



Northern
Territory
Government



NORTHERN TERRITORY CROCODILE FARMING INDUSTRY

STRATEGIC PLAN 2015-21

An industry development strategy prepared jointly by the Crocodile Farmers Association of the Northern Territory and the Northern Territory Government.



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Foreword

I am pleased to present the Northern Territory Crocodile Farming Industry Strategic Plan 2015-21 on behalf of the Crocodile Farmers Association of the Northern Territory (CFANT). This is the first major strategic planning activity undertaken by the crocodiles farming industry in partnership with the Northern Territory Government.

The strategy provides a profile of the industry and outlines the issues, opportunities and future directions for sustainable industry growth within the NT's successful conservation based approach to crocodile management.

CFANT was established in 2009 to provide a collaborative forum for people directly involved in the NT crocodile farming industry, to discuss and assess issues constraining the ability of the industry to grow and sustain itself, economically and biologically. Since its infancy, CFANT has cooperated fully with the Northern Territory Government with whom it shares the vision of a responsible wildlife industry – one in which the commercial uses of wild populations are legal, sustainable and verifiable, and where landowners are beneficiaries.

CFANT members have decades of experience with crocodile farming and management and CFANT embraces the opportunity to provide the Northern Territory Government with a sounding board for policy issues on and around crocodiles, especially the possible impact of management interventions on industry growth and sustainability. The development of the Northern Territory Crocodile Farming Industry Strategic Plan 2015-21 is a logical step in securing government-private sector agreement on the future of the industry.

The crocodile farming industry in the NT provides diverse benefits to the community, the wildlife

it provides stewardship to, and the economy. It contributes to economic growth through investment, employment, production, research and development, tourism and promotion. Crocodile farming underpins the commercial incentives for landowners to tolerate crocodiles, which is fundamental to the value-added conservation strategy that Government has pursued to ensure crocodiles and their habitats are conserved.

Over the past ten years, crocodile farming has evolved from a small cottage industry into a significant economic contributor to the NT and Australian economies. We have become a well-regarded exporter of the highest quality skins, noted for the consistency of supply and quality of product. Our commitment as an industry is to continue to improve our farming practices to ensure that we remain a globally recognised, responsible industry player, demonstrating world best practice in crocodile farming techniques. Our ongoing commitment to innovation and scientific research is critical to retaining this international competitiveness.

As in any pioneering industry, new challenges lie ahead and it will be important to work together with government to overcome them. The Northern Territory Crocodile Farming Strategic Plan 2015-21 is a blueprint for working together to sustainably grow the industry, maintain competitiveness, increase economic benefits and to retain them in both the NT and Australia. As the industry becomes more secure, our contribution to local employment, investment and conservation will continue to expand.

Mick Burns
Chairman

Crocodile Farmers Association
of the Northern Territory





Overview

Since crocodile farming commenced in the NT in 1979, the industry has grown from the ground up. It has achieved enviable commercial success and international acclaim for its quality product, contribution to incentive-driven conservation and sustainable wildlife use, and establishment of research-based animal welfare standards that are now being adopted internationally.

This success has occurred over a period that has seen wild saltwater crocodile populations recover from severe depletion caused by uncontrolled hunting practices that left the species at the brink of extinction to the abundant, thriving and very visible crocodile resource inhabiting the NT's wetlands and waterways today. NT crocodiles attract visitors from all over the world and underpin economic development opportunities for Territorians, including some remote Aboriginal communities.

The saltwater crocodile has proven to be a natural renewable resource with enormous economic potential for the NT, in terms of export income, employment, technological innovation and economic development. As a large and potentially dangerous animal, it is the economic value of crocodiles to Territorians that makes a compelling case for incentive driven conservation. The crocodile farming industry is at the forefront of providing those commercial incentives through harvesting eggs from the wild as part of its commercial ranching program.

The crocodile farming industry in the NT is positioned for significant growth potential but this will depend on its ability to remain competitive in international markets. The Northern Territory Crocodile Farming Strategic Plan 2015-21 outlines a strategy for optimising opportunities for sustainable industry growth and creating an environment for investment.



