



National Tiger Conservation Authority

s t r i p e s

Quarterly Journal

Volume 13 Issue 2

April-July 2022



CAMBODIA VISIT

VULTURE TELEMETARY PROJECT

20TH NTCA MEETING

PLEDGE FOR TIGER CONSERVATION

I recognize and value,

- That tiger is an umbrella species with charisma, and is the flagship indicator of a balanced ecosystem;
- That a balanced ecosystem is crucial for life support, while providing numerous ecological services to the society;
- Being aware that the status of wild tiger is highly endangered in its natural habitat across Tiger Range Counties with a declining global population;

I hereby solemnly pledge:

- to protect the tiger and its wild habitat to ensure crucial ecological services for posterity;
- to contribute for fostering awareness for tiger conservation by factoring in its concern in areas where tiger is not the goal;
- to work for a balance between tiger conservation and ecologically sustainable development towards harmonious co-occurrence of human beings and the tiger;
- commit to conserve our natural heritage while making all efforts for the future sustenance of wild tiger.



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FROM MEMBER SECRETARY'S DESK



Among the Tiger range countries, India is a leading nation having the largest population of wild tigers (*Panthera tigris*) inhabiting across its 52 Tiger Reserves. The country has already achieved the target of doubling its free-ranging wild tiger numbers before the targeted year, 2022.

As a neo approach to overview the on-field conditions, NTCA conducted its 20th meeting in Pakke Tiger Reserve, Arunachal Pradesh. The meeting was held on 9th April, 2022 under the Chairmanship of Shri Bhupender Yadav, Hon'ble Minister of Environment, Forest and Climate Change (MoEF&CC) and Chairman NTCA and in the presence of Shri Ashwini Kumar Choubey, Hon'ble Minister of State, Environment, Forest & Climate Change (MoEF&CC) and Vice Chairman, NTCA. During this meeting, the NTCA released three publications viz. Standard Operating Protocol (SOP) to deal with the Tiger re-introduction and supplementation in wild, Forest Fire Audit Protocol for Tiger Reserves and Technical Manual on Management Effectiveness Evaluation (MEE) of Tiger Reserves in India. I would also like to congratulate the Bandhavgarh, Pench and Sathyamangalam Tiger Reserves for receiving the Conservation Assured| Tiger Standards (CA|TS) accreditation.

An MoU with Cambodia regarding a 'Bilateral Cooperation for Tiger Recovery Strategy in Cambodia' is under consideration. In this context, an Indian delegation visited Cambodia during 04th to 10th March, 2022, to conduct a preliminary assessment of the field conditions in the country. Through this MoU, we will be contributing to the global tiger recovery and conservation efforts by sharing India's knowledge and expertise with Cambodia.

Furthermore, I am delighted to share that the NTCA is progressing well on the fifth cycle for the All India Tiger Estimation, 2022.

I am hopeful that the readers are going to find this issue of STRIPES interesting and informative.

Dr. S. P. Yadav

Additional Director General, Project Tiger &

Member Secretary, National Tiger Conservation Authority



20Th Meeting of the National Tiger Conservation Authority

The 20th NTCA meeting was organized at the Pakke Tiger Reserve, Arunachal Pradesh which was held on 9th April, 2022. It was the first ever meeting which was conducted in a Tiger Reserve. The motive behind this was to bring the admin and policy makers at the field level so as to have a closer look at challenges being faced by the reserve. Furthermore, this new initiative shall be carried forward to other Tiger Reserves as well in order to bring together the primary, secondary and tertiary stakeholders.

The meeting was chaired by Shri Bhupender Yadav, Hon'ble Minister of Environment, Forest and Climate Change (MoEF&CC) and Chairman NTCA and in the graceful presence

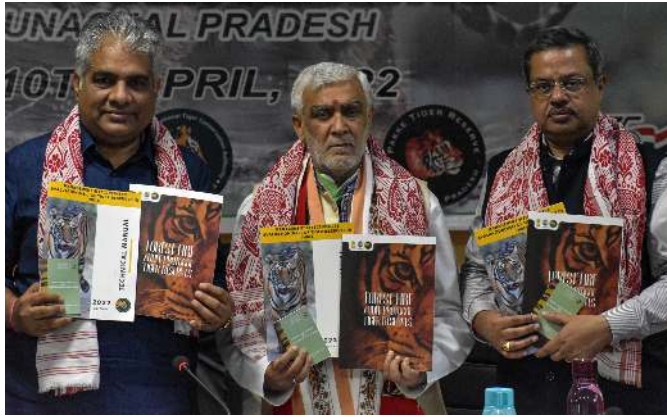
of Shri Ashwini Kumar Choubey, Hon'ble Minister of State, Environment, Forest & Climate Change (MoEF&CC) and Vice Chairman, NTCA.

The meeting was inaugurated with a round of introductions of the NTCA members and other participants, followed by the agenda wise discussions. The ADG (Project Tiger) & Member Secretary (NTCA) while formally welcoming the members initiated the proceedings, requesting the chair for the release of the three publications viz.

(i) Standard Operating Protocol (SOP) to deal with the Tiger re-introduction and supplementation in wild.



