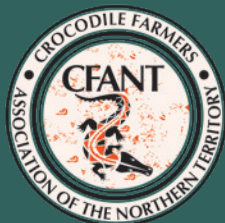




Northern Territory
**Crocodile
Farming Industry
Strategic Plan**
2024–33

An industry-led strategy prepared by the Crocodile Farmers Association of the Northern Territory with support from the Northern Territory Government.



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The industry has a vital role in ensuring the conservation of wild crocodile populations.





01 Introduction

The Northern Territory (NT) crocodile farming industry is a novel, innovative and successful wildlife production enterprise based in the Top End, one of the most remote regions of Australia.

The NT crocodile farming industry produces high-quality saltwater crocodile skins for the global luxury leather market. The industry operates in a complex social, political, and economic context that requires continual adaptation and innovation, whilst simultaneously supporting national development priorities including sustainable economic development, innovative industries, and the sustainable use of biological resources.

The commercial production of Australian freshwater crocodiles is no longer financially viable, having been replaced by the more lucrative saltwater crocodile trade when international trade was approved by the Convention on International Trade in Endangered Species (CITES) in 1985¹. The industry continues its contribution to the economic development of remote Aboriginal communities; supports research and conservation; and increases skills and knowledge about the sustainable use of a native species.

Crocodile farming is a relatively new form of animal production that involves wildlife rather than domestic animals, and specifically, wildlife once threatened with extinction. The industry has a vital role in ensuring the

conservation of crocodile populations, but sometimes faces challenges striking a balance between industry growth and conservation goals. The industry has incentivised public support by promoting the benefits derived from industry growth, including preservation of natural habitats and conservation of the species.

The Crocodile Farmers Association of the NT (CFANT) was established in 2009, primarily to promote the industry's growth and sustainability. It is a forum in which individual farmers can come together to address generic problems affecting all farms; reach consensus on solutions; and where necessary, liaise with Northern Territory Government (NTG) regulators with a united voice.

This Crocodile Farming Industry Strategic Plan 2024 - 2033 (the Strategic Plan) builds on the achievements of the Crocodile Farming Industry Strategic Plan 2015-21. The new Strategic Plan outlines key actions that CFANT and NTG agree will support and facilitate the sustainable growth of the industry in the NT. The actions are to some degree aspirational, but all are achievable and measurable and will be underpinned by an implementation plan.

Status of previous strategic plan actions

The NT Crocodile Farming Industry Strategic Plan 2015-21 was jointly released by CFANT and the NTG in 2015, with CFANT stating it believed the industry could double the annual gross value of production, then valued at \$25 million, within five years.

The ambition of doubling the annual gross value of production of the crocodile farming industry was impacted by a number of external drivers during the life of the 2015 Strategic Plan, including:

- > market changes to much smaller crocodiles, for smaller products;
- > the development of the International Crocodilian Farmers Association (ICFA) standards, against which farms are audited every year by an independent certified auditing body and which resulted in NT industry investment in farming infrastructure upgrades and new technologies over the 2015-21 period;
- > the introduction of new grading standards for crocodile skins, which required rapid adjustment to farming systems;
- > the impact of COVID-19 on global trade; and
- > demands on Australia's crocodile producers introducing world-class science based production improvements and the associated research and development costs.

Table 1: Current status of the actions in the NT Crocodile Farming Industry Strategic Plan 2015–2021

ACTION	STATUS
<p>A strategic partnership between the NTG and CFANT will take an evidence-based approach to reviewing the efficiency and effectiveness of the NTG Saltwater Crocodile Management Program within a framework of incentive-driven conservation and sustainable industry growth.</p>	<p>This action is progressing.</p>
<p>Consider opportunities for competitive businesses to participate in the future management of saltwater crocodiles in instances where there are mutual benefits to government and industry.</p>	<p>This action is progressing and is reflected in the new Strategic Plan (new action 4.3).</p>
<p>Develop strategic actions that can be readily implemented to improve and simplify the legal and regulatory framework for the NT crocodile farming industry, providing certainty while maintaining environmental objectives.</p>	<p>This action is progressing and carried over into the new Strategic Plan (new actions 2.4, 2.5 and 3.2).</p>
<p>Continue to fine-tune the egg ceiling in line with published estimates of sustainable harvest rates and explore additional and alternate areas for collection.</p>	<p>This action is progressing and carried over into the new Strategic Plan (new actions 2.7 and 2.8).</p>
<p>Continue to build professional and business relationships between the industry, landowners and governments to maximise win-win opportunities for all stakeholders and develop community crocodile industry engagement and participation.</p>	<p>This action is continuing at all levels of the industry, including through ongoing industry support for the development of satellite farms.</p>
<p>Create an enabling policy environment that ensures the NT crocodile farming industry is in the strongest position to compete on a level playing field, both domestically and internationally.</p>	<p>This action is ongoing.</p>
<p>Government policy and regulation needs to be open, responsive and flexible to be able to consider new innovation, processes and technologies that complement existing and traditional methods and models of service delivery.</p>	<p>This action is ongoing, with CFANT and regulators continuing to collaborate and discuss issues of policy and regulations.</p>
<p>Invest in strategic industry-driven partnerships that focus on issues related to the industry’s competitiveness, productivity and profitability.</p>	<p>This action is ongoing.</p>
<p>Support the employment needs of crocodile farming businesses through workforce planning, development and training programs.</p>	<p>This action is ongoing.</p>
<p>Continue to support innovative programs that generate employment and commercial opportunities for landowners from crocodiles, and ultimately help to mitigate the risks of access and supply for the crocodile farming industry.</p>	<p>This action is progressing, with the industry continuing to work with interested community groups on the satellite farming model.</p>
<p>A central point of contact in the NTG that brings together policy and regulatory responsibilities for crocodile management would enhance the NT’s ability to contribute to national and international deliberations that impact the interests of the NT.</p>	<p>Responsibility for management of permits, animal welfare, biosecurity, industry development, wildlife management and public education is shared across a number of divisions in two NTG departments. Central points of contact for each of these divisions have been provided to CFANT and regular engagement is ongoing.</p>

03 STRATEGIC PLAN

at a glance



Our vision

The NT crocodile farming industry is known globally as a producer of the highest quality crocodile products, demonstrating leadership in animal welfare practices, research, and sustainability.



Our goal

Maintain a positive investment environment for continued industry growth, with sustainable use of the wild population supporting the diverse benefits of the industry including contributing to conservation, research and economic development in remote Aboriginal communities.

Photo credit: Tourism NT/Tyson Mayr



Our objectives

- > Drive sustainable industry growth that delivers increased economic, social, environmental and community benefits.
- > Support sustainable economic development in remote Aboriginal communities.
- > Continue the NT industry's pioneering role in research on science-based animal welfare and become an internationally recognised hub for research into captive and wild crocodiles.
- > Continue the industry's commitment to strategic communication and proactive education. We aim to better educate the public and improve industry capacity to demonstrate the benefits to habitat and species conservation and animal welfare.
- > Expand the NT industry's global reputation, sustain the industry product's high level of acceptability in the market and attract further international investment to the NT.
- > Contribute to the NT Government's goal of achieving a \$40 billion economy by 2030.
- > Continue to work diligently to reduce carbon emissions by committing to science based greenhouse gas reduction targets. We are putting in place actions to reduce the industry's carbon footprint by investing heavily in green energy.
- > Continue to focus on water efficiency initiatives. The industry recognises that water is a finite resource and is committed to promoting water reuse or recycling through various water efficiency initiatives.
- > A commitment to preserving biodiversity and regenerating natural ecosystems, where possible. The industry aims to measure its biodiversity footprint and put in place action plans proportional to the level of impact at sites.
- > Continue the industry's commitment to reducing waste through recycling and composting initiatives.



Why is this important?

Crocodiles are strategically important to the NT due to their significant cultural and economic value, as well as their role in maintaining the ecological balance of the region's wetlands and waterways.

The crocodile farming industry, and crocodiles more broadly, are essential aspects of the NT economy, contributing to the tourism industry and providing on-country Aboriginal employment opportunities. Crocodiles are often revered and have an important role in the cultural and spiritual practices of many Aboriginal people.



Context

4.1 Global and domestic

Australia is one of many countries in which wild and captive crocodiles are traded for exotic leather. Thirteen of the 28 species of living crocodylian are also traded, with eight species potentially competing with saltwater crocodiles in some markets.

The luxury exotic leather industry considers saltwater crocodile leather the most desirable of all species, but saltwater crocodiles are not restricted to Australia. They also occur from India to Sri Lanka, through Southeast Asia to the Pacific and throughout Indonesia, Timor Leste and Papua New Guinea.