Phases of crocodile management in the NT



ERADICATION | 1960s

“A pest species best eradicated”

- Demand for skins after 1945 made eradication economically attractive
- Saltwater crocodiles hunted almost to extinction
- 1975 - CITES enacted to regulate trade in wild species



CONSERVATION | 1971–1984

“Rebuilding depleted populations through protectionism”

- 1979 - Strictly controlled crocodile farming commenced
- 1979 - Problem crocodile program commenced
- 1979–83 - First three farms established
- 1981 - Parties of CITES agreed to ‘ranching’ resolution



SUSTAINABLE USE | 1985–2014

“Creating commercial incentives for people to tolerate abundant wild crocodiles”

- 1985 - CITES accreditation: ‘Ranching’ of wild eggs for commercial production
- 1987 - NT crocodile Management Program approved allowing export of first skins
- 1994 - CITES accreditation: Harvesting expanded to include hatchlings, juveniles and adults
- 2000s - Expanded utilisation program
- 2008 - Compliance problems culminated in threats to close down NT farming program
- 2009 - The Australian code of practice on the Humane Treatment of Wild and Farmed Australian Crocodiles effected
- 2011 - CFANT registered as incorporated association
- 2014 - NT Crocodile Industry Management Program: Perspectives from the Crocodile Farming Industry - CFANT



INDUSTRY DEVELOPMENT | 2015

“A natural renewable resource and potential building block for economic development, especially in remote communities”

- \$25m industry
- Global leaders in supply of high quality saltwater crocodile skins
- Internationally acclaimed success in sustainable wildlife use, incentive driven conservation and first world animal welfare
- Significant growth potential

Current status of the Industry

The term “crocodile farm” is used to describe any facility that breeds or grows crocodiles for commercial purposes. There are currently eight commercially operated crocodile farms in the NT.

The species farmed is almost exclusively the saltwater crocodile, *Crocodylus porosus*, which is recognised as the best crocodilian skin in the world for high quality fashion goods. Production of crocodile products, particularly raw skins and meat, is the mainstay of the farming industry.

Farmed crocodiles are produced mainly through captive breeding or the regulated sustainable harvesting of eggs from the wild. A limited number of hatchlings and juveniles can also be harvested from the wild. Wild eggs, hatchlings and juveniles have very low probabilities of surviving to adulthood.

The NT crocodile farming industry competes nationally and internationally for a share of the crocodile skin market. About 90 per cent of skins are exported,

with the remaining 10 per cent value added and manufactured into finished products. Skins produced in the NT are highly sought in Japan, France, and Italy, and the high-end fashion products made from them are imported into the USA.

The value of production of the NT crocodile farming industry in 2014-15 will be \$25 million, including \$19 million for crocodile skins alone. The industry creates employment at all stages from “Marsh to Market”, including in remote Indigenous communities, and has attracted considerable new local and international investment exceeding \$100 million over the last 10 years.

Australia accounts for 60 per cent of the global trade in saltwater crocodile skins, with about two thirds being grown and exported by the NT. Of the remaining one-third that is farmed interstate, the majority of crocodiles are sourced from the NT.

Reported commercial exports of *Crocodylus porosus* skins, 2002-2011

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Australia	10,423	14,744	12,741	20,409	16,123	21,314	28,626	26,990	30,518	32,117
Indonesia	3,277	2,732	3,968	4,714	3,825	5,151	5,718	5,967	4,302	7,934
Malaysia	662	618	1,450	1,058	1,684	1,273	1,043	587	861	436
Papua New Guinea	9,332	8,000	11,043	10,222	10,208	12,675	12,237	9,900	15,787	9,432
Philippines	0	0	0	0	0	34	20	892	0	200
Singapore	584	470	693	538	1,712	1,653	1,877	0	70	0
Thailand	0	0	300	500	600	3,149	2,560	1,229	1,704	3,310
Total	24,278	26,564	30,728	37,441	34,152	45,249	52,081	45,565	53,242	53,429

Source: World Trade in Crocodilian Skins 2009-2011, United Nations Environment Programme World Conservation Monitoring Centre, September 2013

The NT Crocodile Farming Industry has also invested significantly in tourism through the establishment of a number of multi-million dollar crocodile-based tourism attractions. These attractions provide unique visitor experiences, support to the NT’s positioning as a nature-based tourism destination and highlight our wildlife conservation and incentive driven conservation successes. They also play a vital role in the education of visitors around crocodile safety and awareness, as well as attracting significant attention from visiting domestic and international media. Internationally, documentaries about the NT’s crocodile management and farming successes are circulating continually.