- (ii) Forest Fire Audit Protocol for Tiger Reserves.
- (iii) Technical Manual on Management Effectiveness Evaluation (MEE) of Tiger Reserves in India.



During the meeting, Bandhavgarh Tiger Reserve, Pench (MP) Tiger Reserve and Sathyamanglam Tiger Reserve were presented with CA/TIS accreditation, which is an internationally accepted conservation tool to manage tigers through best practices and standards and to further encourage assessments towards achieving the benchmark progress. The awarded Tiger Reserves were chosen based on their uniqueness quotient as accord to the CA/TS International Committee.

The ADG (Project Tiger) & Member Secretary (NTCA) continued the proceedings by briefing the chair & members regarding the control of forest fires & alert system which has been put up in all the tiger reserves. The progress of E-Shram and Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) as directed in the last NTCA meeting was also highlighted by him. With respect to the park's protection, he stated that the 5th cycle of Management Effective Evaluation (MEE) will be initiated shortly.

In the updated MEE document, inclusion of parameters such as that of Climate Change adaptation and mitigation, Wetland management have been done successfully. He also briefly summoned the progress of the 5th cycle of the All India Tiger Estimation and the report of the same will be submitted by January 2023. Also, efforts have been taken to enhance the coordination among the neighboring countries such as Nepal and Bangladesh with respect to the All India Tiger Estimation exercise.



It was also mentioned that the Elephant population estimation is being done for the very first time as a part of the All India Tiger Estimation 5th cycle. The elephant population estimation will be done by analyzing the DNA from the elephant dung samples collected across all the tiger reserves.

Various managerial issues were also flagged during this meeting. With respect to the welfare of forest staff, it was suggested that the authority will provide physical and functional incentives to the staff posted in the interior fields so as to encourage them to work in difficult or remote areas.

Along with this, the meeting addressed the additional agenda for the final approval for declaration of Dibang Wildlife Sanctuary as Dibang Tiger Reserve. Moreover, a documentary was also screened to the members showcasing the efforts adopted by the management of Amrabad Tiger Reserve, Telangana so as to make the Park a Plastic-free zone.



In the meeting, the Hon'ble Minister of State of Environment, Forest and Climate Change (MoEF&CC) and Vice Chairman NTCA suggested, that CSR (Corporate Social Responsibility) funds from companies/ industries located in the vicinity of the tiger reserves/protected area should be explored to invest in the activities of the reserve.

The meeting was concluded with the observation and comments of the Hon'ble Minister of Environment, Forest and Climate Change (MoEF&CC) and Chairman NTCA. The chair expressed satisfaction over the efforts of NTCA towards tiger conservation and issued directions on various aspects related to the management of the tigers and its habitat. Some of the directions included setting up a committee to visit various tiger reserves in order to facilitate key policy decisions with respect to such Tiger reserves, the other being coordination between various agencies, listing issues and resolving them,



through consultation with other such agencies or organizations. The chair clearly highlighted the importance of Tiger conservation vis a vis maintaining the core of the Tiger reserve as the Sanctum Sanctorum of the area.

Various managerial issues were also flagged during this meeting. One of the prevailing issue

The points raised were duly noted to be implemented in the letter and spirit. The meeting ended with a vote of thanks to the Hon'ble Chair and the participants.



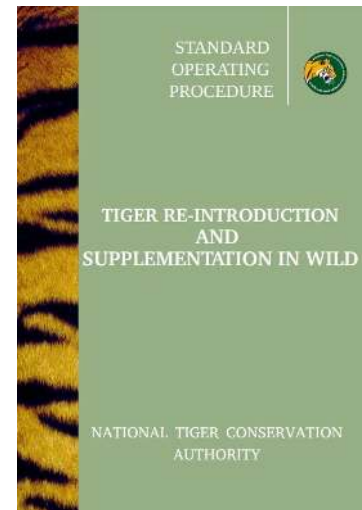


BRIEF NOTE ABOUT THE RELEASES AT THE 20th NTCA MEETING

Tiger Re-Introduction and Supplementation in Wild

India harbors about 70% of the world's tiger population in the wild. The tigers occupy different landscapes in the country. While some landscapes have rich and viable populations in accordance with the habitat and prey-base, there are some habitats that are under occupied but have potential to support a better tiger population. There may be some more habitats where the population of tigers have disappeared.

In this scenario, it sometimes becomes imperative to re-introduce tigers or supplement the existing population. This being a sensitive and technical task, the NTCA has prepared a Standard Operating Protocol (SOP) to deal with the reintroduction and supplementation. The SOP takes into account the scientific knowledge available on the subject as well as conditions that may be typical to India. Therefore, the NTCA is releasing a SOP titled, 'Tiger Reintroduction and Supplementation in Wild Protocol'.



