigenous peoples and local communities.
A headline indicator that acknowledge the rights of Nature should be included. Then it will be possible to include indicators related to the vulnerability and capacity (limits) of Nature to sustain the planet. Other related indicators would include: % of population that acknowledge and respect the agency and capacity of Nature, % of polulation that knows and respect the productive vocation/capacity of local ecosystems
We have identified a number of important gaps in the set of goals and targets contained in the updated zero draft. This obviously has implications for the adoption of the headline indicators, which should measure progress against all goals and targets.
We are in particular concerned about gaps with regards to the drivers of biodiversity loss such as agriculture and food systems, fisheries, infrastructure and the financial sector and, overarching all of these, humanity's unsustainable environmental footprint. We also believe that the framework needs to better integrate the rights-based approach and that the finance related aspects require a more comprehensive and ambitious approach that address the need (1) to align financial flows with biodiversity conservation, (2) to increase of resources from domestic and international, public and private sources, and (3) to eliminate or repurpose incentives, including subsidies, that are harmful to biodiversity.

We align with other organizations who have voiced their concerns to the procedure and process on developing these current draft. We feel it is not appropriate to design indicators at a point in time when there is still no agreement on the text of goals and targets of the GBF.We participate in this survey in good faith but would like to stress that our comments on the indicators do not mean endorsements of the goals and targets, and that changes may be necessary in the indicators if the goals and targets are changed.

We would also refer to the statement made by the CBD Alliance relating to item 3, in which it was pointed out that the current draft goals and objectives are a regression of the Aichi targets, such as in action targets 1, 2, 3, 4, 8, 9, 14, 15, 17 (and possibly more) -and this should not be the case if we are to achieve the 2050 vision of living in harmony with nature.

We stress the need to guarantee appropriate participation of observers and CSO in this process in order to produce a legitimate and implementable GBF.
none

No, gracias!

The Pacific Island country and territories have a agreed set of regional and national indicators that are measurable and have available data across much of the region. These are used in national State of Environment Reports available here https://soec.sprep.org/resources_and_about.html

Regionally the State of Environment and Conservation in the Pacific Islands: 2020 Regional Report (SOEC) examines the status and trends of 31 regional

environment indicators in 22 island countries and territories, focusing on the period 2015–2020. https://soec.sprep.org/

Within the Pacific region SPREP supports countries to have data required and available, against these indicators.   Where possible we support the use of these indicators for reporting against the GBF by the Pacific region, until further capacity for obtaining and assessing additional data across all PICTs is available.
The IUCN Green List of Protected and Conserved Areas should be included as an indicator given that it can help Parties to measure the quality aspects (effective management, equitable governance) of protected areas coverage and their own performance against Target 2. The Green List also triggers capacity building support for any site registering with the scheme.

The adoption and implementation of appropriate regulative measures and legislation to help enforce the various aspects of the 20 targets is an important indicator. Regulations and laws can be counted and measured and carry with them the need for governments to become pro-active in protecting and securing the achievement of the targets. This aspect should be included more widely in the various indicators, where appropriate.

There should be a headline indicator on ecological connectivity: "Percentage of protected and conserved areas that are linked by formal ecological corridors that allow the unimpeded movement of species and the flow of natural processes that sustain life on Earth".
WWF has identified a number of important gaps in the set of goals and targets contained in the updated zero draft. This obviously has implications for the adoption of the headline indicators, which should measure progress against all goals and targets.

We are in particular concerned about gaps with regards to the drivers of biodiversity loss such as agriculture and food systems, fisheries, infrastructure and the financial sector and, overarching all of these, humanity's unsustainable environmental footprint. We also believe that the framework needs to better integrate the rights- based approach and that the finance related aspects require a more comprehensive and ambitious approach that address the need (1) to align financial flows with biodiversity conservation, (2) to increase of resources from domestic and international, public and private sources, and (3) to eliminate or repurpose incentives, including subsidies, that are harmful to biodiversity.