A sustainable crocodile farming industry that conserves its natural resource will add value to the Top End visitor experience for many years to come.

The future of crocodile farming

CFANT believes the NT crocodile farming industry can double in value over the next five years to almost \$50 million per year as a result of industry expansion and production efficiencies, while continuing with world's best practice animal welfare and wildlife management.

Production of crocodile products is the mainstay of the farming industry. Industry participants have invested significantly in crocodile farming infrastructure and research to increase their capacity, skin quality and competitiveness. Skin exports are increasing and are predicted to rise sharply in future years. Future growth will be determined by the industry's responsiveness to the changing demands of high-end fashion markets.

Sustainable industry growth can also be supported by pursuing related commercial, research and management opportunities.

Optimising commercial opportunities

There is potential to increase the value of the crocodile farming industry through the commercialisation of by-products and by capturing more of the value chain through further processing and/or manufacture into finished products.

Crocodile skins are usually sold raw and tanned overseas. With luxury goods companies prepared to invest in securing reliable supplies of crocodile skins, there would seem to be an opportunity to capture more of the value from processing skins in the NT.

While some crocodile meat is recovered and commercialised to supply increasing demand, production is dictated by demand for skins and, for this reason, can be irregular. Other by-products in demand internationally are generally discarded. Crocodile blood, oil, bile and gall bladder have been commercialised for medicinal uses in Asia and, to a lesser extent, in Mexico and South America and African countries.

World commercial exports of crocodile by-products

By-product	Average annual export volume (2000-2004)	Major exporting country (in order of significant volume)	Major importing country (in order of significant volume)
Teeth	64,505	Singapore, Papua New Guinea, Malaysia, Australia	Australia, Singapore, Papua New Guinea, Indonesia
Soup	8,472 cans	Thailand	Hong Kong, China
Tails	4,941	Singapore, Zambia	USA, Mexico, China
Skulls	1,303	Madagascar, South Africa	Italy, Netherland
Feet	306	Australia	Thailand
Eggs	51	Thailand	Netherland
Bones	24 kg	Thailand	Korea
Heads	16	Mauritius, Australia, Zimbabwe	USA, France
Skeletons	1	Australia, Thailand	USA, Korea

A close-up photograph of crocodile skins. The left side shows a black crocodile skin with a distinct, grid-like scale pattern. The right side shows a vibrant red crocodile skin with a more irregular, bumpy scale pattern. The lighting is dramatic, highlighting the texture and sheen of the scales.

*“Northern
Australia crocodile
farming industry -
leading the world
in the reliable
production of
the highest
quality saltwater
crocodile skins”*



Research and Innovation - a CFANT and Government partnership

Apart from being engaged in the husbanding of crocodiles for consumptive use, some NT crocodile farms earn income from crocodile-based tourism and from national and international research and consulting services on crocodiles and the conservation, management and sustainable use of wildlife.

The NT crocodile farming industry invests in scientific research to improve its farming practices and to strengthen its competitiveness. The industry is now the biggest investors in farm research today while continuing to partner with Government and other public research providers. Amongst these the role of the Department of Primary Industries and Fisheries has been critical to improved production efficiency.

Skin quality has become the major adaptive management issue during the last ten years and has been the source of significant advances through industry-based research and development. As producers move towards more intensive production, the issues of improved animal welfare, handling and nutrition management are key research targets.

The NT has world recognised crocodile research skills which have underpinned advances in conservation, management, sustainable use and farm efficiency. These skills are recognised internationally and there may be further opportunities to commercialise this research and development expertise in international markets.





Case study: Berrimah Veterinary Laboratory and the Crocodile Industry

Since the early inception of the crocodile farming industry in the NT there has been a close partnership between the Northern Territory Government's Berrimah Veterinary Laboratory (BVL) and the crocodile farmers.

