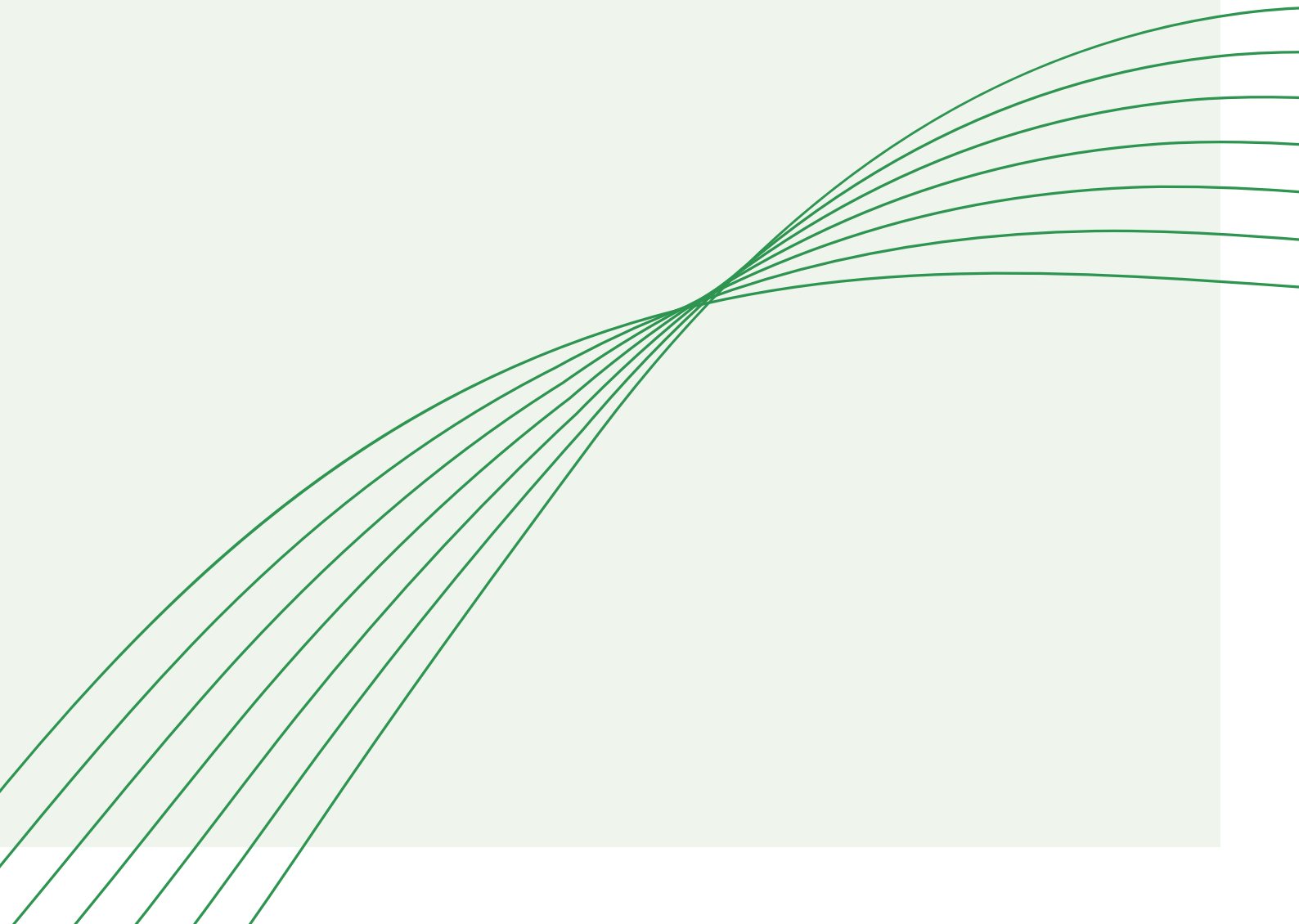
INTERNATIONAL CROCODILIAN FARMERS ASSOCIATION

ACTIVITY AND SUSTAINABILITY REPORT




INTERNATIONAL CROCODILIAN FARMERS ASSOCIATION
ICFA

SUMMARY

FOREWORD

Crocodilians, which appeared 200 million years ago and survived the extinction of the dinosaurs, almost disappeared from the planet in the 1970s. Human pressures on the planet, which we now see affecting the climate and biodiversity, had brought this extraordinary animal to a critical state worldwide.

Crocodile farming was developed in response to this dire situation. Fifty years later, the economic model created at that time has proven to be both effective and beneficial.

To preserve and promote this valuable contribution, crocodile farmers and their partners in the exotic leather industry formed the ICFA (International Crocodilian Farmers Association) in 2016.

Its first mission was to establish best farming practices to ensure sustainability. The implementation of a recognized standard now enables farms that meet the criteria to become certified (a requirement for membership), ensuring the industry is supported by a process verified by independent third parties.

This CSR Report supports ICFA's second mission: to highlight members' contributions to sustainable development goals and their achievements. In addition to exemplary farming practices, this includes efforts in wildlife conservation, wetland preservation, and local development.

We are proud yet humble in presenting the results we've achieved, with the hope that this report will contribute positively to the discussions surrounding the use of wild animals. As acknowledged by IUCN experts, our dedication and hard work have established a strong connection between sustainable development and crocodilian farming. It is our duty to share and promote this accomplishment.