WWF proposes that Goal D, in addition to significantly increasing biodiversity positive financing from all sources, domestic, international, public and private, as well as capacity building and technological transfer, should ensure that public and private financial flows are aligned with the three objectives of the CBD. Public and private financial flows refer both to incentives, including subsidies, as well as financial flows in the finance sector. In addition to target 17 on harmful incentives, a target on public and private financial flows in the finance sector is needed, to align public and private financial flows with the goals of the GBF.

As headline indicators for such a target, we suggest:
- Number of countries with regulatory requirements (e.g. taxonomies, disclosure requirements) for the financial sector to report on risks, impacts and dependencies associated with biodiversity loss or
- Proportion/Number of Central Banks/ financial supervisors integrating biodiversity-related financial risks into capital and solvency requirements for financial institutions.
- Number of financial institutions integrating biodiversity aspects in their investment decisions including banks, trust companies, insurance companies, brokerage firms, and investment dealers.

A further note on indicators for Goal A:
An important indicator for component A.2. Ecosystem integrity and connectivity (terrestrial, freshwater and marine ecosystems) is missing from the proposed indicator framework: the Forest Specialist Index. The Forest Specialist Index supports the monitoring of forest quality (integrity). See: Below the canopy: global trends in forest vertebrate populations and their drivers | Proceedings of the Royal Society B: Biological Science: https://royalsocietypublishing.org/doi/10.1098/rspb.2020.0533
The index is also proposed in: CBD/SBSTTA/24/inf/16: indicators for the post-2020 GBF
PRRI is of the view that indicators should be kept simple, realistic and in line with the CBD

- We feel it is not appropriate to design indicators before the targets of the GBF.
- Our comments on the indicators do not mean endorsements of the goals and targets.
- The draft GBF does not address or monitor the CBD obligations not to do damage to the biodiversity of other countries.
- We support to have an indicator on the number of ministries involved in implementing the NBSAPs as an important contribution to establishing a whole of

government approach.
- The questionnaire only gives limited opportunity to suggest further indicators. It also does not ask if there are indicators which could be downgraded or given up.
- Some expressions need to be very clearly defined in order to be monitored – e.g. sustainability of farming or forestry, or "forests" as opposed to plantations.
- A very important indicator would be one that ensures that none of the actions undertaken to achieve the 30 by 30 target or any other nature conservation targets contravenes existing human rights obligations.
- We broadly endorse the submissions made by Friends of the Earth Europe and Wildlife Conservation Society.

- We align with others who have voiced concerns with developing of these Indicators before the targets have been agreed.

- We also associate ourselves with the statement made by the CBD Alliance relating to item 3, that the current draft goals and objectives are a regression of the Aichi targets (particularly Targets 4 and 8).

- The GBF should restate parties' obligations not to damage biodiversity in other countries.

- Additional indicators are needed to measure Government efforts to implement NBSAPs and to measure actions taken to comply with human rights obligations.

- Need to clearly that sustainable management of "forests" does not include plantations.
TRAFFIC strongly encourages strong input by CITES and other relevant multilateral environmental agreements (MEAs) in the final stages of the negotiations on the post-2020 Global Biodiversity Framework. TRAFFIC hopes that the Parties will ensure that an ambitious but realistic framework can be agreed to, with indicators that are consistent and harmonized with those that will be used by CITES and other MEAs. For example, while target 4 of the zero draft refers ensuring that "the harvesting, trade and use of wild species of fauna and flora is legal, at sustainable levels and safe", we hope that robust indicators are also developed on reducing the illegal and unsustainable trade in wild species, an important indicator of progress being made by CITES.

Finally, TRAFFIC also notes the concerns expressed by many during the negotiations over the additional reporting burdens that the monitoring framework may impose and the capacity needed for countries to effectively utilize it. We would therefore call on Parties to provide the technical and financial support and resources needed, as well as the establishment of clear and structured mechanisms to support countries in building capacity for their monitoring systems.
The headline indicators need to be adequate to meet the goals and targets. Currently there are no headline indicators that represent biodiversity's role in providing nature's contributions to people, despite nature's contributions to people being central to Goal B.