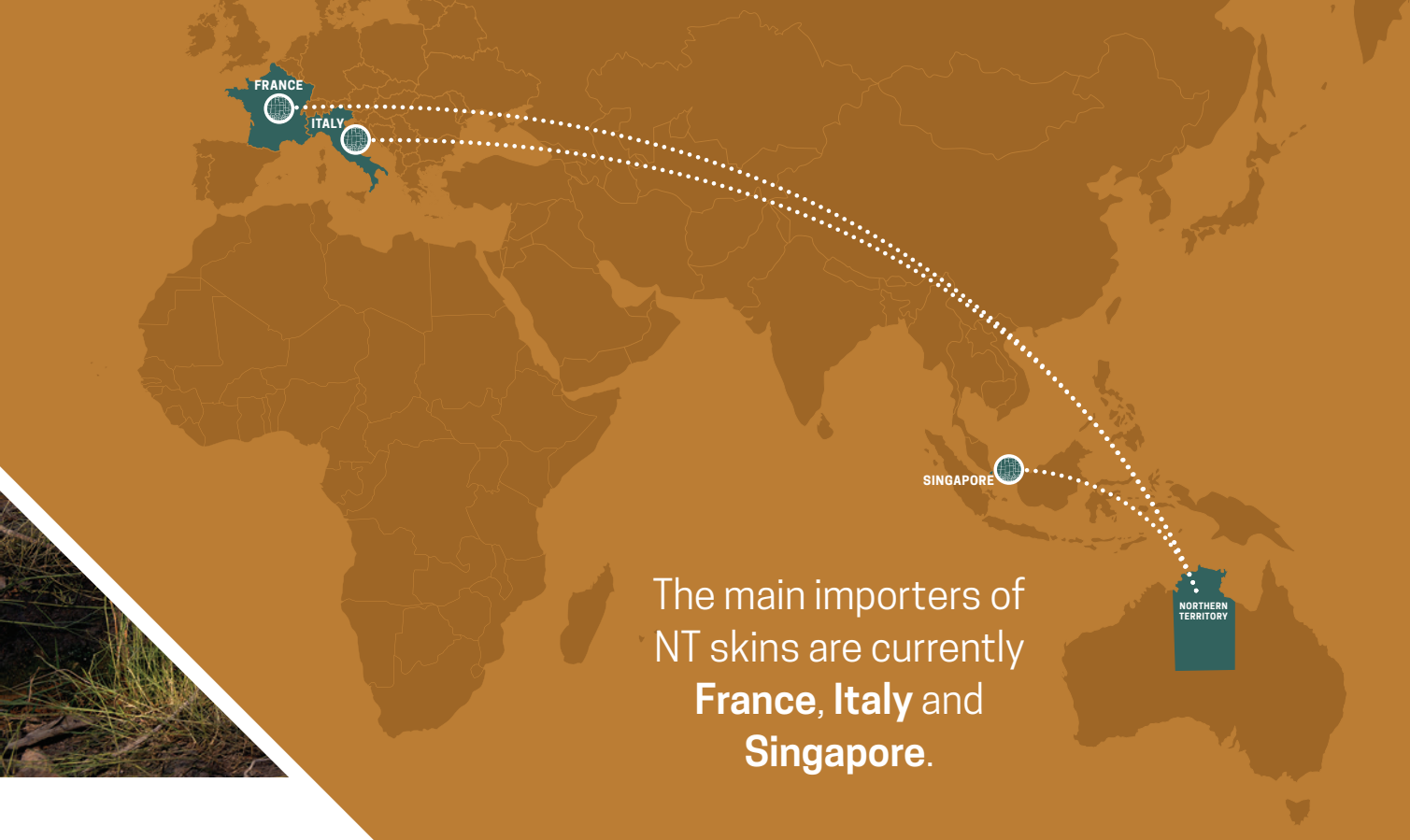
Commercial farming of saltwater crocodiles, based on captive breeding, occurs in Bangladesh, Indonesia, Malaysia, Philippines, Papua New Guinea, Singapore and Thailand. Indonesia and Papua New Guinea also have ranching programs for eggs and juveniles, and some wild harvesting of sub-adults and juveniles. In some range states (Thailand, Cambodia, Vietnam), the wild populations are virtually extinct, with options for rebuilding them limited by public and political opposition. The abundance of the wild population of saltwater crocodiles in the NT, and across northern Australia generally, is unique.

Australia produced **58%** of all saltwater crocodile skins traded internationally in 2015-20, with around **two-thirds** of these coming from the NT.



Most of the remaining third was exported from interstate farms, many of which source hatchlings from the NT ranching program.

CFANT will continue to encourage members to aim to sustainably increase production and exports to 50,000+ high quality skins per annum, throughout the 2024-33 Strategic Plan.



The main importers of NT skins are currently **France, Italy and Singapore.**

Markets for finished luxury products, regardless of their place of manufacture, are global. The United States of America (USA) is an important market for luxury fashion products, and it is a measure of the success of the NT's management that the Australian population of saltwater crocodiles was transferred from 'endangered' to 'threatened' on the US *Endangered Species Act 1973* (ESA).

The ESA is a stricter domestic measure than CITES within the USA. 'Threatened' means the wild population is no longer endangered, and does not imply it is still at risk of extinction. The International Union for Conservation of Nature (IUCN) Red List of Threatened Species independently lists saltwater crocodiles as 'Least Concern'².

The ESA determination of 'threatened' allows products from Australian saltwater crocodiles to be imported and sold within the USA, whereas those from other countries, with the exception of Papua New Guinea, remain classified as 'endangered' and cannot be imported or sold in the USA. For the NT industry, this creates a significant competitive advantage, resulting directly from the successful conservation and management of the wild populations.

Crocodylian skins in trade are classified as 'classic' or 'caiman', with classic skins more highly valued. Saltwater crocodile skins are the most desirable

classic, and comprise 8% of the total volume of 'classic' skins in world trade. Of that 8%, 55% are produced in Australia (Table 2: Caldwell, 2022) and around two-thirds of these come from the NT. Australia and the NT provide 5% and 3%, respectively, of all classic crocodylian skins in international trade.

In 2014-15, the value of production within the NT crocodile farming industry was estimated at about \$25 million.



Since 2015-16, the industry has grown exports, but been negatively impacted by international market forces, particularly an oversupply of classic skins from American Alligators (*Alligator mississippiensis*) and Nile Crocodiles (*Crocodylus niloticus*) (Table 2). During this period, the NT industry increased investment in farming improvements which will take some years to result in increased trade.

Table 2: Numbers of classic crocodylian skins traded internationally in 2015 – 2020

SPECIES	2015	2016	2017	2018	2019	2020	ALL	
American Alligator	428,521	553,371	463,466	596,258	492,563	423,625	2,957,804	56.5%
Nile Crocodile	278,094	317,121	250,150	213,757	259,714	157,831	1,476,667	28.2%
Saltwater Crocodile	69,470	102,768	72,173	75,774	67,509	40,206	427,900	8.2%
Siamese Crocodile	58,558	33,349	35,407	55,825	19,761	47,367	250,267	4.8%
PNG FW Crocodile	39,070	14,022	7,649	8,849	9,786	2,192	79,746	1.5%
American Crocodile	3,353	3,233	5,040	5,295	8,187	2,291	27,399	0.5%
Morelet's Crocodile	1,291	1,640	3,000	4,338	421	0	10,690	0.2%
Totals	878,357	1,025,504	836,885	960,037	856,178	673,512	5,230,473	

Source: Caldwell (2022)

4.2 Environmental

Crocodiles are believed to be an integral part of wetland ecosystems in the NT, although their role and importance in maintaining those ecosystems and the extent to which they are indicators of wetland health is poorly understood, it is stimulating increased research interest³.