Part 1

General aspects

ICFA presentation

Purpose and history

Originating in the 1970s, crocodile farming emerged with the backing of the International Union for Conservation of Nature (IUCN) and its endangered species conservation experts. This initiative was established to address the increasing demand for crocodile products, catering to both local food systems and the luxury goods sector. Recognizing the risks to various species listed on the IUCN Red List, industry stakeholders collaborated to develop a system that **balances the preservation of wild habitats and species with local economic growth**. Consequently, crocodile farms were established to safeguard wild populations, encourage local communities to protect these animals, and fulfill consumer demands.

Over the past five decades, numerous farms have progressively adopted programs aimed at enhancing their practices for economic, environmental, and social benefits. These improvements have been focused on ensuring animal health and the quality of farm products, while also reducing resource consumption and maximizing positive impacts on their local environments.

In the mid-2010s, these pioneering farms unified their efforts and formalized their policies, establishing enforceable standards for all stakeholders involved. Supported by the leather industry, which utilizes the skins, **the International Crocodile Farmers Association (ICFA) was officially established in 2016, marking a significant milestone in the industry's development.**

Members and geographic localization

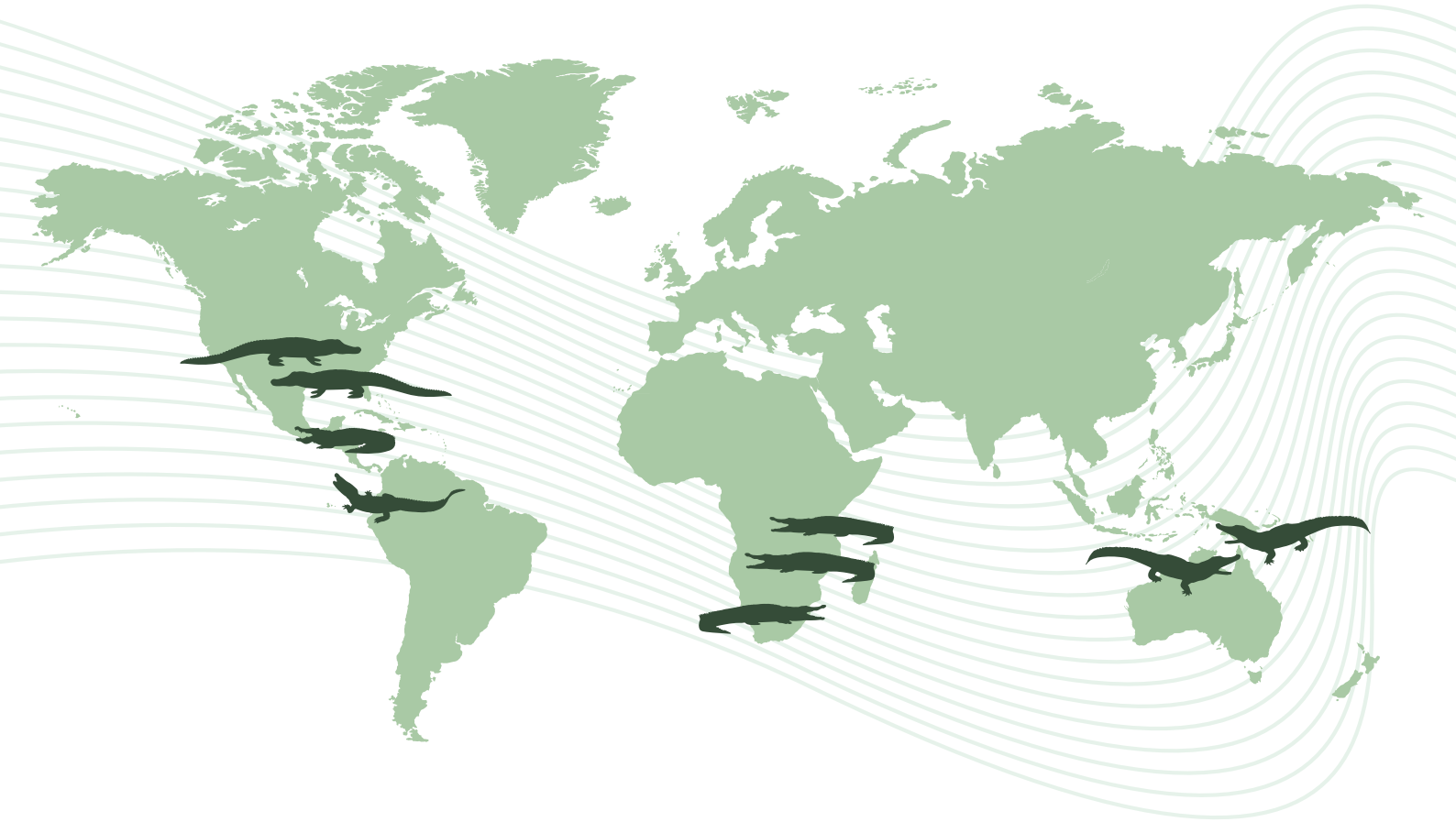
From its inception, the International Crocodile Farmers Association (ICFA) has been **a collaborative effort, uniting key stakeholders in the crocodile skin industry**. While maintaining compliance with health and other regulatory standards for supplying meat to local markets, stakeholders utilizing the skins have prioritized educating consumers about the positive impacts of their activities.

The ICFA comprises representatives from every stage of production, including, but not limited to, **breeders**, **tanners**, and **brands** that manufacture products from crocodile skins, such as leather goods, watch straps, and footwear.