We support a limited set of Headline indicators, which all Parties should be required to
report against, that are able to generate national-level data that can be readily aggregated
to assess global progress. These Headline indicators must be supported by a larger set of
Component indicators that translate across each identified component of the Goals and
Targets and a set of Complementary indicators which are available for in-depth or thematic
analyses. While flexibility should be allowed for Parties to use the most nationally
appropriate Component indicators, these indicators should be standardised and
comparable wherever possible.

A primary aim of developing Headline indicators is to generate comparable national-level
reporting data that are readily aggregated to assess global progress. It is key that the data
used for Headline indicators are standardised to allow for consistent monitoring which enables comparison between and across countries. We need this in order to
appropriately implement the 'ratcheting' of global commitments through the implementation mechanism.

All Parties should be required to report against the full list of Headline indicators in a section of their National Reports, using standardised methods for data
sources. In some cases this will require development of expanded monitoring, assessment and data compilation at the national scale (e.g. implementation of
population abundance monitoring to allow national indices to be developed, such as the Wild Bird Indices recently developed for Botswana and Uganda).

We agree with the call from many Parties to have a limited list of Headline indicators. The
number per goal, milestone and target will vary and depend on the complexity of each of these, and the availability/feasibility of appropriate indicators. We don't

agree with the proposal to group the targets under the goals with just a few Headline indicators for each grouped cluster – as this would make the monitoring framework confusing (SMART targets would not clearly translate across to indicators), and would risk some targets not being clearly reported against.

The process for choosing Headline indicators must be clear and transparent, and we see
the following criteria as key:
• Easily understood: it is conceptually clear how the indicator relates to the goal or target and the data is easy to interpret and present
• Quantitative: the indicator enables accurate measurement of the feature of interest with low bias and assessment of error. It shows trends over time, measures a rate of change and
changes in the rate, and has good spatial coverage.
• Amenable to analysis at different scales: the indicator is nationally relevant, including the
ability of the indicator to be disaggregated and/or aggregated from global to national and
national to global scales without creating bias. This is to help understand the underlying
patterns and shed light on the potential drivers of change and remedial policy actions.
• Scientifically robust: the methodology for the indicator and the underlying data are
published in a peer reviewed location that can be accessed, and the methodology can be
repeated by other scientists or agencies with the same overall result obtained.
• Regular data collection: data for the indicator can be updated regularly throughout the
duration of the post-2020 Global Biodiversity Framework.
• Good availability and support: the indicator currently exists or is likely to be agreed through
a scientific or intergovernmental process where there is an existing body that will continue to review and revise the methodology as needed, such as the indicators identified for monitoring implementation of the 2030 Agenda for Sustainable Development.

For our full reflections please see BirdLife International Priorities for the Post-2020 Global Biodiversity Framework Global Monitoring Framework
http://www.birdlife.org/sites/default/files/birdlife_priorities_global_monitoring_framework.pdf
We point out that the current draft goals and objectives are a regression of the Aichi targets, such as in action targets 1, 2, 3, 4, 8, 9, 14, 15, 17 (and possibly more).
The current GBF still has significant gaps in implementing the CBD in its entirety. Notably, the draft GBF does not address the obligations stated under Art 3, 4b, 7c and 8l, which compel parties not to do damage to the biodiversity of other countries. This includes the impacts of consumption and trade by industrialized countries on other countries, and would need additions to the indicator framework.
Similarly, there are no indicators on other elements of the GBF. It would be good to have indicators on implementation beyond those related to NBSAPs. We notably support Finland's proposal to have an indicator on the number of ministries involved in implementing the NBSAPs as an important contribution to establishing a whole of government approach.
A very important indicator would be one that ensures that none of the actions undertaken to achieve the 30 by 30 target or any other nature conservation targets contravenes existing human rights obligations.
Also we could not answer the survey fully due to limited space. Find our full responses to they survey here:
https://docs.google.com/document/d/1VmzjfrU7Ur4jkzlVAK8zjs0ueMqTL6m2YUNXVEJERA8/edit?ts=60a51b57
Two additional views:
1. The post-2020 GBF should harmonize with the United Nations' rights-based approach. We would therefore propose the inclusion of a headline indicator related to the right to a healthy, safe and clean environment, for example: 'The number of States that recognize the right to a healthy environment through their constitutions, legislation or as parties to legally binding regional treaties that include the right.'