In the early days, the major problems were related to the environment in which the crocodiles were housed. Early attempts at farming tried to emulate the natural environment in which crocodiles lived without fully considering the implications of high stocking densities relative to the wild. Parasitic diseases and bacterial infections were common and there were substantial mortalities. BVL were closely involved with pioneering disease diagnosis on the farms and provided advice on control measures, predominantly through the reduction of stress-related problems resulting from intensive farming.

Following a diagnosis of substantial losses in hatchlings associated with a Chlamydia infection, a research project funded by the Rural Industries Research and Development Corporation (RIRDC) was carried out to investigate the epidemiology of this infection. The successful completion of this project indicated other disease agents were implicated and further funding from RIRDC enabled the laboratory to develop the technology to isolate viruses from crocodiles. This project resulted in the first isolation of herpesvirus and adenovirus from crocodiles and the description of four disease syndromes associated with these viruses.

As skin quality issues increased in importance in the market place, BVL partnered with CFANT members and tanneries to document and describe defects associated with the downgrading of skins and to follow those defects through the tanning process to the final finished leather. The application of a more science-based approach to grading has assisted farms in their quest to improve skin quality.

BVL continues to provide the crocodile farms with an early disease diagnosis service and to assist researchers with laboratory testing related to specific research. BVL also plays a key role in assessing welfare issues and best practice.

Internationally, with the assistance of CFANT, BVL staff now play a key scientific role in the Veterinary Group of the IUCN-SSC Crocodile Specialist Group, which ensures the NT is at the cutting edge of husbandry and disease issues, and is advancing global knowledge about them.





Management expertise - an international leader and influencer

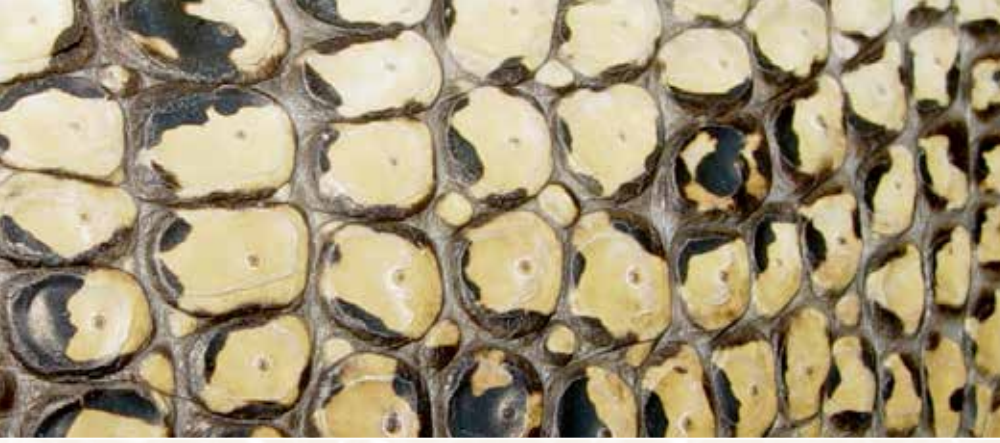
The NT has the advantage of world recognised research, development, conservation, management and farming skills and is active internationally in global issues impacting on conservation and trade. Through the IUCN-SSC Crocodile Specialist Group, the NT is at the crossroads of information exchange on crocodylians around the world.

The incentive-driven conservation program applied to crocodiles in the NT has been a major conservation success story. Predators are the most difficult animals to conserve, because as they increase in abundance, so too does their negative impact on people through human-crocodile conflict, and public and political intolerance mounts.

The NT management program has avoided that intolerance with economic incentives derived largely through farming. The innovative leadership demonstrated by the NT is nationally and internationally recognised.

There are clearly other animals in the NT, especially in remote areas, that may be equally suited to incentive-driven conservation models that link their ongoing conservation to economic benefits and opportunities in remote communities. Just as crocodile farming technologies needed to be developed in the NT, as a pioneering industry, so the development of similar farming initiatives with other species has considerable potential.





Issues and actions

The Northern Territory Government recognises the important contribution of the crocodile farming industry to the NT, particularly to economic and social development and the continued success of crocodile conservation as a result of sustainable commercial use.