As indicated by its name, farmers are central to the association. The sustainability of the end products relies heavily on the exemplary practices of these farmers, who constitute over half of the ICFA's membership.

48
ICFA members around the world

31
member farms



100%
local or commercial meat markets

The association oversees the farming of three primary crocodile species, each located on different continents:

- **The saltwater crocodile, Porosus,** is raised in Oceania, specifically in Australia's northern territories and Papua.
- **The African Niloticus** is bred in southern Africa, notably in the Republic of South Africa, Zimbabwe, and Malawi.
- **The American alligator** is farmed in the United States, predominantly in Louisiana, Georgia, and Texas.

There are also considerations for expanding membership to include farms in Central and South America, such as those raising **Caiman** in Colombia and **Moreletti** in Mexico.
A critical aspect of these **farms is their location in regions inhabited by wild populations of these species**, essential for the system's effectiveness in conservation efforts.

Our vision of the key issues and debates of the industry

Livestock farming, like all human activities, is currently at the center of significant debate. These discussions are driven by broader trends such as environmental concerns in the face of global warming and biodiversity loss, as well as societal questions about humanity's impact on the planet. The issue of animal welfare is particularly pertinent to livestock farming.
In the realm of crocodile farming, three major themes dominate the discussions among the International Crocodile Farmers Association (ICFA) and its stakeholders:

Acceptability

Industries today face scrutiny regarding their impact. For crocodile farming, the question is whether it is ethical to breed wild animals for luxury products for an affluent global market. The ICFA was established partly to address this concern, aiming to show that crocodile farming can be conducted in a manner that **respects both the animals and animal welfare standards**. The ICFA engages in these debates by providing concrete evaluation elements and challenges the dogmatic questioning of human activities that ignores the complexities of ecosystem interactions and the food pyramid.

Sustainability

The ICFA and its members are acutely aware of the importance of **preserving natural resources in their practices**. Originally, crocodile farms emerged in the 1970s as a response to the risk of extinction of certain wild species. When operated under clear principles, crocodile farming can significantly contribute to addressing modern environmental issues.
The primary goal of the ICFA is to ensure the sustainability of its members' activities and their products, as demonstrated in this report.

Traceability

The ICFA ensures that member farms adhere to the highest farming standards through a certification process. This process involves the **adoption of standards**, compliance with which is guaranteed by **certification**. Once farms are operating sustainably, it is crucial to be able to identify products originating from these farms. The ICFA aims to be recognized as a **benchmark label**, guaranteeing the sustainability of farming practices and their products.

This traceability also extends to meat consumption, where sanitary regulations govern product quality and control. National regulations cover both local consumption and exports. Meat from crocodilians raised on ICFA farms is sold entirely in local markets, used in catering and food products like spring rolls and jerky in places such as Australia. It also provides an important source of protein for underprivileged communities who depend on it for their nutrition

Regarding skin trade, the international **CITES** (Convention on International Trade in Endangered Species of Wild Fauna and Flora) regime, established in the 1970s, regulates the trade of products from protected species. Each exported hide is required to have a "CITES tag," which remains attached throughout the transformation process, ensuring the legality of the trade and that the exploitation of the animal does not negatively impact the survival of its species. This is especially relevant for wild animals collected in the wild, as farmed animals do not impact wild stocks by definition.

In summary, products from animals raised on ICFA farms benefit from the traceability provided by CITES for skins and meat consumption traceability systems.

CITES and the crocodilians trade

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) was established following a resolution passed by the United Nations General Assembly in 1963. It came into effect in 1975 and now has over 180 member countries, **regulating or even banning the trade of endangered species. Today, it covers nearly 40,000 species.** Crocodiles that are no longer at risk of extinction are permitted for trade, with each exported product bearing a CITES label to ensure it comes from legally sourced animals and complies with all trade regulations.

Standards and certification

The primary mission of the International Crocodile Farmers Association (ICFA) was to establish and disseminate optimal practices for crocodilian breeding, underpinned by a strong scientific basis. This led to the conception of a standard, which, by virtue of its rigorous development process and adherence to specific rules and procedures, ensures a high level of sustainability when followed correctly. An integral component of this standardization was the decision to involve an independent third party to conduct certification of the farms. This certification verifies that the farm practices align with the established standards, thus completing a robust system.

Development and Adoption of ICFA Standards

The breeding standards of the ICFA are a culmination of the experiences of member farms combined with contributions from international experts. These standards have undergone thorough evaluation, debate, validation, and adoption by a "Standards Committee." This committee, led by Exotic Insurance, an expert in certification processes, comprises a diverse group of stakeholders with complementary expertise. This includes veterinarians and scientists renowned for their research in crocodilian welfare, as well as specialists in certification systems, crocodilian breeding, regulation, and conservation.

Each standard is grounded in contemporary knowledge and, in most instances, is validated by scientific research and existing documentation. The development process of ICFA standards and the rules for certification are based on the procedures and guidelines of ISO/IEC, ISEAL, and the WTO.

In certain aspects, these standards surpass the national and international regulatory requirements of conventions such as CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). The ICFA standards ensure that breeding operations are not only legal and sustainable but also verifiable.

The highest animal welfare standards at the heart of the standards

The ICFA's animal welfare standards focus on animal-based indicators, rather than solely on technical and management criteria. This approach aligns with the most rigorous requirements, emphasizing outcome-based results that are derived from observing the animals and their behavior.