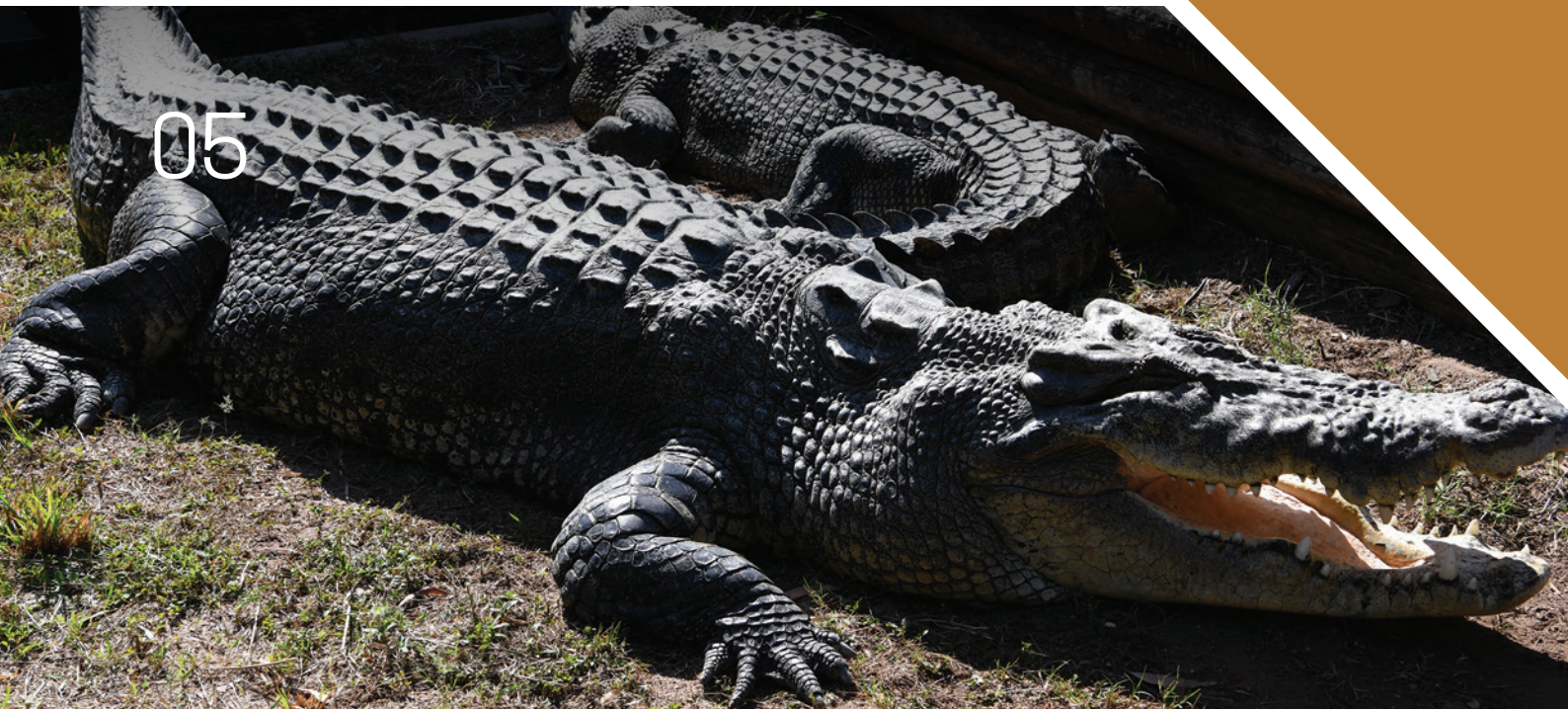
The Australian Government has implemented various regulatory protections, which help to ensure the ongoing conservation and sustainable management of crocodile populations in the NT. In 1974, when the wild populations were severely depleted, the Australian Government enacted a total export ban. Since CITES came into force in 1975, Australia has complied with CITES protocols for regulating international trade in all crocodile products.

The Australian Government's *Environmental Protection and Biodiversity Conservation Act* (EPBC Act) requires states and territories seeking to trade in crocodile products to develop detailed crocodile management plans. The management plans are approved by the Australian Government and include commitments

to monitoring and managing both wild and captive populations and ensuring the highest international standards for animal welfare are maintained. These plans also outline management actions to minimise human-crocodile conflict, and ensure the long-term sustainability of the wild populations.

The *Management Program for the Saltwater Crocodile (Crocodylus porosus) in the Northern Territory* is currently being updated. The management plan acknowledges there are two native species of crocodile in the NT; the Saltwater Crocodile and the Freshwater Crocodile. While freshwater crocodiles are not currently farmed or wild harvested in the NT, some management activities such as monitoring and management of threat to human safety may involve both species.

The regulatory protections currently in place for crocodiles in the NT demonstrate the NT Government's long-standing commitment to conservation and sustainable management of all native wildlife.



Territory crocodile farming industry overview

5.1 Historical perspective

The recovery of the saltwater crocodile population in the NT has taken time, monitoring and research. Carefully managed harvesting has provided economic benefits without compromising conservation goals. Prior to protection in the NT in 1971, the crocodile harvest was unregulated and unmanaged and it greatly reduced wild populations.

The saltwater crocodile population started to recover immediately after protections were introduced, and the development of regulated methods for sustainable harvest of wild populations has proceeded cautiously since then.

The Parties to CITES transferred the Australian population of saltwater crocodiles from Appendix I to Appendix II in 1985, enabling an approved ranching program for the NT. This started as an experimental ranching program involving the collection and sale of wild eggs by landowners to crocodile farms, helping offset the problems landowners were encountering with the growing wild crocodile population on their land.

The wild population in the NT today, 52 years after protection, occupies its complete historical range and is numerically close to the abundance that existed in

the 1940s. The additional 100,000 crocodiles on 14 farms represent mainly animals that would not have survived in the wild, if eggs had not been collected.

The industry has evolved continuously since the 1980s, with methods of egg collection, incubation, and juvenile raising, among other things, greatly enhanced. It has required significant investment in research by both the private and public sectors, including the Australian and NT Governments. The success of the industry is evident in the NT's 'preferred supplier' status within the luxury leather industry which attracted international investment of over \$70 million between 2015 and 2022.

The global supply of crocodile and alligator skins from overseas farming operations has also increased due to investment in technological development and innovation. For the NT to sustain sales and reach its full potential in a competitive environment over the life of this Strategic Plan, the industry will need to continue to innovate to produce the highest quality skins, maintain impeccable conservation and animal welfare credentials and engage in benefit-sharing with landowners.

5.2 Political context

Until the 1960s, saltwater crocodiles were seen as a nuisance species and were hunted for their valuable skins. In 1971, attitudes towards crocodiles shifted as concerns about conservation and potential extinction arose, leading to their protection in the NT. This reflected a broader global trend of environmental conservation becoming a mainstream political issue in line with community expectations.

The crocodile farming industry in the NT began in 1979, during the post-protection conservation era, but it faced opposition from some academics and interest groups who were sceptical about its conservation implications. In the 1980s, as the wild crocodile population continued to expand and crocodile attacks on humans increased, the NT's management focus shifted from conservation to sustainable use, with the introduction of a ranching program allowing landowners to sell crocodile eggs to farms for production.

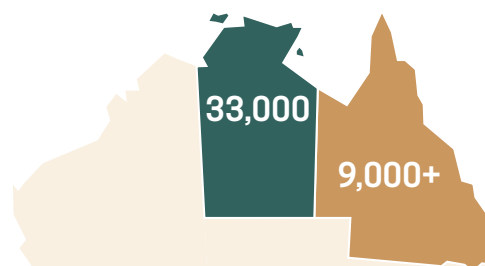
Despite disapproval from those who opposed reopening trade, the NT demonstrated through extensive research, monitoring and experimental management, that collecting wild eggs did not negatively impact the growth of the wild population. However, obtaining approvals to trade was a drawn-out and costly pursuit.

Opposition to the industry today focuses on farming operations, with some special interest groups portraying crocodile farming as cruel and ethically wrong. Claims of animal welfare concerns aim to discourage consumers from purchasing crocodile products and to create doubts about the corporate well-being of producing companies.

Although science-based animal welfare research can address numerous claims, the diversity of such claims can exceed research capacity and a lack of research on the biology and behaviour of wild crocodiles adds to the difficulty of assessing some claims made about crocodiles in captivity.

To ensure the industry's well-being, stakeholders must promote its value and contribution to sustainability, animal welfare and the local economy, especially for Aboriginal people. Science-based animal welfare research will continue to provide the evidence to address genuine problems, but stakeholders must work together to overcome ideological opposition to the industry.

5.3 Size of the industry



The predicted offtake of skins for 2023 is **33,000** animals from NT farms and **9,000+** from Queensland farms stocked with hatchlings from the NT ranching program.

In response to market factors, buyers have imposed stricter skin grading standards. Prices for premium skins have increased, and for lower grade skins has substantially decreased. Some NT farms have been able to invest in the research and development needed to improve skin quality, and have attracted international investment. Others have struggled through a particularly tough economic time.