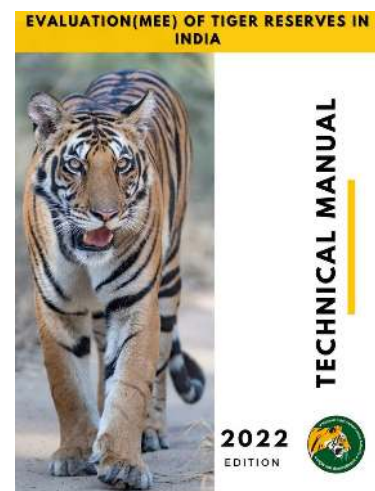
Forest Fire Audit Protocol for Tiger Reserves



Forest Fires play a crucial role in maintaining the dynamics of forest. Fire can play a vital role in healthy forests, recycling nutrients, helping tree species regenerate, removing invasive weeds and pathogens and maintaining habitat for some wildlife. Occasional fires can keep down the fuel loads that feed larger, more destructive conflagration. Increasing forest fires have now become a global concern. So, in order to help the tiger reserve managers assess their fire preparedness and manage the complete life cycle of forest fires, the NTCA has prepared a Forest Fire Audit Protocol for Tiger Reserves and is now being released.

Management Effectiveness Evaluation (MEE) of Tiger Reserves in India

Survival of tigers is dependent on conservation & management efforts. India is amongst the selected countries that have institutionalized the MEE Process. The globally accepted framework of Management Effectiveness Evaluation (MEE) of tiger reserves has paved the way for successfully assessing the tiger conservation efforts. The MEE exercise in tiger reserves was initiated in 2006 and since then a lot of experience has been gained. Accordingly, a committee was constituted by the NTCA to revisit and review the MEE criteria for the 5th cycle of MEE exercise starting 2022. Based on the suggestions, the technical manual on Management Effectiveness Evaluation (MEE) of Tiger Reserves in India is being released by NTCA.



‘VULTURE TELEMETRY PROJECT’

~ A Satellite Tracking Of Vultures

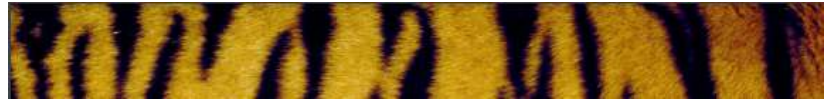
In

Panna Tiger Reserve, Madhya Pradesh”



In collaboration with the Wildlife Institute of India (WII), Dehradun; Panna Tiger Reserve (PTR) has initiated monitoring of its wild vulture population through GPS tagging. The existing scientific studies indicate that there are 14 vulture species which have been tagged and studied across 24 countries, with none from India. Hence, it is a first of its kind scientific study which is being conducted in India and is also the largest vulture telemetry project in the country. About nine species of vultures are found in the country, of which three are critically endangered. Out of these nine species, seven of these species have been reported from Panna Tiger Reserve. These seven species include three migratory species namely, Himalayan Griffon (*Gyps himalayensis*), Eurasian Griffon (*Gyps fulvus*), and Cinereous vulture (*Aegypius monachus*), who tend to migrate from Northern region and visit the reserve in November. They further return back in the month of February-March. The other four vulture species are, Indian vulture (*Gyps indicus*), White-Rumped vulture (*Gyps bengalensis*), Red-headed vulture (*Sarcogyps calvus*) and Egyptian vulture (*Neophron percnopterus*) which are also resident to the Panna Tiger Reserve.

A research team and professional trappers from the Wildlife Institute of India visited the reserve during winters of 2020-2021 and 2021-2022. A total of 25 vulture individuals were carefully captured and tagged with solar GPS devices which include 3D acceleration sensors, two UMTS antennas, and one UHF antenna. As the tag has the solar charging panel hence, its battery gets constantly charged by the solar energy. Out of these 25 tagged individuals, 13 are Indian vultures, 02 are Red-headed vultures, 08 Himalayan Griffons and 02 Eurasian Griffons. Among the tagged species, Indian vulture and Red-headed vulture are critically endangered species whereas Himalayan Griffon and Eurasian Griffon are near threatened species. These tagged individuals were then tracked through the satellite transmitted data, which was constantly being received from the attached tags.

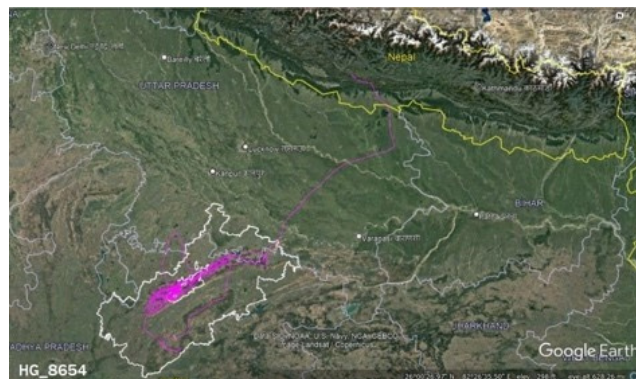


The attached GPS sensor acquires the location of the tagged individual which is then further recorded by the 3D acceleration sensor to trace the pattern of the bird's movement in a three-dimensional axis. The received data is transmitted through the UMTS to update the configuration of the tag through the mobile tower (GPRS/GSM based connection). Also, it is possible to do an on-site tracking with the help of the UHF antenna using the handheld terminal. Once deployed, the tag keeps logging the GPS location and 3D acceleration data of the tagged individual. This data is then documented and restored in the storage device which periodically gets transmitted to a global data repository, namely, Movebank.