Fields of Implementation

The ICFA 1001 crocodilian farming standards outline best practices in several key areas:

- Crocodilian health, welfare, and biosecurity
- Responsible use of veterinary drugs
- Traceability of farm products
- Operations management and staff skills
- Respect for biodiversity and the environment

The Standard as a Process

ICFA views its standard not just as a benchmark for breeding operations management but also as a catalyst for continuous improvement. The provisions of the standard are dynamic, reflecting the best practices at a given time, but are designed to evolve with advancements in knowledge and practice. To support this, ICFA has established a research committee to enhance understanding of various aspects of breeding.

40
farming practices backed by widely recognized scientific studies

42
certified farm sites

Uses of Crocodilians

Crocodiles have long been valued by local populations for their meat and skin. This remains unchanged with breeding.

Meat

Crocodile meat is known for its taste and nutritional benefits, being low in fat, high in dietary fiber and protein, and a good source of omega-3 fatty acids, phosphorus, potassium, and vitamin B12. Meat represents between a third and a half of the animal's weight. Crocodile meat is widely consumed by humans. In Papua, for instance, two-thirds of the meat is exported while one-third is consumed locally. In Oceania, it is popular not only in restaurants but also in processed forms like crocodile spring rolls and jerky, which are sold with great success. Additionally, crocodile bones are used in animal feed, and teeth are commonly crafted into jewelry, especially in Australia.

Skins

Crocodile skin, valued for its beauty and durability, is widely used in the leather goods industry for products like belts, watch straps, bags, clothing, and shoes.
The economic model of animal husbandry, centered around adding value to skins, has facilitated the setup of conservation programs for wild animals.

Medical and Scientific Uses

Crocodile farming also plays a role in medical research and treatment. Researchers are particularly interested in how crocodiles protect themselves from infections, even though they often have wounds and live in contaminated waters. Their blood is studied for its potential in fighting infections and is also being researched for its ability to destroy the HIV virus. At Stanford University, crocodilians are being used in oncology research, with promising results, especially in targeting colorectal cancer. Additionally, crocodile fat is used in medical and cosmetic creams, and in China, their gallbladders are used to treat asthma.

Main stakeholders and relationships

For an organization like ICFA, several types of stakeholders are essential partners: industry professionals, scientific experts in conservation and research, local communities, and the academic world.

ICFA includes representatives from all stages of the leather production process among its members, and the farms supply industries such as leather goods, fashion, and watchmaking. The leather industry is a key stakeholder, consisting of tanneries, manufacturers, and brands, some of which are ICFA members and others not.

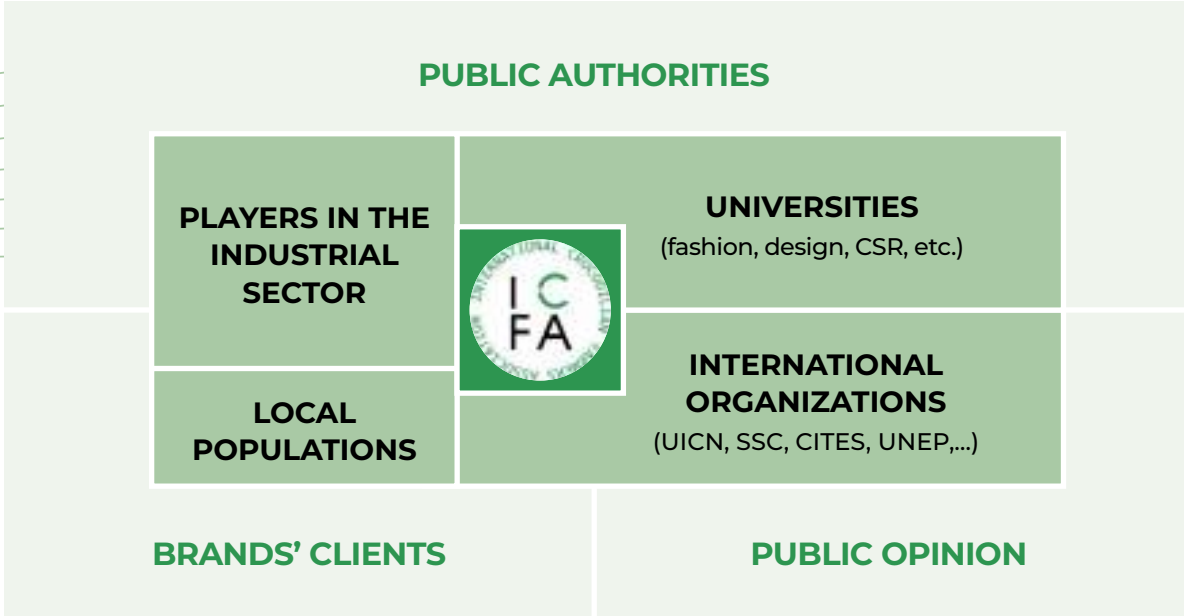
The scientific community is another important stakeholder. Experts in conservation and biodiversity are key partners for ICFA, collaborating on wildlife conservation programs and habitat preservation. ICFA maintains close relationships with the IUCN (International Union for Conservation of Nature) and its specialist conservation groups, particularly the SSC (Species Survival Commission), with the Crocodile Specialist Group (CSG) holding a unique position.