Direct benefit-sharing in the NT mainly involves the egg ranching program, which rewards landowners through payments for delivery of eggs. Limited harvesting of wild animals, often problem animals, benefits some landowners. Landowners with no significant nesting habitat are prevented from participating in the ranching program. Options for allowing juveniles to be collected as part of the ranching program, as occurs in Papua New Guinea and Indonesia are possible, but must include consideration of biosecurity issues relating to the introduction of animals from the wild to high level biosecurity farming environments.

The extensive national and international media attention created by the recovered wild crocodile population helps public education and makes an important contribution to attracting tourists to the NT. Crocodiles have become a must see iconic attraction for visitors to the Top End, with the image of the saltwater crocodile becoming synonymous with the NT and its reputation as a frontier destination.

5.4 Key economic opportunities

Ranching, which refers to the sustainable egg harvest from the wild population, remains under-utilised in the NT and can potentially support additional industry growth. Egg/hatchling production through captive breeding is a proven alternative for increasing industry growth, but competes with the ranching program and the incentives this provides for ongoing conservation.

The technology used for raising hatchlings in the NT to one year of age, meets the highest industry standards and is currently employed within a remote satellite farming venture in Arnhem Land, where it is generating both social and economic benefits for a remote Aboriginal community. The Strategic Plan aims to support the establishment of additional remote satellite farms in interested communities over the long term.

Raising crocodile hatchlings from one year to processing requires significant investment in management, husbandry, processing facilities and access to food supplies. Significant investment in increasing final stage raising occurred during the 2015-21 Strategic Plan, and is expected in the future, either in new large facilities or innovative contractual arrangements.

The major luxury brands that use saltwater crocodile skins are intimately involved with the crocodile industry in the NT and Queensland, which offers a unique opportunity to ensure future expansion of production is directly linked to the market. Further development of the industry will focus on quality and regional benefits for remote communities.

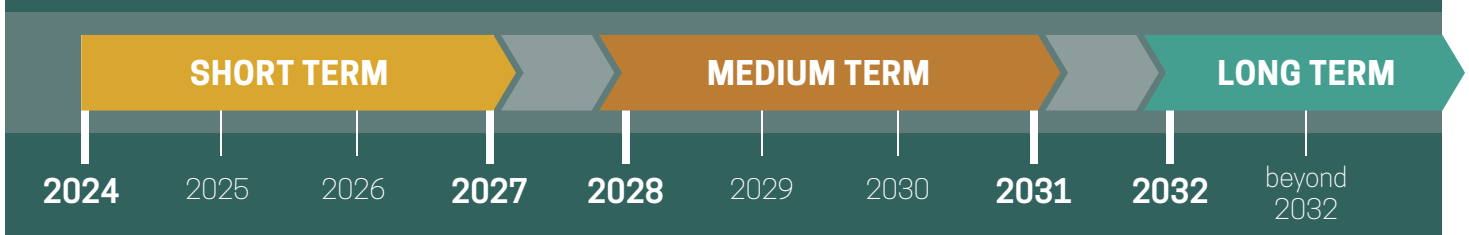
There is opportunity to improve and expand the use of by-products, including through research into the potential for medical applications of by-products. Enhancing the NT as an active international hub for innovative crocodilian conservation, research and management has the potential to expand the industry and the benefits it contributes to the economy and community.



Key strategic actions

The Strategic Plan identifies four key focus areas and accompanying actions that will be taken by CFANT and relevant stakeholders to grow the industry sustainably over the next 10 years.

These actions are divided across the following timeframes:



6.1 Drive sustainable development



Increasing the economic potential of products

There are sound economic reasons for industry to maximise the commercial use of by-products and to consider other economic development opportunities linked to by-products, particularly medicinal ones. Greater use of by-products generally assists marketing, because it reduces economic dependence on farming for skins alone, which is considered socially unacceptable in some markets.

The NT farming industry primarily produces raw salted skins from crocodiles, with back straps and meat being the other main products. Other products, such as heads, skulls, feet, fat (for oil extraction), and teeth, are also produced but to a lesser extent. Most of these products are processed and sold domestically within Australia, while some are exported. However, the competition with cheaper meat from other countries in international markets poses a challenge for NT crocodile meat exports. This is due to higher regulatory costs associated with export abattoirs in Australia and the live trade in crocodiles for meat from Southeast Asia to China.

During the establishment of the industry in the 1980s, procedures for the processing of crocodile meat for human consumption in the NT were developed cautiously. This included avoiding the processing of internal organs and other tissues due

to potential contamination risks. However, in other countries, these products are recovered safely in quality abattoirs and marketed domestically and internationally. While the traditional Chinese medicine market is the main established market for crocodile products, the scientific literature is increasingly confirming the scientific basis of their medicinal value in western societies for wound healing, vascular function, asthma, anti-cancer properties, and as health products for people and pets.

Despite market demand and potential for new commercial exports, most of these products are still discarded in the NT. CFANT believes that exploring science-based medicinal uses of crocodile tissues is a potentially important area for economic development in the NT, which would expand benefits from the industry. However, there has been limited uptake by local researchers in this area.



CFANT will undertake a review of scientific literature relating to the medicinal application of crocodilian by-products and assess the capacity and/or interest within and outside NT institutions to undertake related research.

The export of raw or processed by-products for human consumption would ultimately require compliance with CITES protocols and with numerous other regulatory bodies (for example Meat Standards Australia; Australia New Zealand Food Standards Code; Therapeutic Goods Administration) and would require adopting the 'Australian Standard for Hygienic Production of Crocodile Meat for Human Consumption'. CFANT will liaise with NTG experts to assemble the protocols required before downstream products could be marketed nationally and internationally.

Over and above being new commercial opportunities for industry, the increased use of by-products has implications for overcoming social license issues in some markets, where the ethical acceptance of farming animals primarily for skins is questioned. Increasing the value of the production of meat and other by-products, which is currently modest in the NT, will both diversify the income from crocodile farming and positively impact the skins' life cycle assessments. In other words, farming a crocodile not only for its skin alone will reduce the environmental impact of all stages of production of the skin by reallocating it to the meat and other by-products that economically benefit the farmer – under condition the allocation rules are based on value, which is the common approach currently adopted for leather worldwide.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
1.1	Encourage members to aim for increased production and exports of high quality skins throughout the life of the 2024-33 Strategic Plan.	CFANT	Ongoing	Production and exports of high quality skins are sustainably increased annually.
1.2	Undertake a review of scientific literature on the medicinal application of crocodilian organs/tissues and assess the capacity and/or interest within existing NT institutions to undertake such research.	CFANT	Short to medium term	Publish a review of existing scientific literature and identify opportunities for further research with industry and academic partners in the NT.
1.3	Strengthen cooperation between researchers and research institutions to upgrade crocodile research capacity and capability.	CFANT	Ongoing	Support the establishment of a crocodile research network.

✓ Ensure the employment needs of the industry can be provided locally

The growing crocodile farming industry has become increasingly specialised and sophisticated, creating more diverse employment opportunities and training needs.

The crocodile industry in the NT is affected by a shortage of skilled labour, which has been exacerbated by the COVID-19 pandemic. CFANT has been involved in industry training advisory councils for many years and has contributed to the development of crocodile-related training courses. In the 1990s and early 2000s, CFANT members successfully delivered a certificate course on crocodile conservation, management, and husbandry to participants from various parts of the world. Internationally, similar goals specifically with crocodilians are being advanced by the One Welfare Sustainability Centre at the Ohio State University, with which NT industry stakeholders cooperate.

To address the specific needs of Aboriginal people, CFANT members created a pilot training course on crocodile egg collection, incubation, and hatchling rearing, which was delivered successfully to Aboriginal people in Maningrida.

While the Seafood Industry Training Package offers accredited training, the crocodile industry still requires on-site training to ensure compliance with safety regulations and crocodile welfare standards. To this end, the industry collaborated with NT Worksafe to produce a safety video titled 'Not a croc - safety in the crocodile industry supply chain' for national and international audiences.

CFANT will work with stakeholders, including the NTG, industry skills advisory councils, and training providers, to identify training and workforce options that may need to be customised for remote satellite farms to facilitate increased involvement of Aboriginal Territorians in the industry. In addition, CFANT will evaluate industry-specific training needs and provide advice on available formal and informal training programs to its members and other interested parties.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
1.4	Collaborate with industry, NTG, training providers and other key stakeholders to identify training and workforce needs and develop an overview of existing training programs and analysis of training gaps.	CFANT	Ongoing	Training and workforce needs assessment; overview of existing training programs; and analysis of gaps completed and communicated to industry stakeholders.
1.5	Evaluate current level of Aboriginal participation in the crocodile farming value chain and examine opportunities to increase their involvement.	CFANT	Ongoing	Increased participation from Aboriginal people and Aboriginal owned organisations in the industry.