Movement Data of Migratory (Himalayan & Eurasian Griffion) and Resident Vultures

Update on movements of tagged Himalayan Griffions:



Routes taken & Location of HG_8673, HG_6987 and HG_8654 as on 27th April 2022

Movement of Himalayan Griffons for return journey from PTR started at the end of month of March. The route passes through Nepal and then enters China. The above images show the routes taken and location of HG_8673, HG_6987 and HG_8654 as on 27th April 2022. Also, the following images show the locations and the routes taken by HG_8677 as on 27th April and 9th May, 2022 respectively.



27th April, 2022



9th May, 2022

Locations & Routes taken by HG_8677 as on 27th April & 9th May, 2022

Update of movements of tagged Eurasian Griffons:

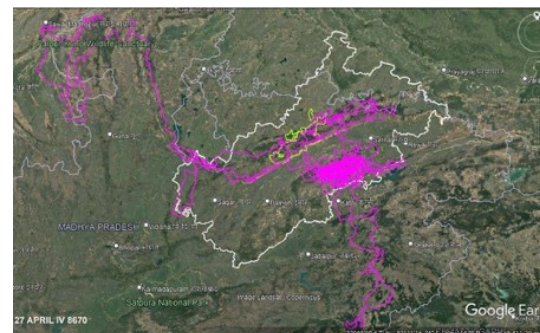
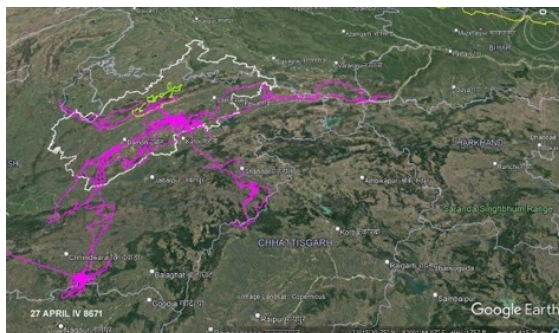
Two Eurasian Griffon vultures were GPS tagged and in the first week of May 2022, both the tagged individuals were in Pakistan. As per the recent updates, both the Eurasian Griffon vultures are further moving west.



Routes taken & Location of EG_8643 and EG_8661 as on 5th May, 2022

Update on movements of tagged resident vultures:

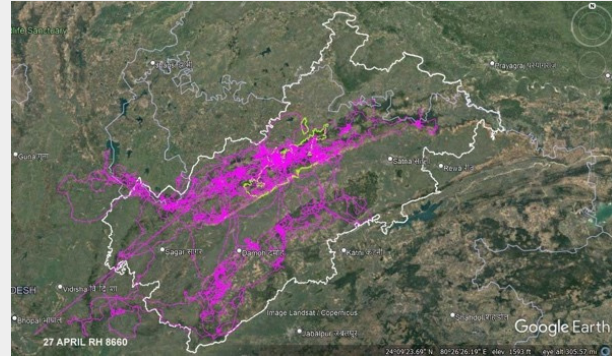
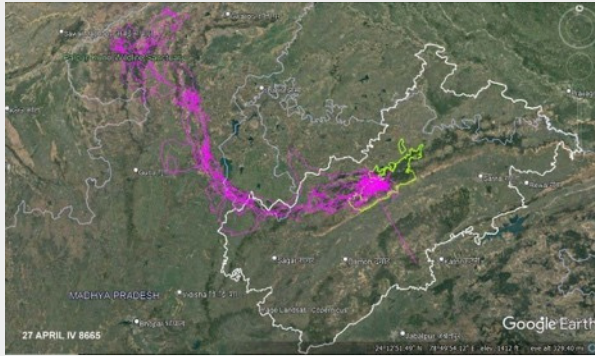
GPS tagged resident vultures namely, Indian Vultures and Red-headed vultures, mostly sub-adult has shown interesting behaviours. One Indian Vulture (IV_8671) has travelled all the way to Bihar and came back and visited Amarkantak-Achanakmar Wildlife Sanctuary as well. Two other Indian Vultures travelled up to Palpur-Kuno Wildlife Sanctuary.



Movement of IV_8671 and IV_8670 as on 27th April 2022



While, Red-headed Vultures seem to be confined within the Greater Panna Landscape.



Movement of IV_8665 and RH_8660 as on 27th April 2022

Considering the drastic and catastrophic decline in the vulture population over the course of last century, it was imperative to conduct a telemetry-based study so as to understand the movement behaviours of the vulture species. As vultures require large area for survival including human spaces and carcass dumps, it is important to understand their migration, foraging, roosting, nesting, bathing and other behavioural patterns. These behaviours are crucial for their survival. The current study will establish a baseline data for these activities across a spatiotemporal scale. Furthermore, haematological, and microbiological analysis from the obtained samples will help in determining the overall health status of the individuals. This study will enhance our understanding regarding the health of vulture populations in and around the reserve to a certain extent. The findings from the current study will improve our comprehension regarding the biology of vultures and will facilitate in developing significant conservation policies towards adaptive management of these remarkable raptors in the Panna Landscape.