For this reason, the Northern Territory Government is committed to facilitating the sustainable growth of

the crocodile farming industry and is partnering with CFANT to identify and address key issues that impact on the economic viability of the industry to ensure it is appropriately supported into the future. These issues are:

- **Regulation**
- **Ranching**
- **Performance**
- **Capacity**

Issue 1 Regulation

The Northern Territory Government is responsible for the management of saltwater crocodiles in the NT within a national legislative framework that satisfies Australia's obligations as a signatory to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

International, national and state/territory regulatory requirements place a competitive burden on the expanding NT crocodile farming industry.

The Northern Territory Government Saltwater Crocodile Management Program

The Northern Territory Government has adopted a policy of conserving crocodiles by allowing their managed commercial use. The Northern Territory crocodile farming industry plays a pivotal role in ensuring the success or otherwise of this policy because it is the link between landholders and the market for crocodile products.

Since its inception in 1987, the Northern Territory Government Saltwater Crocodile Management Program has been periodically reviewed and revised around its key conservation objectives of facilitating sustainable use, promoting community awareness, ensuring humane treatment and monitoring harvest impact.

With the rapid shift in saltwater crocodile populations from near extinction to near carrying capacity and modest use as a sustainable commercial resource, conservation continues to be the overarching priority. However, increasingly attention must focus on its symbiotic relationship with industry. It is important that the management program keeps pace with the status of the wild crocodile population, the current state of development of the industry and the Northern Territory Government's broader economic development goals.

Maintaining a demonstrably successful conservation program is fundamental to the crocodile farming industry as it underpins, not just the ability to harvest wild eggs, but also access to key export markets in the USA. For this reason, the industry has a legitimate interest in issues arising from crocodile management, whether real or perceived, including enforcement, community safety and animal welfare.

Action 1

A strategic partnership between the Northern Territory Government and CFANT will take an evidence-based approach to reviewing the efficiency and effectiveness of the Northern Territory Government Saltwater Crocodile Management Program within a framework of incentive-driven conservation and sustainable industry growth.



Supporting development of industry capability and capacity

The management of saltwater crocodiles in the NT has evolved from a situation where most activities involving wild crocodiles were undertaken by Government or by private contractors to Government, to the situation today where the biggest drivers and investors in research and development related to crocodiles is now the crocodile farming industry.

Building on precedents for outsourcing core functions in the crocodile management program and helping to establish a bigger role for competitive businesses in crocodile management tasks will diversify the capability and capacity of the industry, promote increased private sector investment in new and innovative businesses and contribute directly to economic growth.

Action 2

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.

Regulatory certainty to support commercial investment

Scientific research, new technologies and industry practices have and will continue to improve the crocodile farming industry's ability to sustainably and efficiently expand production of high quality saltwater crocodile skins. A regulatory framework that is flexible enough to keep pace with this evolving operating environment could help attract investment in the development of the crocodile farming industry.

The crocodile farming industry has identified opportunities to clarify, simplify and rationalise the legal and regulatory framework to help improve certainty and reduce related costs, including the following:

- Commercial licencing of crocodile farms could provide certainty, transferability and accountability appropriate to multi-million dollar capital intensive enterprises and remove the existing regulatory burden of complying with multiple permit provisions contained in the Territory Parks and Wildlife Conservation Act.
- Improved cooperation and alignment between the States and Territories could streamline regulatory requirements, strengthen enforcement and reduce unnecessary compliance. For example, relaxing permit requirements for interstate trade in inconsequential products, such as crocodile teeth and inconsequential leather products, would reduce the regulatory cost without comprising conservation.
- Development of an NT industry guide to implementing and interpreting the Code of Practice on the Humane Treatment of Wild and Farmed Australian Crocodiles, while continuing to encourage research into new and innovative husbandry and housing practices. This would draw on scientific research, technological advances and industry best practice to clarify definitional issues and other inconsistencies and ambiguities, providing transparency, accountability and objective assessment of animal welfare and environmental outcomes.



Case study: Developing enterprises and industry capability

In the early 1980s, the Northern Territory Government implemented an “incentive-driven conservation” strategy to inform the public of the environmental and economic benefits of crocodile conservation. Positive incentives were created through commercial activity in tourism, crocodile farming and ranching, and negative incentives countered by an active “problem crocodile” program. At that time, the Northern Territory Government, through contractors, began experimenting with a wild harvest of saltwater crocodile eggs to boost egg production through captive breeding on farms.