✓ Increasing benefit-sharing and commercial opportunities for landowners

The social and economic benefits the industry generates through the NTG crocodile management program, particularly to Aboriginal landowners, will remain important for incentivising biological sustainability, maintaining the preferred supplier status, and sustaining the secure investment environment.

Globally, Indigenous lands are estimated to contain about 80% of the world's remaining biodiversity, which is critical to international conservation goals. The United Nations Declaration of the Rights of Indigenous People establishes that economic development based on local biodiversity is a fundamental right of Indigenous people that should be encouraged. The foresight of the NTG in this sense was both morally and ethically sound. The Territory Economic Reconstruction Commission Final Report⁴ also recognises and promotes the active leadership of Aboriginal people in the commercial development of their lands.

The security of the supply of ranched eggs is critical to the long-term economic viability of farms, and the development of long-term land use agreements between landowners and farmers can benefit both parties. CFANT will investigate this potential avenue.

Aboriginal lands provide approximately 70% of eggs harvested through the ranching program in the NT and egg payments inject private funds into remote areas where conventional economic development has been difficult. The participation of Aboriginal landowners in the ranching program was essential when it was first developed in the early 1980s. By the late-1990s, some Aboriginal communities were collecting and incubating their own eggs and selling hatchlings to farms. In the 2000s, experimental facilities for raising hatchlings on Aboriginal lands began with the aim of value-adding through on-selling raised juveniles to farms. The goal was to increase economic involvement and employment in remote Aboriginal communities.

The satellite farming project in Ramingining, Arnhem Land, resulted in a sophisticated, Aboriginal-owned, crocodile raising facility where eggs collected on traditional lands are incubated locally, hatchlings are reared and then on-sold to farms at a guaranteed sale price.

Satellite farming, in which smaller farms can feed their production into larger farms, has potential in the NT to increase benefit-sharing and expand employment and skills training in remote communities.

The Ramingining facility, as an independent Aboriginal-owned and managed business venture, is being closely evaluated by stakeholders, including industry members, with two other satellite farming ventures under consideration. The involvement with crocodiles has resulted in active control of wild cattle and buffalo through eradication and strategic fencing to counter wetland degradation and increase the number of nests available for collection. Non-Aboriginal landowners began using strategic fencing to prevent nesting habitats from being eroded by stock, when ranching was first introduced in 1983 and the commercial value of eggs was identified. Commercial incentives can assist the habitat conservation provisions of the NT crocodile management program.

There are potential benefits to some landowners having the ability to include wild hatchlings or small juveniles in their local ranching strategies, which will require experimental research. CFANT will continue to support activities that increase direct and indirect benefit-sharing from the industry, and will encourage strategic research to determine whether ranching juveniles could benefit some landowners.



Modern Hatchling Facility.



Since the early inception of a remote satellite crocodile farm concept, the Aboriginal ‘swamp’ people were keen to be involved. With the help of both industry and government, Arafura Swamp Rangers Aboriginal Corporation (ASRAC) has successfully commenced an innovative on-country enterprise employing and upskilling local Aboriginal people working towards their economic independence. ASRAC rangers collect the eggs, hatch and raise the animals up to 80cm at the satellite hatchling facility based in Ramangining. The hatchlings are then sold to Darwin-based crocodile farms after six to eight months of raising.

This greatly increases the value of the animals going back to local people and provides employment in remote areas where other employment options are extremely limited. Training and mentoring provided by Darwin crocodile farmers and employment pathways for young people will continue to be fostered, on and off-country.

Stage one of the facility has successfully run for two years, with the facility moving into stage two in the 2024 egg collection season. This will see the facility raise up to 1,500 animals and provide additional jobs. The profits go back into employment and fund land management activities that protect crocodile habitats in Gurruwiling (the Arafura swamp). ASRAC represents swamp people who have lived with crocodiles for thousands of years.

‘People from Gurruwiling possess a deep understanding of the behaviour and ecology of these animals and are ideally placed to use their knowledge to develop a sustainable business.’

Arafura Swamp Rangers Aboriginal Corporation

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
1.6	Investigate the development of long-term land use agreements for supply of ranched eggs.	CFANT	Short to medium term	Additional land use agreements developed.
1.7	Assist in the further development of existing satellite ranching in Aboriginal communities, and unlock further opportunities in additional communities willing to participate.	CFANT	Short to medium term	Pilot farms expanded and additional sites developed.
1.8	Examine feasibility of allowing juvenile crocodiles to be collected as part of the ranching program.	NTG	Short term	Options paper released.



Maximising the benefits of research

Research on crocodiles will remain fundamental to the NT crocodile industry being sustainable and competitive. Research generally, in both the private and public sectors, constitutes a local industry in its own right. The crocodile research expertise and capacity in the NT is considerable and could be further enhanced through strengthened coordination. The synergism possible through a crocodile research hub, virtual or actual, could improve innovative research outcomes to industry, among many other benefits.

To remain competitive in the future, the crocodile industry must continue to improve the efficiency and quality of production. This requires innovative adaptation of procedures based on local or international research findings. Research not only provides solutions to industry problems but also generates insights and hypotheses about basic crocodile biology, which can inform the management of wild crocodiles.

Similarly, research on wild crocodiles and their management can inform industry about the occurrence of problems with captive crocodiles. Some industry research is constrained by the inability to determine whether results are explainable in terms of basic crocodile biology and behaviour in the wild, which is important for maintaining animal welfare on crocodile farms.

Research on wild and captive saltwater crocodiles and Australian freshwater crocodiles in the 1970s and 1980s established research credibility, underpinned the sustainable use program, ensured that NTG policies were evidence-based, and solved many pioneering industry problems. Since the 1990s, industry research on saltwater crocodiles has increased significantly with funding from the industry and the Australian and NT Governments. Crocodile management effort has continued to monitor wild populations and report on their status. However, the very strong historical focus on field research into the basic biology and population processes underpinning how wild populations appeared to be functioning - and indeed be able to sustain ranching and harvesting - has been largely abandoned for saltwater crocodiles and particularly freshwater crocodiles. Research continues to be conducted by various interstate and international researchers, but with limited involvement with local research priorities, linked to crocodile management.

The NT is uniquely placed to potentially pursue a regional Centre of Research Excellence in crocodile research with Australian Government support. Crocodiles are one of the spheres of innovative research and development potential in which the NT is uniquely positioned to pursue, relative to other Australian jurisdictions. The rebuilding of targeted research capacity will ensure the sustainable use and management of NT crocodiles continues to be based on the best science available.

Key institutions contributing to crocodile research capacity in the NT are:

- > Charles Darwin University (CDU; public)
- > Berrimah Veterinary Laboratory, within the NT Department of Industry, Tourism and Trade (BVL; public)
- > NT Department of Environment, Parks and Water Security (DEPWS; public)
- > Parks and Wildlife Commission of the NT (PWCNT; public)
- > Commonwealth Scientific and Industrial Organisation (CSIRO; public)
- > Menzies School of Health Research (MSHR; public)
- > Parks Australia (PA; public)
- > Centre for Crocodile Research (CCR; private)
- > Wildlife Management International (WMI; private)

The NT's crocodile research credibility has consistently assisted the industry. For over 40 years, BVL has been a leading NTG agency providing diverse research services related to animal health in an industry context, although there is some overlap in research with other agencies. CCR, CDU, WMI, MSHR, and CSIRO have all contributed to industry research, partnering with local, interstate, and international researchers. CDU, WMI, and DEPWS have conducted diverse research into crocodile biology and populations, while PWCNT has focused on applied management practices.

The IUCN SSC Crocodile Specialist Group (CSG), coordinated out of the Northern Territory through WMI, is widely recognised as the global leader in crocodilian conservation, management, and research for all 28 species of world crocodilians. With 725 global members in 82 countries, the CSG supports sustainable use of species; industries based on sustainable use; and benefit-sharing to rural landowners and Indigenous People and Local Communities (IPLC). The CSG Chair, CSG Executive Officer, IUCN Red List Authority (for crocodilians) and one CSG thematic group (Veterinary Science) are located within WMI, CCR and BVL.

The 27th biennial Working Meeting of the CSG, along with an ICFA board meeting, will be held in Darwin in April 2024, providing an opportunity to showcase NT research, management, conservation, and industry achievements.