ICFA also works with other scientific stakeholders involved in crocodilian farming, such as veterinarians. Standards that incorporate the latest scientific knowledge have been developed through academic partnerships with universities.

Furthermore, ICFA maintains strong ties with local communities in crocodilian habitat areas. These communities play a vital role in the farming model and are compensated for their involvement in animal and habitat conservation.

The academic world is also a crucial stakeholder, as students in industry and fashion programs, particularly future designers, will be the next generation of leaders in the sector.

On a broader level, ICFA also considers public authorities, customers of farm products, and the general public as important stakeholders.



ICFA Contribution to Industry Debates

The “exotic” leather industry is involved in numerous debates, including those about its future, conservation of wildlife, habitat protection, environmental concerns, and local development. To share its perspective and highlight the benefits of its members’ activities, ICFA participates in industry forums and events, and delivers lectures at design and fashion schools and universities. Since 2002, presentations have focused on the sustainability of crocodile farming, with initial presentations in Italy and France.

6
schools / universities visited

450
students engaged

Part 2

Policies and Key Results

Since its inception, ICFA's primary goal has been to implement farming practices that meet established standards and contribute to the social, environmental, and community objectives of the regions where the farms operate. This section explains how member farms are applying these policies to support the environment, their employees, and local communities.

It is challenging to compile data because of the diversity of the farms. Each region where these farms are located has unique circumstances, challenges, and constraints. This variety is clearly reflected in the geographical distribution of the farms, and the standards take into account the specific needs of each crocodilian species.

To provide a clearer understanding, we have focused on data from the three main species farmed by ICFA members: the Nile crocodile (Crocodylus niloticus) in Africa, the saltwater crocodile (Crocodylus porosus) in Oceania, and the American alligator (Alligator mississippiensis) in the United States. This allows us to present more relevant insights into the policies applied across these species.

Environmental Impact

Key Issues

Key Issues

Crocodilian farming, like other agricultural activities, has a direct connection to the environment. This relationship involves several important aspects:

- Since farms are located in areas where crocodiles naturally live, and farming depends on collecting eggs from the wild, protecting the surrounding environment is crucial. This is especially important because crocodiles live in wetlands, which are not only delicate ecosystems but also play a major role in capturing carbon, helping to combat climate change.
- Water management is critical because crocodiles are aquatic reptiles. Farms need a constant supply of fresh water for their ponds, and this water must be regularly refreshed. Therefore, water sourcing and wastewater treatment are essential challenges that farms must address.
- A major environmental impact comes from feeding the animals. Depending on the region, farms use different approaches, but they often rely on using by-products that can't be used elsewhere, supporting the idea of a circular economy.
- Measuring the carbon footprint of farms is ongoing. Early results show positive trends, as farms are implementing circular economy practices and actively helping to preserve wetlands.

Overall, ICFA member farms are closely connected to their larger ecosystems, including the local economy, society, and environment. They focus on circular economy practices, creating benefits for both the farms and the surrounding communities, including both people and other economic activities.

Water Usage

ICFA farms focus on using local water sources and aim to balance the amount of water they take with the amount they return. Reducing water consumption is a top priority, and farms use different methods to achieve this, such as repairing and replacing pipelines and reusing water in ponds after treating it with ozone.

Here are some examples:

- In Zimbabwe, Padenga Farm draws water from a nearby lake, treats it, and returns it to the environment.
- In Louisiana, Donald Farms has reduced its water use by 66% over the past five years by improving its water management system. The wastewater is used to irrigate fruit crops, and the leftover sludge from treatment is used as fertilizer for nearby fields.
- In Papua New Guinea, farms get their water from wells, treat it after use, and then release

it back into a nearby river. The region receives 4,000 mm of rainfall each year, which helps with water supply.

- In Australia, some farms have reduced their use of natural water sources by using water from other industries. For example, one farm uses water from a sugar refinery, where water is extracted from sugarcane during the production process. This water is then reused on the farm, arriving at the perfect temperature for the crocodile ponds without needing extra heating. In return, nutrient-rich wastewater is used to irrigate sugarcane fields.

Reusing water reuse is becoming more common on Australian farms within the Hermès group. Pond water, which is high in organic matter, is returned to the environment, primarily to irrigate nearby crops, following local regulations. In 2023, 21% of the wastewater from Australian farms was reused for irrigation, a 16% increase from 2022. One farm partners with Hermès Parfums and Beauté to use its water for irrigating sandalwood trees, a key ingredient in Hermès perfumes. Another farm reuses water to irrigate a mixed plantation of mahogany, white mulberries, and a diverse forest, which also helps promote biodiversity on the farm's land.

The key principle: farms treat their wastewater before releasing it back into the environment.

Energy Consumption

ICFA farms are mostly located in warm, tropical areas. Crocodiles need water temperatures of around 30°C to stay healthy, with slight changes depending on their age. In the first year, maintaining this temperature often requires heating, which is the biggest source of energy use for these farms.

To cut down on energy use, farms use a variety of methods, such as generating heat from other activities, installing solar panels, and using recycled fuels. These actions are part of a larger plan to lower carbon emissions. The challenge is to reduce the use of carbon-based energy without significantly increasing

other electricity use. The goal is to increase production while using less energy for each unit produced.