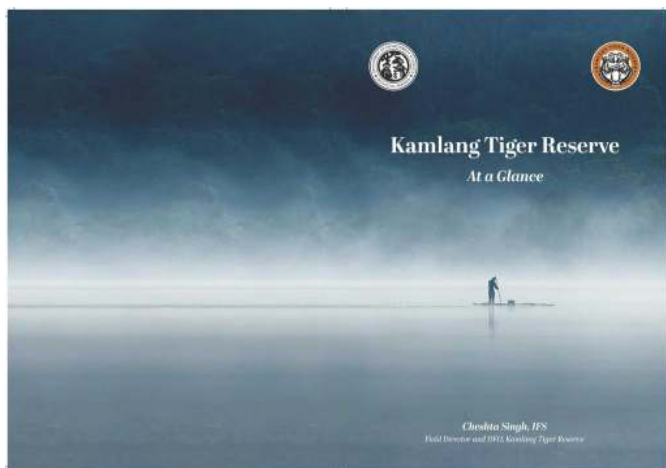
Apart from the current telemetry study in Panna Tiger Reserve, as a part of Landscape Management Plan, telemetry projects are underway in the other states as well which includes, Himachal Pradesh and Gujarat. Such telemetry projects are vital for developing holistic scientific conservation efforts so as to deter the extinction of Old-World vulture species in India.



Biodiversity of Kamlang Tiger Reserve, Arunachal Pradesh

The state of Arunachal Pradesh is one among the seven sisters of India. It has a rich biodiversity and is contiguous with the Indian Biodiversity Hotspot, the Indo-Burma region. The state has a variety of animal species including our national animal, Tiger, *Panthera tigris*. Kamlang is one of the most important Protected Areas of the state, the other two Tiger Reserves being the Pakke & Namdapha.

Beside the Flora that has been recorded in the “Flora of British India and the Fauna of British India”, the region lacks species documentation, particularly in the Protected Area Network. With the advanced tools and techniques, new species are being discovered frequently. Moreover, due to climate change, habitat fragmentation and degradation, biodiversity is getting impacted severely. Thus, it is of utmost importance to enhance our knowledge about the biodiversity of Protected Area Network.



Since a Tiger Reserve is not only about the tiger but, it also has a variety of flora and fauna ranging from a small insect to a big mammal species. Similarly, the Kamlang Tiger Reserve is a region which has high species richness. Though, there has been no official documentation of the species inhabiting the reserve. Ms. Cheshta Singh, the Field Director

& DFO of the Kamlang Tiger Reserve took the initiative to monitor the biodiversity of the reserve and record the species belonging to different kingdoms and orders.

The compiled report entitled, ‘Kamlang Tiger Reserve ~ At a glance’, has comprehensively documented species including, 33 mammals, 37 birds, 4 snakes, 79 butterflies, 2 dragonflies, 1 spider species and 4 floral species. Besides registering the biodiversity, the report also studied the cultural diversity describing the socio-economic aspects and the regional tribe, Mishmi tribe, residing in the periphery of the reserve. 'The untold story of the Glaw Lake' in the report has also mentioned the spiritual beliefs and cultural association of local tribes with the landscape of Kamlang Tiger Reserve.

This study showcased the baseline data for the biodiversity of the reserve. The rate with which we are losing our diversity, it is impeccable to conduct more such studies to know about the regional biodiversity and their ecology in an ecosystem. Furthermore, continuous monitoring and documentation might give an insight to the unexplored niches of the reserves. The report was officially released on 7th June, 2022. The event was graced by the presence of Hon'ble Deputy Chief Minister, Home minister, Chief Secretary and PCCF, Arunachal Pradesh.





‘NTCA on Social Media’

National Tiger Conservation Authority @ntca_india · Jun 12

Team Satpura Tiger Reserve of @ntca_india is utilising drones to monitor various aspects of management like fires, waters, habitats and life of wild denizens. Watch here few glimpses of the enchanting land that is Satpura. @byadavbjp @moefcc @mptfs @MPTourism @incredibleindia

National Tiger Conservation Authority @ntca_india · Jun 13

Get ready to be taken to safari around the Satpura Tiger Reserve driven by empowered daughters of these fascinating highlands. Under the #CommunityDevelopment initiative of @ntca_india, Satpura TR is training them as safari drivers @byadavbjp @moefcc @MPTourism @incredibleindia

National Tiger Conservation Authority Retweeted

Bhupender Yadav @byadavbjp · Apr 22

We have no Planet B...

Invest in our Planet

#EarthDay

11K views 0:03 / 0:41

National Tiger Conservation Authority Retweeted

Ashwini Kr. Choubey @AshwiniKChoubey · Apr 22

आज #पृथ्वी दिवस है। आइए, पृथ्वी को हरा भरा बनाने का संकल्प लें। पृथ्वी हमारी माँ हैं, इसे प्रदूषण मुक्त बनाना हम सभी की जिम्मेवारी है। #EarthDay22

482 views 0:01 / 1:38

National Tiger Conservation Authority Retweeted

Divisional Forest Officer Mangaldoi Wildlife ... @OrangTi... · May 6

Some of the clicks of today's (on 06.05.2022) Yoga Session organized at the office of the Field Director, Orang Tiger Reserve under the guidance of a Yoga Instructor as well as at Range HQ. @CMOfficeAssam @himantabiswa @mkyadava @ntca_india @moefcc @pradipta_baruah @assamforest