The status of native freshwater crocodiles is an integral part of the NTG's crocodile conservation obligations from a conservation and biodiversity

viewpoint, which has received limited focus since the 1990s. The Strategic Plan prioritises upgrading crocodile research capacity and activities generally, encouraging more basic research, and facilitating dialogue between researchers and research institutions to assess the potential for increasing cooperation on industry and non-industry problems.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
1.9	Examine establishment of a regional Centre of Research Excellence in Crocodile Research.	CFANT and NTG	Long term	Requirements are identified and discussions commenced with potential partners including the Australian Government and research organisations.
1.10	Continue commitment of Berrimah Veterinary Laboratory to support industry research outcomes.	NTG	Ongoing	Industry research outcomes are met.



Updating the economic assessment of the industry

In 2016 an independent economic assessment of the contribution the crocodile industry was making to the NT economy was carried out. Given significant new investment and changes in marketing and trade, a review and update is considered timely.

The economic value of the NT crocodile industry was independently assessed by Ernst and Young in 2016, which concluded: *During the 2014/15 FY, the total economic contribution of the Industry in value added terms was \$54.3 million.* This report assisted NTG in recognising the role the industry was playing and contributed to attracting investment in the industry.

Since that time, significant new capital investment has occurred in farming, in both Darwin and Ramingining. The number of employees directly and indirectly engaged in the industry has increased

significantly and the contribution of different industry stakeholders has changed, due to the impact of new skin quality requirements. The contribution crocodile-based tourism makes to the economy was dramatically reduced during the COVID-19 pandemic, but is now recovering.

The benefits the industry provides to landowners, particularly Indigenous landowners, needs to be assessed in more detail, as increased investment on Aboriginal raising facilities is being requested by Traditional Owners.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
1.11	Commence an economic review of the NT crocodile farming industry before 2026.	NTG	Short term	Delivery of economic review to support future growth.

6.2 Lead industry standards



Continue development of industry standards

There is growing community expectation that commercial animal industries will comply with the UN Sustainable Development Goals and will implement science-based animal welfare provisions.

Fashion houses utilising crocodilian and other exotic leathers are increasingly developing their own industry standards, with which farms and others involved in their supply chains will be expected to comply.

The NT has contributed significantly at a national and international level to research and the development of production standards for crocodiles (including through the International Crocodilian Farmers

Association; ICFA) and will continue to contribute actively to the development of national and global industry standards based on the best scientific evidence available.

The degree to which this may require new investment on existing farms, to meet new requirements, will be assessed by CFANT during the life of the 2024-33 Strategic Plan.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
2.1	Continue to contribute actively to the development of national and global industry standards based on the best scientific evidence available.	CFANT	Ongoing	Strong engagement and alignment with the International Crocodilian Farmers Association maintained.
2.2	Assess the degree to which development of local and global industry standards may require new investment on existing farms, to meet new requirements.	CFANT	Ongoing	New investment requirements are identified and communicated to the industry.



Biosecurity provisions

Investment in biosecurity in the crocodile industry has increased greatly, and tailoring a biosecurity strategy to the diverse operations that constitute the local crocodile industry will assist industry in various ways.

Biosecurity is a fundamental aspect of conventional animal production industries within Australia, especially for preventing the introduction of exotic diseases. Although risk factors from exotic diseases for the crocodile industry seem reasonably modest, relative to anticipated high risk situations with other animal industries, biosecurity measures aimed at safeguarding and improving domestic production against a range of known risk factors, need assessment.

In addition to ensuring high animal health standards generally, the ability to meet the increased skin quality standards now demanded by the international market requires changed procedures and increased biosecurity measures. NT research has already identified a range of pathogens responsible for the downgrading of skins, and some farms are

implementing biosecurity measures to control them.

Biosecurity measures within crocodile farming generally vary with different life stages (eggs, hatchlings, juveniles, adults) and contexts (incubators, community pens, single pens, breeding pens, breeding lagoons), and vary between farms, depending on the scales of operation, location, facilities in place and investment constraints.

CFANT and its members will cooperate fully with the current NTG review of biosecurity requirements in animal production undertaken by NTG through the Livestock Biosecurity Unit in the Department of Industry, Tourism, and Trade to refine biosecurity measures appropriate to the different farm and industry contexts.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
2.3	Engage with the current NTG review of biosecurity needs in animal production to refine biosecurity measures appropriate to the different crocodile farm and industry contexts.	CFANT	Short term	New biosecurity management plans adopted by all farms, resulting in a reduction of biosecurity issues.



Regulatory framework

Adapting some aspects of the regulatory framework could assist industry without compromising conservation goals.

The strict regulatory framework governing the crocodile industry generates conservation benefits. As the wild population in the NT recovered and the industry grew and matured, regulations once considered essential safeguards may no longer be necessary. There are sound reasons to ensure regulations are adapted to the current status of crocodiles, their management and industry; and that conservation funds are not being allocated to unnecessary procedures based on historical concerns. CFANT will work with the NTG and others during the 2024-33 Strategic Plan to identify and address these issues.

The degree to which the egg ranching program, which allocates conservation value to the wild population and ensures livelihood benefits to Aboriginal and non-Aboriginal landowners, can compete economically with hatchling production through captive breeding, is managed by individual farms. There are welfare considerations of relying on wild versus captive adults, high logistic costs and personnel safety issues with egg collection in both wild and captive environments. All are subject to tiers of regulation, but given the diversity of issues, will continue to be managed by individual farms.

One issue is that domestic product labels for trade in crocodile products between states and territories appear to have been relaxed for some products in some states, but not for others. Labels could differentiate between products made from Australian skins and imported products, which would assist the industry.

Compliance with CITES places a heavy economic burden on many regulatory authorities for small, legal individual crocodile products, with no conservation benefit. This issue has been raised by the European Union, and CFANT will work with other industry bodies to explore innovative opportunities to address it, in cooperation with NTG, states and the Australian CITES Management Authority.

The NT's crocodile management program requires that industry comply with the Australian Government's Code of Practice on the Humane Treatment of Wild and Farmed Australian Crocodiles, which is currently under review. CFANT may advance the development of a specific NT industry code, updated with recent husbandry research, as an interim measure if the review is prolonged.

The governance arrangements for crocodile farms in the NT need to be reviewed to ensure they are still fit for purpose. The current farm permit is non-transferrable and has no commercial value, which has suited small farms with limited investment. However, commercial licensing has been raised as an option but could be costly and potentially restrict opportunities for small operations and communities. Permits to harvest eggs need to be reviewed to ensure they are readily transferrable. CFANT will work with NTG to resolve potential regulatory anomalies.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
2.4	In liaison with NTG, identify any aspects of regulation that could be modernised in line with contemporary industry and conservation best practice.	CFANT	Ongoing	Regular communication between industry and regulators maintained, and proposals to modernise regulation developed.
2.5	Engage with the industry to explore opportunities to advocate to regulators to rationalise international regulatory requirements for small, manufactured crocodile products that have no conservation significance.	CFANT	Ongoing	Maintain dialogue with the Australian Government at the biennial Crocodile Forum, and advocate to make the forum annual.
2.6	Develop a guide to implement and interpret the 'Code of Practice for the Humane Treatment of Wild and Farmed Australian Crocodiles' in line with the Commonwealth Government's review of the code.	CFANT	Short term	Implementation guide developed by CFANT and provided to industry stakeholders.
2.7	Continue actions to amend the TPWC Act to enable more appropriate permitting for crocodile farms and improve ability to transfer landowner egg harvest permits.	NTG	Medium term	Farm permit system supports industry objectives and is compliant with CITES and related environmental regulation.

Ensure the egg harvest remains biologically and environmentally sustainable and meets industry and landowner needs

Independent regulation of the egg harvest by NTG, at arms-length from industry, is a significant program asset. The NTG system of allocating egg quotas needs to continue to optimise the permitted harvest and ensure equitable distribution of eggs to farms and benefits to landowners.

Industry relies heavily on the egg-ranching program, and about 70%+ of eggs are harvested from Aboriginal lands. Assessment of ranching programs around the world (Jenkins *et al.* 2006) confirms the extensive NT egg harvesting program is a safe and conservative form of consumptive use, which is not detrimental to the wild population.

Secure access to eggs from the ranching program is critical to the long-term viability and sustainability of the industry, as is reducing the costs of egg collection. The annual harvest ceiling for the next

5 years will be maintained at 90,000 viable eggs, which is well within sustainable limits based on population modelling and monitoring surveys⁵. This annual harvest ceiling has never been fulfilled, indicating that there is a sufficient buffer for industry to continue to expand without adversely affecting wild populations.