The key architects of this integrated program, who played a leading role in basic research, surveys, and monitoring, farm research, ranching research, implementing the egg harvesting program and involving Indigenous landowners were Wildlife Management International (WMI), consultants to the Northern Territory Government on crocodile conservation, management, and research from 1978 to 1998.

Later privatisation of the egg harvest program, and of other management tasks, resulted in developing considerable expertise in the private sector which is now embedded across the crocodile farming industry in various capacities. Early contractors have grown to become diversified crocodile farming companies with over 30 years of experience in the sustainable use of crocodiles and offering a range of services in addition to the production of crocodile skins. WMI, for example, now chairs the IUCN-SSC Crocodile Specialist Group, with over 500 members in 63 countries, and host its headquarters in Darwin.



- In cooperation with the Commonwealth Government, the NT could play a more proactive role in rationalising regulatory requirements that have no conservation significance, particularly where the Commonwealth Government has adopted stricter domestic measures than are required by CITES.
- The Australian Standard for Hygienic Production of Crocodile Meat for Human Consumption requires procedures that constrain the type of products that can be removed from the crocodile body, which could be reviewed to assist in increasing the number of by-products and the state in which they can be marketed.

Action 3

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.

Issue 2 Ranching

The crocodile farming industry depends on the commercial harvesting of eggs from the wild, known as ranching. Restrictions on securing a sufficient supply of eggs are potentially a major impediment to business growth.

More secure access to eggs from the ranching program is critical to industry sustainability. To meet farming requirements, egg supply from ranching must be adequate in number, reliable and timely.

Access to stock

The Management Program for the Saltwater Crocodile in the Northern Territory 2015-2021 provides for an increased harvest ceiling of 100,000 eggs. This effectively allows for a potential 40 per cent increase in the harvest over the next five years.

A theoretical model, still under development, suggests this level of harvest, and perhaps up to 150,000 eggs, would not produce any population decline, but the ultimate safeguard lies in the wild population monitoring program which provides a measure of population status over time.

Action 4

Continue to fine-tune the egg ceiling in line with published estimates of sustainable harvest rates and explore additional and alternate areas for collection.





Reliable supply of stock

The most important conservation element of the egg harvest program is the payments by farms to landholders. This drives the incentive-driven conservation program, and without it, landowner resistance to having large and viable wild populations of crocodiles can be expected to increase.

The security of the crocodile farming industry, based on egg ranching, will ultimately depend on landowner and farming interests striking sustainable agreements that are long-term rather than short-term. There are also opportunities for greater Indigenous participation in the harvest, incubation and rearing of crocodiles, providing economic benefits to Indigenous communities and lowering the risks of mortality for crocodile farmers.

Action 5

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.

Issue 3 Performance

The NT crocodile farming industry competes nationally and internationally for a share of the global crocodile skin market.

Saltwater crocodiles are widely distributed from India and Sri Lanka in the northeast, across Southeast Asia to the Philippines in the east, and down through Malaysia, Indonesia, Papua New Guinea and various Pacific islands to Australia in the south.

Saltwater crocodiles are produced through captive breeding in Myanmar, Thailand, Vietnam, Philippines, Singapore, and Malaysia, and through a combination of captive breeding and ranching in Papua New Guinea, Indonesia and Australia. Although saltwater crocodiles are farmed in many countries, only those from Papua New Guinea, Indonesia and Australia, in raw or manufactured forms, have the conservation credentials to be imported into the USA.

Profitability

The NT crocodile farming industry is capital intensive and its profitability is largely determined by the export price of skins and the proportion of skins sold as first grade.

The industry experiences high costs of production relative to its competitors in other Australian states and overseas, particularly in the significantly higher costs of labour, food, services and construction. Relative to its international competitors, the industry also faces additional costs associated with a relatively cooler climate for growing and more stringent corporate social responsibilities involving animal welfare and work health and safety.

The industry has the potential to be impacted by:

- increased international competition in saltwater crocodiles as the conservation credentials of competing countries improve;
- the ongoing efforts by producers of other crocodile species with good conservation credentials, particularly American alligators, Nile crocodiles and Thailand's Siamese crocodiles, to replace saltwater crocodiles in



the world market place; and

- the substitution in some markets (eg USA) of Australian skins, with high conservation credentials, with skins from other countries where conservation credentials are not yet established.