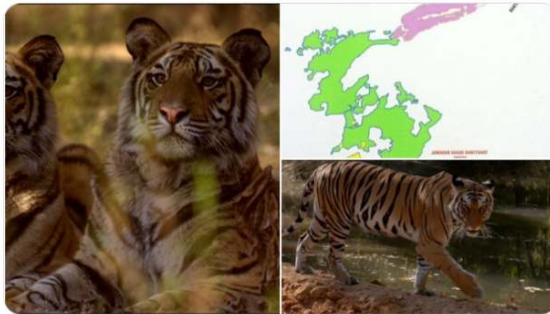
National Tiger Conservation Authority Retweeted

PAKKE TIGER RESERVE @pakke_tiger · May 6

In a run-up to International Yoga Day, @pakke_tiger administration held yoga session in morning starting with focus on Meditation and Breathing. For field staff, it provided gateway to peace and bliss. @byadavbjp @moefcc @ArunForests @PemaKhanduBJP @NatungMama

National Tiger Conservation Authority Retweeted
Bhupender Yadav @byadavbjp · May 16
 Pleased to note Ramgarh Vishdhari Tiger Reserve has been notified today. The 52nd Reserve of India will conserve biodiversity and bring in ecotourism and development to the area.

Under the leadership of PM Shri @narendramodi ji, we are committed to preserving our wildlife.



National Tiger Conservation Authority @ntca_india · Jun 3
 The @ntca_india officials and delegation of @ClemsonUniv held detailed debriefing on their recent visit to Periyar and Corbett Tiger Reserves and discussed areas of collaboration on capacity building, research and education in the field of conservation.
 @byadavbjp, @moefcc



National Tiger Conservation Authority @ntca_india · Jun 4
 Under the #ProjectTiger, the @ntca_india supports community development. The Annamalai Tiger Reserve is helping tribal youth living around forests become self reliant. A training program in automobile servicing linked with employment is being organised for them
 @byadavbjp @moefcc



National Tiger Conservation Authority @ntca_india · May 20
 The @NTCA regularly engages with people living in fringes of tiger reserves to sensitise them about ways to reduce human wildlife conflict. Dudwa Tiger Reserve is holding consultations in Bardiya village to discuss measures to reduce #hwc.



National Tiger Conservation Authority Retweeted
Bhupender Yadav @byadavbjp · Apr 9
 Visited the Pakke Tiger Reserve in Arunachal Pradesh. Home to some of the rarest species of flora and fauna, Arunachal offers a model to emulate with programmes like Hornbill Nest Adoption and Air Gun Surrender Abhiyan.



National Tiger Conservation Authority Retweeted
Bhupender Yadav @byadavbjp · Apr 9
 Participated in the Air Gun Surrender Abhiyan at Pakke Tiger Reserve of Arunachal. Within a year of this community and compassion driven programme, the state has witnessed a surrender of over 2,200 hundred Air Guns.

I urge all state govts to take up the #AirGunSurrender Abiyan.

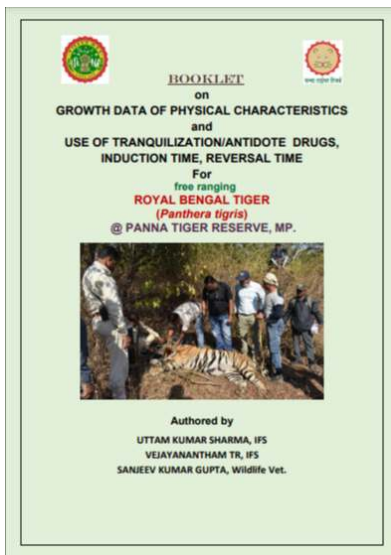


MoEF&CC and PIB India



Publication by Panna Tiger Reserve

During the 18th Century, there were about 30,000-40,000 tigers residing across the Indian subcontinent. Over time an increase in illegal hunting, poaching and habitat fragmentation and degradation has led to rapid decrease in tiger population. The crisis was realized by the Government of India during the 1970s based on the scientific data collected, indicating a steep decline in tiger numbers. The reduction in their population resulted in their low numbers and even caused local extinction at few sites within the country. Eventually, the Government put a legal ban on hunting and poaching by enforcing the Wildlife Protection Law in 1972. Subsequently, Project Tiger was also launched in 1973 to safeguard the population of the mighty animal.



The Royal Bengal Tiger, *Panthera tigris*, is a top-predator and is an umbrella species and plays a significant role in the Indian forest ecosystem. Thus, the Central Government along with the State Government is executing various programmes for sustaining and reviving the tiger population across the nation. Re-introduction projects were also successfully implemented at sites of local extinction. However, knowledge on physical growth of tiger individuals and the optimum use of tranquilizer, antidote drugs to

monitor them remained limited. Such information is vital for various managerial aspects in a tiger residing habitat. Thus, Shri Uttam Kumar Sharma, Field Director of Panna Tiger Reserve, Madhya Pradesh took an initiative by developing a matrix with all the necessary attributes to assess the variation in tiger's physical characteristics with age. The protocol further evaluates the relation between the amount of tranquilization/antidote drugs to be used, its induction and reversal time, effect of ambient temperature as according to the tiger age and gender. He used the guidelines on the tiger's physical characteristics and tranquilizers/antidote drugs, which is provided by the National Tiger Conservation Authority (NTCA), as the baseline data.