For example:

- In Papua New Guinea, the Mainland farm gets electricity from a hydroelectric dam. To heat the water for young crocodiles, they use boilers powered by recycled oil from nearby businesses like workshops, transport companies, and mines.
- In Zimbabwe, Padenga farms have installed solar panels that generate 1.2 MW of electricity, which means they no longer need diesel generators.
- In Australia, the United States, and Africa, farms are using solar panels to cut down on carbon-based energy. These panels provide electricity locally, reducing the need for power from the grid where it's available.

The key principle: Farms are reducing their energy use and producing their own clean energy.

Example of Circular Economy: Animal Feed

ICFA farms focus on using protein sources for crocodile feed that would otherwise be discarded. In both the United States and Papua New Guinea, for instance, leftover parts of chickens from nearby farms are repurposed as the primary food source for crocodiles, transforming waste into valuable feed. At Mainland Farm in Papua New Guinea, where both chickens and crocodiles are raised, 100% of the adult crocodile feed comes from chicken farming by-products. Additionally, unused crocodile by-products are processed into animal meal for broader use.

In Zimbabwe, Padenga farm similarly utilizes by-products from the food and grain industries for crocodile feed. Crocodile meat that is not suitable for human consumption is reprocessed into feed for adult crocodiles.

In Australia, population control programs for native species such as buffalo and camels help limit their impact on desertification and biodiversity. These animals are sometimes used as feed for young crocodiles. Additionally, farms make use of chicken by-products and other waste from the food industry to feed their crocodile populations.

The key principle: Farms prioritize turning waste from other industries into valuable feed for their crocodiles, supporting sustainability and resource efficiency.

LCA – Life Cycle Analysis and Carbon Footprint

ICFA has initiated life cycle studies to measure the carbon impact of crocodilian farming. Early findings indicate that the preservation of wetlands, supported by these farms, plays a significant role in offsetting carbon emissions, leading to an overall positive environmental balance.

According to the Louisiana Department of Wildlife & Fisheries (LDWF), wetlands are highly effective in combating climate change. Although wetlands make up just 1% of the Earth's surface, they account for 50% of the carbon stored in natural environments. One hectare of wetlands can store twice as much carbon as a forest.

Therefore, the programs supported by crocodile farms, which help preserve crocodilian habitats, make a substantial contribution to the fight against climate change.

Additionally, wetlands are essential for preserving biodiversity. In the United States alone, wetlands are home to around 8,000 species of animals and plants.

The key principle: Crocodilian farming contributes significantly to climate change mitigation and biodiversity.

Social Impact

ICFA member farms are primarily situated in economically disadvantaged regions where local communities experience significant challenges. This includes areas such as Papua New Guinea, parts of Africa, and Indigenous Australian communities. Even in the United States, particularly in Louisiana, these farms are located in regions facing ongoing social and economic difficulties.

The key principle: ICFA farms play a vital role in economically challenged areas, underscoring the importance of social responsibility and contributing to the well-being and development of local communities.

Employment Opportunities with Fair Wages and Competitive Benefits

Crocodilian farms make a significant economic and social contribution through job creation. In the United States, particularly in Louisiana, the crocodile industry generates $245 million in annual revenue and supports 25,000 jobs.

In Zimbabwe, Padenga farms employ nearly 1,000 workers, offering highly desirable jobs with favorable conditions. Wages are 30% higher than the national minimum for similar qualifications, and employees receive additional benefits such as free meals and transportation. The company has also established clinics providing free healthcare for employees and their families.

Mainland Farm in Papua New Guinea employs around 100 workers, with wages above the local average. The farm also offers essential benefits, including free transportation and allowing workers to take home a portion of the meat produced for personal use. Additionally, about ten employees, whose roles require on-call availability, are provided with free housing on the farm. Given the country's low employment rate, jobs at Mainland are highly sought after.

The key principle: Crocodilian farms provide valuable employment with fair wages and comprehensive benefits, offering essential economic opportunities in areas with limited job prospects.

Safety as a Core Priority

Working with crocodiles presents inherent risks, and as such, all ICFA member farms implement rigorous training programs designed to ensure the safety of employees, while also prioritizing animal welfare and product safety.

These programs include comprehensive initial safety training, which is regularly updated to maintain the highest standards. A strong focus is placed on animal welfare, as the well-being of the animals is critical not only for employee safety but also as a core principle that all ICFA members are committed to upholding.

The key principle: Crocodilian farms prioritize a safe working environment by providing ongoing, robust training programs and maintaining high animal welfare standards, ensuring both employee and animal well-being.

100%
of farm employees receive comprehensive safety training

Animal Welfare: A Central Focus of ICFA Standards

Animal welfare is a growing concern in Western societies, generating strong expectations from the public. For ICFA, one of the founding objectives of crocodilian farming was to contribute to the conservation of wild populations, making animal welfare a fundamental priority from the outset.

ICFA standards incorporate the most advanced scientific provisions to ensure compliance with the five freedoms established by the World Organisation for Animal Health (WOAH, formerly OIE). These include providing sufficient space in enclosures to allow natural movement, as well as ensuring that subordinate animals can avoid dominant ones due to the aggressive nature of crocodiles.

All ICFA member farms are committed to implementing these practical guidelines, and initial evaluations are positive. A study assessing stress levels in farmed crocodiles found them to be comparable to those in the wild, indicating that welfare standards are being effectively maintained.

ICFA's approach to welfare is results-oriented. Rather than simply following prescriptive procedures, compliance is measured by observing animal behavior, ensuring that best practices are evaluated through real-world outcomes. This progressive approach places ICFA at the forefront of animal welfare, recognizing the importance of addressing animals' needs and acknowledging their sentience.