CFANT will collaborate with NTG to ensure equitable distribution of egg quotas, whilst optimising the harvest and benefits to landowners.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
2.8	Consult with the industry and provide consolidated recommendations to government to simplify rules relating to sustainable egg quotas in order to optimise the harvest and benefits to landowners while meeting national, international and community expectations.	CFANT	Medium term	A higher proportion of allowable egg harvest is agreed, leading to increased habitat protection by landholders with nesting habitat.

✓ Sustainable farm practices

The crocodile farming industry is committed to ensuring the industry is sustainable.

The crocodile farming industry is committed to reducing carbon emissions and its carbon footprint, by continuing to invest in research and broadly supporting green and renewable energy. This includes a focus on water efficiencies involving filtration, recycling and reuse in horticulture. A major contribution the industry makes to biodiversity

conservation is via the ranching program, which provides a direct commercial reward to landowners for maintaining their wetlands in a natural state, or rehabilitating wetlands damaged by grazing animals. Waste reduction will continue to be minimised through recycling, composting and finding uses and markets for new products.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
2.9	Prepare a report card describing the status of current practices being undertaken and developed, as a mechanism for assessing the status of sustainable farm practices over time.	CFANT	Medium term	Changes in adoption of sustainable farm practices assessed in report card format every five years.



6.3 Drive collaborative action

✔ Strengthening partnerships between NTG, state and Commonwealth agencies

Although wildlife management is a State/Territory responsibility, Commonwealth, State and Territory co-operation is essential to the industry, and specifically to managing domestic and international trade.

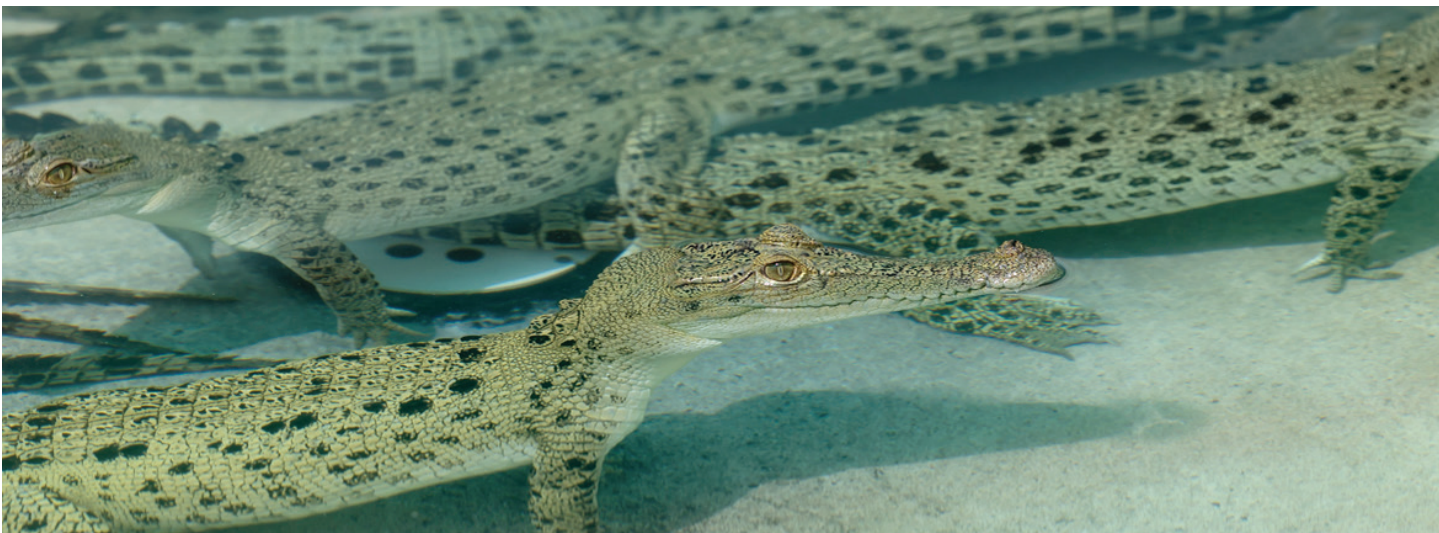
During the 2015-21 Strategic Plan, special interest groups opposed to farming animals lobbied the Australian and some state and territory governments and launched campaigns against the NT crocodile industry. This highlighted the need for all stakeholders to be better informed about the NT's crocodile management program and industry, and to understand the roles of different stakeholders.

Crocodile products are subject to state and territory legislation for domestic trade, including meat and leather products, and imports and exports are subject

to Australian Government regulations and must comply with CITES.

Reviewing compliance obligations for domestic trade in crocodile products, in cooperation with other states and the Australian Government, with a view to simplifying cosmetic regulation, would support industry growth in the NT and elsewhere.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
3.1	Continue engaging with NT and Australian Governments on industry challenges and opportunities and maintain strategic contact points.	CFANT	Ongoing	Regular engagement through the Crocodile Forum.
3.2	Consult with the industry and propose specific controls and regulation for domestic and international trade are simplified.	CFANT	Medium term	Industry proposals are presented to government for consideration.
3.3	Develop a showcase program in conjunction with the CSG Working Meeting in Darwin in April 2024.	CFANT	Short term	Showcase program delivered.





Ensuring active participation in policy reviews

As the NT industry largely depends on supplying an international market, the well-being of the industry is dependent on the consequences of policy changes overseas, where appropriate representation is typically lacking.

The policies governing the crocodile industry in the NT have been developed with input from stakeholders and have generally improved industry management. However, changes to policies at the national level can be more complicated. These changes may be influenced by lobbying from interest groups and industry representation may be limited due to geographical barriers. Consultations between the Australian and NT Governments allow for industry perspectives to be taken into account.

Internationally, the industry can also be impacted by changes in legislation or protocols, which can affect conservation and livelihoods. It is important for the industry, the NT and Australian Governments to remain vigilant and have representation to ensure that decision-makers are properly informed. CFANT will liaise with the NT and Australian Governments to develop a formal approach to assessing international risks and taking actions to counter them.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
3.4	Engage with NTG to establish how a whole of government approach to crocodiles can be improved, and how a forum can be created through which CFANT and various government agencies and stakeholders can meet regularly and/or as circumstances require.	CFANT	Ongoing	Proposal is presented to NTG for consideration
3.5	Liaise with the NTG and the industry to discuss development of a proactive public education program to describe the benefits of the industry.	CFANT	Ongoing	Proactive public education program is developed and implemented.



6.4 Promote industry value



Develop a CFANT communication strategy

A tailored communication and education strategy will ensure the general public and decision-makers are well educated about the NT program including the conservation, social and economic benefits that result and the accolades the program receives from international conservationists as a model program.

In the past, political constraints to crocodile industry development were based on conservation concerns, largely countered with scientific research results. This has been replaced more recently by social media campaigns questioning the ethics, morality and rights of people to use animals and confine them in farms. The campaigns largely ignore or denigrate the social, economic and biological benefits being achieved by the industry.

The effectiveness of these efforts to date is questionable, because the NT has achieved a formidable national and international reputation over the last 40 years for responsible management

of its crocodile resources. The NT crocodile industry remains ethically sound; science-based and sustainable; promotes conservation; is economically successful; and fosters culturally appropriate economic development opportunities for Aboriginal people that respects traditional knowledge and expertise.

CFANT will work with key industry and government stakeholders to explore options for an evidence-based communication and education strategy, with enhanced social media presence and increased engagement with mainstream media.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
4.1	Work with key industry and government stakeholders to explore options for developing and implementing an ongoing communication strategy, including developing and distributing education materials.	CFANT	Ongoing	Communication strategy developed and implementation commenced.



Environmentally friendly crocodile farm facility in Darwin.



Maintaining public awareness within the NT

Public education about crocodiles in the NT is now largely focussed on public safety, and the public safety challenges of living with crocodiles. Explaining the NTG’s incentive-driven conservation program and the role industry plays in creating incentives for conservation, needs to remain an integral part of local education programs.

Conservation of crocodiles is supported by people who value their intrinsic worth, while others see their social, biological and economic benefits as more important. This positive attitude towards crocodiles is crucial for conservation efforts, and a healthy wild population is important for the industry.

The NT Government’s Be Crocwise program educates the public in order to improve public safety. The NT Government’s foresight in developing this program can and should be an iconic matter of pride within the NT.

CFANT will liaise with NTG to explore options for promoting the NT Government’s successful incentive-driven conservation model, which is recognised internationally as an important conservation case study. CFANT will also examine options for developing more educational materials tailored for students, tourism operators and the general public.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
4.2	Strengthen implementation of the Be Crocwise program, including through consideration of how the industry can contribute to the program.	NTG	Ongoing	Industry is actively supporting implementation of the program.