The developed matrix was used to collect the data in the Panna Tiger Reserve Madhya Pradesh. They initiated recording the data on the tiger's physical attributes which included weight, nose tip to tail length, tail base to tail tip length, total length, shoulder height, neck girth, chest girth, abdomen girth and canine length. Furthermore, following the standardized tranquilization procedure for collaring, they collected data on the effect of ambient temperature, effect of induction and reversal time of the injected drug in both males and females of different age groups. After compiling the collected data, the research team analyzed it to understand the physical growth of tigers and as well as optimized the quantity and time period of tranquilizer/antidote drugs required for population monitoring. It will serve as a baseline study and will guide to shape various managerial decisions related to the collar size, tranquilizer/antidote quantity and time based on the age, gender and the weight of a tiger individual. Moreover, it paves the way for conducting more of such studies across the nation and eventually developing an, 'All India Booklet on Tiger Body Growth Data', documenting the successful expansion of tiger population in India.

BILATERAL COOPERATION VISIT TO CAMBODIA FOR TIGER RECOVERY STRATEGY



The Royal Bengal Tiger or *Panthera tigris tigris* is a flagship species in India and thus serves as a medium to adopt a holistic approach towards biodiversity conservation. Its current distribution status shows its occupancy being reduced to as low as 6% of its historical range. This includes a range contraction in all the 13 tiger range countries. Cambodia is one such country that has lost its tiger population, the subspecies known as Indochinese Tiger or *Panthera tigris corbetti*. The Global Tiger Recovery Program (GTRP), which was endorsed through the ‘Saint Petersburg Tiger Summit’ in Russia on 23rd November, 2010. During which, it was decided to strive to double the existing wild tiger populations by 2022, across its range globally. This summit is committed for all the tiger range countries including Cambodia, to recover its wild tiger population.

Cambodia has reported the last record of its tiger subspecies in 2007. Thus, in order to revive its wild tiger population, the country attempted to source some tigers from Thailand and Myanmar, however, was unable to proceed with this plan. Therefore, through a consultative process in the recent past, it was suggested to Cambodia to source wild tiger individuals from India. Although relatively smaller in size, the Cambodia’s tiger species, the Indochinese Tiger species has a geographic and genetic relatedness with the extant subspecies, *Panthera tigris tigris*, which is native to India and Nepal.



Subsequently, the Government of India viewed this proposal positively and accepted to source tigers from India along with the technical support which might be required to establish the de novo wild population. The momentum got picked up through the recent communications which has happened between the Hon'ble Environment Minister of Cambodia and the Indian Ambassador in Cambodia. The country seeks the technical cooperation from India for recovering their tiger wild tiger population.



In due course, the Ministry of External Affairs through Indian Ambassador to Cambodia sought a visit of India delegations to Cambodia. The Indian delegation team led by Dr. S.P. Yadav, ADG(PT)/Member Secretary, National Tiger Conservation Authority visited Cambodia during 04th – 10th March, 2022, to conduct a preliminary assessment. The other members of the team included Dr. Rajesh Gopal, Secretary General, Global Tiger Forum, Dr. Ramesh Krishnamurthy, Senior Scientist, Wildlife Institute of India and Mr. Hemant Singh, Assistant Inspector General, National Tiger Conservation Authority. Locally, the visit was coordinated by the Ministry of Environment and Wildlife Alliance, which supports the Cambodia Government for tiger recovery project in the Cardamom Hill Forest, which is also the targeted region of this planned mission.

Field conditions were examined during the field visit by the Indian delegation team. It was

reported that the proposed reintroduction landscape has a forest cover of 16000 sq.km with more than 1200 sq.km of inviolate core area where tiger is expected to be reintroduced. Anthropogenic disturbance was observed to be minimal with little human habitation. The habitat is a mix of dry and wet forests with a large contiguous track, though past evidence of disturbances was seen in some sections when travelled by road. Furthermore, the landscape has low prey density hence targeted efforts to manage the landscape prior to reintroducing the tigers are required. So, it was suggested that planned rebuilding of the principal prey species in-situ, such as Sambar, Wild Pig and Barking Deer immediately.

The team discussed the tiger and prey recovery strategies and suggested identifying a suitable location or enclosure, away from human habitation for an initial soft release of tiger individuals. To further encourage adoption of community inclusive conservation strategies, the team visited Sovanna Baitong Community Agriculture Village to understand the community dynamics in the landscape. The resident locals reportedly get engaged in activities such as farming, nursery and horticulture. Thus, an Integrated Farming strategy with sustainable development was suggested. Also, along with local institutions and NGOs, it is important to understand the engagement dynamics of other communities so as to design conservation strategies accordingly.