Research into crocodilian sentience is ongoing, with ICFA contributing to this important field. Though crocodiles may not intuitively appear sentient, given that their brain weighs only 11 grams in a 660-pound body, ICFA adheres to the highest welfare standards across all species.

The Five Freedoms of Animal Welfare (WOAH)

- Freedom from hunger, thirst, and malnutrition
- Freedom from fear and distress
- Freedom from physical or thermal discomfort
- Freedom from pain, injury, and disease
- Freedom to express natural behavior

The slaughter process is a particularly crucial element in animal farming. The guiding principle is straightforward: animals must not experience pain, and death should occur instantly and humanely. Post-mortem procedures must be conducted only after the animal has completely lost consciousness.

For crocodiles, the slaughter process is designed to eliminate all cognitive and nervous functions. The brain, which is the size of a walnut in a 660-pound crocodile, is first targeted with a bullet or bolt gun. It is then mechanically destroyed, and the spinal cord is severed. This ensures an instantaneous and painless death while preventing post-mortem reflexes common in cold-blooded animals.

The key principle: ICFA is deeply committed to animal welfare, upholding rigorous, scientifically-based standards that prioritize the humane treatment of crocodiles throughout their lives and ensure a swift, painless death at the time of slaughter.

The Contribution of Crocodilian Farms to Conservation and Environmental Protection

Crocodilian farming has a long-standing connection to the conservation of wild species and the protection of their natural habitats. This success is widely acknowledged by experts at the International Union for Conservation of Nature (IUCN). In the 1970s, many crocodilian species were at serious risk of extinction. However, the establishment of farming programs enabled the implementation of effective conservation policies that met their objectives. As a result, wild populations have been restored to levels that substantially mitigate the risk of extinction.

Conversely, crocodilian species not supported by such farming initiatives continue to face significant threats globally.

The key principle: Crocodilian farming has been instrumental in wildlife conservation efforts, playing a pivotal role in reducing extinction risks and safe guarding natural habitats.

Conservation Initiatives and Their Outcomes

In the 1970s, all crocodilian species were classified as endangered on the IUCN Red List. This decline was primarily attributed to two factors: hunting by indigenous communities, either for consumption or trade, and the destruction of their natural habitats, particularly the draining of wetlands for agricultural expansion.

This situation posed a critical question: how can local communities be motivated to protect wetlands and wild crocodilian populations? The solution emerged in the form of a pioneering crocodilian farming model. Under this system, local communities are financially compensated for collecting crocodile eggs, which are hatched and raised on farms, in exchange for their commitment to safeguard the animals and their habitats.

The success of this model has been widely recognized. In fact, conservation experts from the IUCN have urged the luxury industry to continue sourcing crocodilian leather as it

Letter to the CEOs of luxury companies

In August 2020, IUCN experts wrote an open letter to recall the benefits of the responsible use of wildlife by luxury groups.

OPEN LETTER – August 2020

The luxury fashion industry and the benefits of using exotic leathers

Dear Luxury CEO,

The International Union for Conservation of Nature (IUCN) is a global membership organization that brings together governments and civil society to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable. It harnesses the experience, resources, and reach of its 1,400 Member organisations and the input of nearly 17,000 experts. This diversity and vast expertise makes IUCN the global authority on the status of the natural world and the measures needed to safeguard it. IUCN has observer status at the United Nations and plays a key role in several international conventions on nature conservation and biodiversity.

Within the IUCN, the Species Survival Commission is a science-based network of more than 9,600 volunteer experts, distributed in 164 groups in 174 countries, all working together towards achieving the vision of *"A just world that values and conserves nature through positive action to reduce the loss of diversity of life on earth"*. Some of SSC's groups address conservation issues related to plants, fungi or animals, while others focus on issues such as reintroduction of species into former habitats, wildlife health, climate change or sustainable use of natural resources and biodiversity.

We write to you to express our concern about the decisions taken by some luxury fashion groups to ban or cease to use the skins of wild animals, such as crocodiles, alligators, snakes, and lizards. Firstly, the scientific evidence shows that the trade in those skins is in fact sustainable, contributes to wildlife conservation and recovery, and supports the livelihood of local communities. Secondly, there has been a concerted push to ban exotic skin use due to misinformation about COVID19 transmission. There is no evidence, however, that reptiles transmit zoonotic diseases like coronaviruses. We are constantly working on developing the best evidence base to support public policies regarding the conservation and sustainable use of biodiversity, but we are afraid that data do not support decisions made by luxury fashion brands to stop using precious skins.

The benefits that trade in precious skins and exotic leathers provide to nature and people, as well as to the adoption of UN Sustainable Development Goals, are supported by scientific evidence. This trade is one of the great conservation success stories of our time. Species once close to extinction have recovered and are now subject to meticulous management.

The demand from luxury brands for reptile skins has indirectly built this industry into what it is today. Some companies may not have realized and foreseen these benefits, but their involvement fuelled the conservation actions that were and still are needed. We are now experiencing the negative consequences of luxury fashion companies abandoning the use of these raw materials, which extend through the supply chains to local communities unable to adapt to change.