The industry is also affected by inconsistencies in standards applying to imported products as compared to domestic products. One example relates to the use of antibiotics in the treatment of disease in crocodiles. Strict Australian antibiotic usage rules means that meat from Australian farmed crocodiles treated with antibiotics can never be consumed, whereas lower standards may apply for imported crocodile meat from international competitors.

Action 6

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.

Productivity

The NT crocodile farming industry is dependent on research and development to maintain its competitiveness.

Farming techniques and approaches used to grow crocodiles to marketable size are basically similar across NT farms, although innovative research into new farm technologies and the finer points of improving skin quality varies from farm to farm.

The NT is at the southernmost extreme of the range of saltwater crocodiles and relative to farms at or near the equator, has to contend with a winter causing relatively slow growth for three to five months of the year. This extends the growing period by an additional year. Industry is investing in innovative ways of overcoming this problem through use of solar energy and more efficient feeding sheds and water circulation systems.

There are a series of other research initiatives being pursued on farms, by industry, to improve skin quality and growth rates, and to reduce mortality rates.

Action 7

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.

Investment

Crocodile farms are investing in producing the best skins in the world, while still increasing the volume of skins produced.

The NT crocodile farming industry attracts considerable local and international investment, as the industry continues to invest in the development of best practice farming techniques and luxury good companies invest in securing reliable supplies of crocodile skins and optimising their global supply chains.

Further investment in product and market diversification, including value adding opportunities, will improve competitiveness and grow the industry.

Action 8

Invest in strategic industry-driven partnerships that focus on issues related to the industry's competitiveness, productivity and profitability.

Workforce Development

The NT crocodile farming industry is impacted by the tight labour market conditions that characterise the NT and result in broad skills and labour shortages that can be particularly exacerbated by the onset of major projects.

The Northern Territory Government is committed to building a skilled and dynamic Territory workforce and can specifically assist the industry with workforce planning and development tools, programs to support Indigenous workforce participation and targeted skilled migration sponsorship.

For example, NT Worksafe has partnered with the crocodile industry to produce a video on health and safety in the supply chain, which supports industry workforce development and showcases the industry to a national and international audience as part of the Safe Work Australia Virtual Seminar Series.

Action 9

Support the employment needs of crocodile farming businesses through workforce planning, development and training programs.

Indigenous Opportunity

Opportunities for landholders to gain from harvesting larger wild crocodiles and conducting a ranching and rearing program with juveniles, will set the stage for a broader, innovative, landowner-based system, aimed at generating further commercial opportunities for landowners. The ability to sell juveniles to farms may open new opportunities for landholders who cannot reach the full potential of their egg harvest.

However, long term goals of increased value-adding on remote communities through egg collection, incubation, hatchling raising and eventually juvenile raising, will require considerable assistance, training and industry and community investment in the short-term, heading steadily towards systems that can be operated by local people, as viable local industries, with costs and benefits internalised.

There are also opportunities to extend the lessons learnt in the sustainable use of crocodiles to other species. Given that a diversity of NT wildlife has potential for sustainable use programs, particularly on Aboriginal lands where for a variety of reasons conventional agriculture has not proved viable, the structure put in place to manage crocodiles, with three decades of experience, may provide a solid foundation for extending the lessons learned to other species – particularly in the context of economic development on remote Aboriginal lands.

Action 10

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.



Case study: Value-adding in remote communities

Crocodile farming is creating jobs in the Indigenous community of Ramingining with locals collecting, hatching and raising crocodiles before selling them to crocodile farms.

The “Crocs in a Box” project, now in its fourth year, has successfully installed two crocodile raising facilities at Ramingining and consideration is being given to rolling the project out to another eight communities. The object is not simply to produce hatchlings on remote communities, but rather to rear the hatchlings on site, for the first eight months to a size of up to 80 centimetres, so larger animals can be sold to farms.

The project is designed so that the local community starts the farming process, but the crocodile farm bears the full cost of the facility and guarantees to buy the crocodiles, removing the economic risk. So far, local ranger groups have operated the trials, with the payments for crocodiles going to the community.