Field Visit by Indian Delegations to examine the field conditions in Cambodia



FA landscape profiling with a baseline information on biological, social and managerial aspects also needs to be done. This can be achieved by engaging professional organizations like Global Tiger Forum and experienced Biologists. Simultaneously, a detailed assessment can be undertaken based on the Management Effectiveness Evaluation (MEE) framework. Subsequently, capacity building activities may be planned both within Cambodia and in India for the officers of Cambodia and professionals from Wildlife Alliance who will be involved in the translocation program. This may be undertaken by The National Tiger Conservation Authority, Wildlife Institute of India and the Global Tiger Forum.

After closely examining all the aspects during this visit, it was proposed to draft an MoU and a mutually agreed MoU is likely to be signed by the respective authorities in order to enable a bilateral cooperation regarding tiger recovery efforts in Cambodia. In continuation to this, an action plan namely, '**Cambodia Tiger Recovery Action Plan**', shall be prepared to ensure a successful recovery of the species in the country.



QUICK HIGHLIGHTS



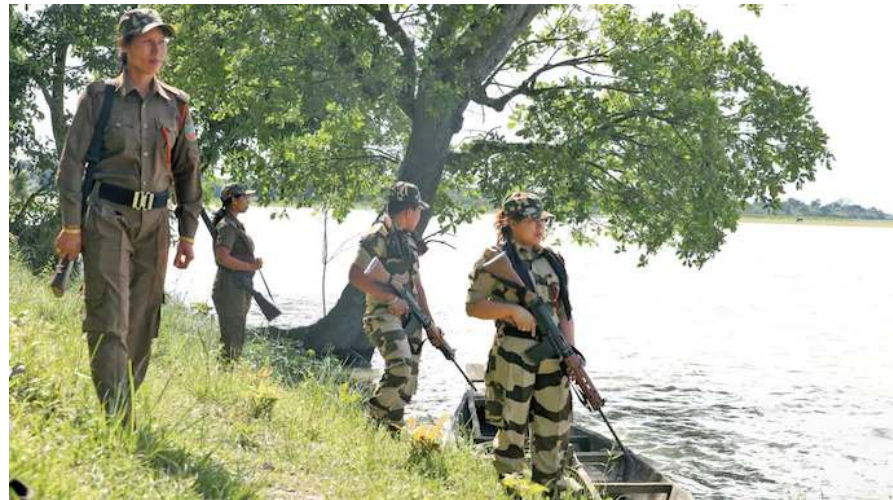
a) In Anamalai Tiger Reserve, Pollachi division, human-wildlife conflict in the Valparai Plateau during elephant migration period is a major issue. Due to the consistent efforts and dedication of the team in Valparai and Manambolli range, not a single human-wildlife case has been reported from the region since past one year.

The NTCA is supporting the Anamalai Tiger Reserve's team by providing the required facilities and funds.



b) In Burapahar range of the Kaziranga National Park, the State Rhino Protection Force (SRPF) constantly safeguards the vulnerable greater one-horned rhinoceros. Here, by owning the forest with pride, the Female Forest Rangers breaks the stereotypes.

The team consist of 74 males alongside whom are 8 Female Forest Rangers, who have joined the duty and are equally vigilant to protect this eco-sensitive region.



c) Keeping up with the forest monitoring profiles even during the peak-monsoon periods.

Distribution of essential rations to the anti-poaching camp staff of the Orang National Park & Tiger Reserve.





**e) Dr. S.P. Yadav, ADG (PT) & MS (NTCA) meeting
Dr. Say Sam Al, Hon'ble Minister of Environment, Cambodia, to discuss the strategy for tiger restoration efforts in Cambodia.**

**Indian Delegation team facilitating,
Dr. Loeung Kesaro, Senior Official
Ministry of Environment, Cambodia.**



SPECIAL REMARKS FROM DIRECTOR GENERAL OF FORESTS & SPECIAL SECRETARY MOEF&CC



The Project Tiger initially launched in 1973 was aimed to protect tiger and tiger habitats in the country. With the passage of time & subsequent dependence on the conservation scenario of the country, the Project Tiger so launched was upgraded to the status of a statutory body, the National Tiger Conservation Authority (NTCA) by an amendment of the Wildlife Protection Act in 2006.

Over years, the NTCA has been the forerunner in terms of keeping up the Ministry's pride by setting up a benchmark in achieving the objectives of Tiger and habitat conservation in the country. It has successfully delivered by attaining the goal of doubling the tiger numbers in India, well ahead of its pre-decided timeline. The NTCA has grown its reach far beyond the national borders through Bilateral Cooperation with countries such as Bangladesh, Bhutan, Myanmar etc. and now is in the process of expanding its network with Cambodia. The NTCA is playing a pivotal role in active tiger management and other prestigious projects such as "Project Cheetah", aimed to bring the Cheetah back to the country.

The present NTCA team of officials and scientists who have set the conservation scenario at the center stage of global excellence. Last but not the least, the achievements of NTCA is visible through the increase in the tiger range habitats which is currently more than the 74,000 Sq. Km., with the latest addition of the 52nd Tiger Reserve, namely Ramgarh Vishdhari in Rajasthan.

I would like to congratulate team NTCA for taking forward the Tiger Conservation Agenda and representing India at the global level and my best wishes to the team for future endeavors.

C. P. Goyal

Director General of Forests & Special Secretary

Ministry of Environment, Forest and Climate Change,
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