2. A process under the auspices of the Working Group on Article 8(j) and Related Provisions in parallel with and in addition to the AHTEG on the monitoring framework is desirable to continue the development of and operationalization of indicators related to traditional knowledge and indigenous peoples and local communities.
As noted several times the headline indicators are too quantitative and do not take proper account of the relationship between biodiversity and ecosystem integrity and those who live closest to biodiversity, IPLCs, women and peasant farmers etc.

Their rights, knowledge and cultures need to be reflected throughout the GBF and its indicators
.

Instead of focusing on pure numbers, which is important, suggest to also include quality indicators, such as living condition and welfare concerns of animals, into consideration.

- We broadly endorse the submissions made by Friends of the Earth Europe and Wildlife Conservation Society.

- We align with others who have voiced concerns with developing these Indicators before the targets have been agreed.

- We also associate ourselves with the statement made by the CBD Alliance relating to item 3, that the current draft goals and objectives are a regression of the Aichi targets (particularly Targets 4 and 8).

- The GBF should restate parties' obligations not to damage biodiversity in other countries.

- Additional indicators are needed to measure Government efforts to implement NBSAPs and to measure actions taken to comply with human rights obligations.

- Need to clearly that sustainable management of "forests" does not include plantations.
For some of the headline indicators (targets 7-10), where we have suggested alternative ways of measuring progress toward the targets, disaggregation of the elements of the indicator to the component indicator level is necessary to really measure progress. Therefore, we would also like to make note of potential component indicators that could be incorporated into the monitoring framework that when aggregated, would support the headline indicators.

Target 7/10 (climate mitigation and disaster resilience)

-State and trends in extent (hectares) and condition (% change) of places important for climate mitigation, particularly high carbon ecosystems, especially those containing global Irrecoverable Carbon. (Covered in SEEA Carbon accounts and Ecosystem services accounts)

-Flows from places providing climate mitigation services as measured by amount of carbon dioxide retained/sequestered in tonnes. (Covered in SEEA Ecosystem and Carbon Accounts)

-State and trends in extent and condition of places providing Disaster Risk Reduction or Disaster Resilience as measured by number of properties or area of coast protected (coastal protection services). (Covered in SEEA Ecosystem Accounts)

-Flow of benefits as measured by lives protected.

Target on Food

-State and trends in extent (hectares) and condition (physical structure, species composition) of places providing habitat for pollinators (Covered in SEEA Ecosystem Accounts)

-Condition (diversity, abundance, and distribution) of pollinator species as measured by Red List Index. (Covered in SEEA Biodiversity accounts)

-Flow of pollination services as measured by the pollination yield gap. (Covered in SEEA Ecosystem accounts)

-State and trends in extent (hectares) and condition (physical structure, species composition) of important freshwater and marine fish habitat, especially spawning locations. (Covered in SEEA Ecosystem Accounts)

-Flow of fish as measured by quantity and age structure of fishery stocks. (Covered in SEEA Ecosystem Accounts

-State and trends in extent (hectares) and condition (physical structure, species composition) of places most important for moisture recycling that benefits rain-fed crop production as identified by atmospheric flow modeling.

-State and trends in extent (hectares) and condition (physical structure, species composition) of places providing grazing space and fodder for non-feedlot livestock. (Covered in SEEA Ecosystem Accounts)

-Flows originating from places under sustainable and regenerative agriculture as measured by gross tonnes of crop biomass harvested. (Covered in SEEA Ecosystem Accounts)

-State and trends in extent (hectares) and condition (physical structure, species composition) of places providing habitat for wild plants and animals that are used for food. (Covered in SEEA Ecosystem Accounts)

-Flow measured as proportion of caloric, protein, and/or micronutrient need met by wild harvested foods

Target on Water Quality and Quantity

-State and trends of extent (hectares) and condition (physical structure or species composition) of ecosystems that remove pollutants from water and/or yield clean water for dilution. (Covered in SEEA Ecosystem Accounts)

-Water purification flows providing water quality amelioration as measured by nitrogen retention. (Covered in SEAA Ecosystem Accounts)

-State and trends of extent (hectares) and condition (physical structure or species composition) of ecosystems that regulate water flow through storage and delayed release. (Covered in SEEA Ecosystem Accounts)

-Trends of quantity and timing of water flow by volume (m3) to track changes in baseline flow maintenance and flood dynamics (Covered in SEEA Ecosystem Accounts)
Thank you for creating this opportunity for submission of ideas and suggestions on the headline indicators.