Acknowledging the role of industry and conservation

Crocodile management programs are formulated in consultation with industry and other stakeholders. It is important to continue to acknowledge the interconnected relationship between the conservation program and the industry.

DEPWS is responsible for managing crocodiles in the NT. Every five years, DEPWS prepares the Saltwater Crocodile Wildlife Trade Management Plans to meet the requirements of the EPBC Act and obtain approval from the Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW). Consistent with the *Management Program for the Saltwater Crocodile (Crocodylus porosus) in the Northern Territory*, these plans aim to promote sustainable use, raise community awareness, monitor the wild population, assess the impact of harvesting and ensure compliance with animal welfare standards and codes. The ability to export crocodile skins and other products is based on these plans being approved.

The management plans enable the sustainable farming of crocodiles in the NT in compliance with CITES. The plans outline various responsibilities, including the issuance of permits for harvesting and farming, monitoring the wild population, the role of Aboriginal Land Councils, and annual reporting to DCCEEW. CITES-approved skin tags are provided by DCCEEW, following consultation with DEPWS.

The crocodile industry is a crucial stakeholder in the incentive-driven conservation program in the NT. It is the industry that provides the employment, egg payments, and other economic benefits to landowners, which drives conservation achievements. Additionally, the industry contributes to other NTG priorities such as economic development, international investment, research, economic development for Aboriginal people, and tourism.

CFANT will work with the NTG to ensure that the industry's contributions are acknowledged in the management plans and during the promotion of the conservation program's success. Similarly, the industry will recognise the critical role played by conservation management in achieving economic success. For the NTG and CFANT, investment in the industry and conservation of the wild population complement each other.

NO.	ACTION	LEAD	TIMEFRAME	MEASURES OF SUCCESS
4.3	Ensure crocodile management programs continue to be evidence-based in consultation with industry and other stakeholders.	NTG	Ongoing	Industry sign-off on revised Management Program and ongoing consultation included in its implementation.
4.4	Liaise with NTG to ensure industry contributions are acknowledged in management plans and at all other times the conservation success of the program is being promoted.	CFANT	Ongoing	Industry contributions are acknowledged.

07

Evaluation

An annual report on progress implementing the actions in this Strategic Plan will be developed by CFANT with input from relevant NTG agencies.



Photo credit: Tourism NT/Paul Thomsen

References and glossary

- 1 https://cites.org/sites/default/files/eng/prog/Livelihoods/case_studies/1.%20Australia_crocodiles_long_Aug2.pdf
 - 2 Webb, G.J.W., Manolis, C., Brien, M.L., Balaguera-Reina, S.A., Isberg, S. 2020. *Crocodylus porosus*. The IUCN Red List of Threatened Species 2021
 - 3 <https://onlinelibrary.wiley.com/doi/abs/10.1111/brv.12594>
 - 4 TERC (2020). Territory Economic Reconstruction Commission. Final Report https://ntrebound.nt.gov.au/_data/assets/pdf_file/0020/952301/terc-final-report.pdf
 - 5 Fukuda Y, Webb G, Edwards G, Saalfeld K, Whitehead P (2021). Harvesting predators: simulation of population recovery and controlled harvest of saltwater crocodiles *Crocodylus porosus*. *Wildlife Research* 48, 252–263. doi:10.1071/WR20033.

Fukuda Y, Webb G, Manolis C, Delaney R, Letnic M, Lindner G, Whitehead P (2011). Recovery of saltwater crocodiles following unregulated hunting in tidal rivers of the Northern Territory, Australia. *Journal of Wildlife Management* 75, 1253–1266. doi:10.1002/jwmg.191
- ATC (2023). Australian Trade Commission. “Why Australia needs Exports: The Economic Case for Exports” <https://www.business.unsw.edu.au/research-site/centreforappliedeconomicresearch-site/Documents/T.%20Harcourt%20-%20Why%20Australia%20Needs%20Exports.pdf>
- AFA (2017). AgriFutures Australia “Strategic R&D Plan 2017-2022; Research and Innovation for Rural Prosperity” <https://agrifutures.com.au/wp-content/uploads/2017/11/AgriFutures-Strategic-RD-Plan-DIGITAL-FINAL.pdf>
- ATIC (2023) Australian Trade and Investment Commission (2022). “Annual Report 2021-22”. <https://www.transparency.gov.au/annual-reports/australian-trade-and-investment-commission/reporting-year/2021-22>
- ABCS (2010). Australia’s Biodiversity Conservation Strategy 2010-2030 (2010). https://www.planning.vic.gov.au/_data/assets/pdf_file/0021/213717/Background-Documents-Commonwealth-Biodiversity-Conservation-Strategy-2010.pdf
- Caldwell, J. (2022). *World Trade in Crocodilian Skins 2018-2020*. UNDP-WCMC: Cambridge, UK
- CBD (Convention on Biological Diversity) (2023). <https://www.cbd.int/>
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) (2023). <https://cites.org>
- CTG (2020). Closing the Gap Report (<https://ctgreport.niaa.gov.au/>)
- DEPWS (Department of Environment, Parks and Water Security) (2021a). *Wildlife Trade Management Plan – Crocodile Farming in the NT 2021-2025*. NTG: Darwin.
- DEPWS (Department of Environment, Parks and Water Security) (2021b). *NT Saltwater crocodile Risk Management Framework 2021-2026*. NTG: Darwin.
- EPBC (Environment Protection and Biodiversity Conservation Act) (1999). <https://www.legislation.gov.au/Details/C2021C00182>
- EY (2016). *Economic Value of the Crocodile Farming Industry to the NT. Final Report*. Ernst and Young report to NT Dept. of Trade, Business and Innovation. https://business.nt.gov.au/_data/assets/pdf_file/0009/438921/nt-crocodile-industry-eca-final.pdf
- ICFA (International Crocodilian Farmers Association) (2023). <https://internationalcrocodilian.com/about/>
- ISA (2017). Innovation and Science Australia “Australia 2030: Prosperity through Innovation”. https://www.industry.gov.au/sites/default/files/May%202018/document/pdf/australia-2030-prosperity-through-innovation-full-report.pdf?acsf_files_redirect
- IPBES (2022). Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. <https://ipbes.net/sustainable-use-assessment>
- Jenkins, R.W.G., Jelden, D., Webb, G.J.W. and Manolis, S.C. (eds.) (2006). *Review of Crocodile Ranching Programmes*. Conducted for CITES by IUCN-SSC Crocodile Specialist Group. AC22 Inf. 2, www.cites.org/eng/com/AC/22/index.shtml.
- ONA (2023). Office of Northern Australia. “Our North, Our Future”. <http://infrastructure.gov.au/territories-regions-cities/regions/northern-australia>
- SDGS (2023). UN Sustainable Development Goals. <https://sdgs.un.org/goals>
- TPWC (Territory Parks and Wildlife Conservation Act) (1976). <https://legislation.nt.gov.au/en/Legislation/TERRITORY-PARKS-AND-WILDLIFE-CONSERVATION-ACT-1976>
- UNDRIP (2007). UN Declaration on the Rights of Indigenous People. <https://humanrights.gov.au/our-work/un-declaration-rights-indigenous-peoples-1>
- Webb, G.J.W., Manolis, C., Brien, M.L., Balaguera-Reina, S.A., Isberg, S. 2020. *Crocodylus porosus*. The IUCN Red List of Threatened Species 2021: e.T5668A3047556. <https://dx.doi.org/10.2305/IUCN.UK.2021-2.RLTS.T5668A3047556.en>

Acronyms

ACRONYM	FULL FORM
ASRAC	Arafura Swamp Rangers Aboriginal Corporation
BVL	Berrimah Veterinary Laboratory
CCR	Centre for Crocodile Research
CDU	Charles Darwin University
CFANT	Crocodile Farmers Association of the Northern Territory
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CSG	Crocodile Specialist Group
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DCCEEW	(Australian) Department of Climate Change, Energy, the Environment and Water
DEPWS	Department of Environment, Parks and Water Security
EPBC	(Australian) Environment Protection and Biosecurity Conservation Act 1999
ESA	(United States) Endangered Species Act 1973
ICFA	International Crocodilian Farmers Association
IPLC	Indigenous People and Local Communities
IUCN	International Union for Conservation of Nature
MSHR	Menzies School of Health Research
NT	Northern Territory
NTG	Northern Territory Government
PA	Parks Australia
PWCNT	Parks and Wildlife Commission of the NT
Strategic Plan	Crocodile Farming Industry Strategic Plan 2024-33
USA	United States of America
WMI	Wildlife Management International