It is hoped that in years to come, individual community members will take on the remote farming, either as a business or a ‘pay as you go’ employment system. It is envisaged that local people, once trained, could register their interest to work on any particular day and receive payment for their work on that very same day, creating a culture of work.



Case study: NT instrumental to CITES success

The NT has been instrumental in Australia's successful track record with the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES), having instigated and prepared submissions as the basis for Australia's applications to CITES.

In 1985, Australia was successful in having its population of saltwater crocodiles transferred from Appendix I to Appendix II of CITES specifically for ranching so that farms could export the skins produced from the harvested eggs they bought from landowners. The CITES Parties gave unanimous support to the Australian Government proposal which noted:

*"The World Conservation Strategy and the Australian Conservation Strategy both support the concept that sustained yield harvesting of wildlife is a positive conservation goal. In the case of *C. porosus*, which is a large and potentially dangerous animal, the argument for having a sound management program, which puts value on the animals and their habitats in the eyes of the community, is even more compelling."* 'Ref: Australian proposal to CITES CoP5 Buenos Aires 1985.'

In 1994, the CITES Parties again provided unanimous international support for Australia to obtain an unrestricted Appendix II CITES listing to allow landowners with crocodiles, but no nesting habitat, to also receive commercial benefits from crocodiles through a wild harvest. The Australian Government proposal noted:

"Harvests of hatchlings, juveniles and adults are specifically included in the management program to increase benefits flowing to landowners Acceptance of this program will allow direct hunting to be incorporated into the overall annual harvest. This will be critical to the cost-effective management of problem animals and the extension of conservation-management programs to landowners in remote areas, particularly Aboriginals in Arnhem Land ... the central aim is to ensure sustainable use for the prime benefit of Aboriginal and non-Aboriginal landowners."

'Ref: Australian proposal to CITES CoP9 Fort Lauderdale 1994.'

From 2004 to 2013, CFANT members were central players in the CITES personal effects resolutions which allows visitors to carry up to four crocodile products without needing CITES permits – a major breakthrough saving the NT industry and governments considerable expense in cosmetic regulations.

Issue 4 Capacity

The future management of saltwater crocodiles and the development and growth of the crocodile farming industry will be determined by the combined capability and capacity of business, industry, Government and Indigenous interests to continue to innovate and respond to market-driven opportunities and challenges.

The NT is regarded as a global leader in crocodile conservation, science-based animal welfare, and industry innovation. This presents opportunities to export expertise through consultancy, management and education services.

A more coordinated approach to crocodile management and industry development could see the NT play a greater role improving the understanding of sustainable use at the national level, influencing the Commonwealth and State governments regarding the role and value of crocodile conservation. The NT, through the Commonwealth or other parties, could contribute to processes that influence CITES considerations, in areas where the Parties are expected to allocate significant resources to attaining compliance to regulation where no conservation values are realised.

Action 11

A central point of contact in the Northern Territory Government 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 on the interests of the NT.





Table of actions

Issue		Action	Who
Regulation	1	A strategic partnership between the Northern Territory Government 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.	NT Government and CFANT
	2	Consider opportunities for competitive businesses to participate in the future management of saltwater crocodiles in instances where there are mutual benefits for Government and industry.	NT Government
	3	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	NT Government and CFANT
Ranching	4	Continue to fine-tune the egg ceiling in line with published estimates of sustainable harvest rates and explore additional and alternate areas for collection.	NT Government
	5	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.	NT Government and CFANT
Performance	6	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.	NT Government
	7	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.	NT Government
	8	Invest in strategic industry-driven partnerships that focus on issues related to the industry's competitiveness, productivity and profitability.	NT Government and CFANT
	9	Support the employment needs of crocodile farming businesses through workforce planning, development and training programs.	NT Government and CFANT
	10	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.	CFANT
Capacity	11	A central point of contact in the Northern Territory Government 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 on the interests of the NT.	NT Government



Crocodile Farmers Association of the Northern Territory
C/O Lagoon Crocodile Farm
PO Box 1449
Berrimah NT 0828

www.dob.nt.gov.au

Images courtesy of Tourism NT and Wildlife Management International.