A great many of the targets for which no firm metric is available (e.g., the proposed indicators measuring "extent to which") might be better evaluated through a separate enabling conditions framework that takes more of a qualitative approach to assessment and is not necessarily rolled up to the global scale. That would permit a smaller number of headline indicators measuring direct conservation actions and ecological targets. It would also prevent the CBD from adopting a framework for which indicators are not available.
The list of indicators is still highly undefined, and many indicators are aspirational but will not be achieved, especially if the CBD does not promote data collection using collaboration, standardized approaches for observation and information management.

The CBD needs to make more emphasis on the collection of observations in marine habitats beyond EBSAs, i.e., in all national and other jurisdictions, in order to meet the proposed indicators and targets (not just EBSAs).
We are of the view that the headline indicators for this target may be too limited in scope and would like to recall the proposals made in our review comments on the draft monitoring framework for the post-2020 global biodiversity framework: https://www.cbd.int/api/v2013/documents/79AC9349-F0B5-151B-F786-93A9E55E61D6/attachments/UNCTAD(1).pdf.

Quote:
Making supply chains sustainable will only work when trade becomes sustainable. Trade should be explicitly mentioned under one of the components of the 2030 target, ideally as additional component T14.4.: Supply chains promote sustainable trade. Accordingly, the shift to sustainable trade should be reflected as a monitoring element under the new component T14.4.: Trends in efforts to shift to sustainable trade. We propose the following indicators for that additional component 14.4:

- Number of Countries supporting Business Support Organizations (governmental Trade Promotion Organizations but also private sector association) in exporting products produced under sustainable criteria, such as BioTrade Principles & Criteria

- Number of companies that have incorporated the BioTrade Principles & Criteria into their business practices

- Trends of trade and commercialization in biodiversity-based products that is sustainable and legal (for instance, in line with BioTrade Principles and/or CITES requirements
The details about these indicators can be found in the indicators comment table.
- Data must be disaggregated by age, sex, and indigenous status wherever possible and relevant, so that the current and future indicators can monitor outcomes for youth, women, Indigenous peoples and local communities.
- We are concerned about agreeing on indicators prior to having the targets agreed upon, within which we still see major gaps.
- There is a key gap in the targets in terms of harness education as a strategy, and the transformative roles that formal, non-formal and informal education can play in addressing many underlying drivers of biodiversity loss.
- Indicators need participation from all stakeholders in their development
Thank you for the opportunity to provide input via this survey.

WCS is concerned that adopting only a small number of headline indicators at CBD CoP15 will result in an incomplete monitoring framework for the GBF. Experience with the Aichi Targets showed that an incomplete monitoring framework hampers implementation, monitoring, and reporting. Adopting a monitoring framework that does not include key indicators recommended by Parties, IGOs, and the Biodiversity Indicators Partnership, would further delay much-needed progress. This is particularly true for biome-specific targets for forests and coral reefs, critical flagship ecosystems for biodiversity whose specific indicators are now considered as only "complementary", and where science-based indicators are available now. For example, the International Coral Reef Initiative, of which we are a member along with more than 40 Parties, has submitted coral reef-specific science-based indicators that are ready now. We also draw attention to the peer-reviewed Forest Landscape Integrity Index, which is the first globally-consistent, continuous measure of forest ecosystem condition as determined by degree of anthropogenic modification. We therefore urge Parties to ensure SBSTTA recommends the adoption of a complete monitoring framework with both headline & complementary indicators at CoP15, whilst understanding there will be work post CoP15 to refine some of those indicators.