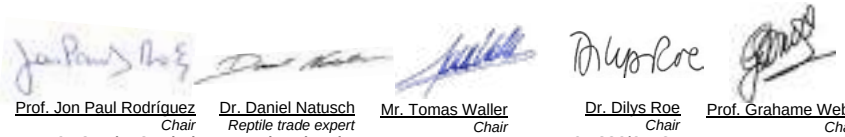
While improvements can and will continue to be made in supply chains, the reptile skin trade today is supporting and encouraging sophisticated and innovative science-based management programs, that provide incentives for people to protect the species they rely on for their income and livelihoods. Legal trade also encourages people to value and protect natural habitats and ecosystems, rather than converting them to intensive forms of land use. This has the knock-on effect of conserving the rest of biodiversity and ecosystem services that those habitats offer.

The legal trade provides sustainable livelihoods for millions of people around the planet, many of them impoverished and living in remote areas, with few if any alternatives for a cash income. The meat of reptiles used for leather is utilised by people, providing an important source of protein and food security. This is the very humanitarian problem the UN Sustainable Development Goals encourages corporations to address. This trade, already dependent on the engagement of luxury fashion brands, provides livelihood security in times of economic uncertainty and resource volatility, and buffers rural people against the looming threat of climate change.

As corporations become increasingly conscious and responsible about sourcing, begin to seek compliance with the UN Sustainable Development Goals, and move towards net positive sourcing practices for biodiversity, we strongly encourage the luxury fashion industry to consider the benefits that this trade generates in favour of species, ecosystems and people. The industry would thus ensure that sourcing decisions are judged in their entirety as part of holistic and evidence-based Corporate Responsibility policies.

The IUCN SSC works closely with many luxury fashion groups to ensure sustainable trade in reptile leather. We look forward to working with you to redouble our efforts to promote evidence-based decision-making and the immense benefits that you generate.

Sincerely,



Prof. Jon Paul Rodríguez
Chair
IUCN Species Survival Commission

Dr. Daniel Natusch
Reptile trade expert
Macquarie University

Mr. Tomas Waller
Chair
IUCN SSC Boa and Python Specialist Group (BPSG)

Dr. Dilys Roe
Chair
IUCN SSC/CEESP Sustainable Use and Livelihoods Specialist Group (SULi)

Prof. Grahame Webb
Chair
IUCN SSC Crocodile Specialist Group (CSG)

supports conservation efforts. In an open letter to luxury brand CEOs in August 2020, they emphasized the importance of this trade, stating, "We strongly encourage the luxury industry to recognize the benefits that the reptile leather trade generates for species, ecosystems, and local communities."

In addition to incentivizing habitat protection, some regions require farms to reintroduce viable adult crocodiles into the wild to further support population recovery. For instance, in Louisiana, the data underscores the significance of wild reintroduction. In 2021, 462,537 eggs were collected, with 406,208 successfully hatched. Of these, 35,803 adult crocodiles were released back into the wild, representing 10% of the hatched eggs, compared to a natural survival rate of just 3% for crocodiles reaching adulthood in the wild.

Kenya has also demonstrated similar success. In the wild, less than 2% of Nile crocodile eggs naturally survive to adulthood. Through reintroduction programs, the number of crocodiles returned to the wild exceeds natural survival rates, contributing significantly to population restoration.

Overall, crocodilian farming has increased survival rates to over 80%, compared to the 2-3% survival rate typically seen in the wild across all species.

The results of these conservation efforts are particularly striking. In Louisiana, the American alligator population has recovered to approximately 3 million, up from fewer than 100,000 in the 1960s when the species was nearing extinction. Nest counts, a key indicator of population health, have risen from 9,200 in 1972 to nearly 60,000 today. Similarly, in northern Australia, the saltwater crocodile (Crocodylus porosus) population has grown from just 3,000-5,000 individuals in the early 1970s to approximately 130,000 today.

The key principle: Sustainable crocodilian farming has played a pivotal role in conservation, contributing to the recovery of endangered species while promoting the protection of vital ecosystems and ensuring long-term ecological balance.

Wetland Conservation

Crocodiles depend on wetlands for their survival, making the protection of these habitats essential for the species' conservation. The survival of crocodiles is directly tied to the preservation of their natural environment.

Wetlands are also vital in capturing and storing carbon. In fact, they can store twice as much carbon as forests on average. This makes wetland conservation and restoration critical for reducing carbon emissions and fighting climate change.

Crocodilian farming plays a key role in providing the resources needed to protect and restore wetlands. In Louisiana, where 80% of wetlands are privately owned, crocodile farming programs have contributed $56 million over five years (2017-2022) to support wetland conservation. Restoring one acre of wetland can cost around $150,000. As Jeb Linscombe, Manager of the Louisiana Conservation Program (Louisiana Department of Wildlife and Fisheries), notes, "The benefits of Louisiana's alligator industry go far beyond the alligators themselves; the industry is immensely beneficial to Louisiana's coastal wetlands and the thousands of plant and animal species that rely on them."

Wetland conservation also supports biodiversity. In Louisiana, wetlands are home to over 8,000 species of plants and animals. Additionally, restoring crocodile populations is important for maintaining a healthy ecosystem. As top predators, crocodiles help control species that could otherwise grow too quickly, which helps keep the ecosystem balanced.

The key principle: Wetland conservation, supported by crocodilian farming, is crucial for carbon capture, protecting biodiversity, and ensuring the health of ecosystems, making it an important part of global environmental sustainability efforts.

Local Development: Farm Contributions to Improving Living Conditions

Crocodile habitats, even in the United States, are often found in regions where living conditions

are challenging. In addition to providing jobs, ICFA member farms are actively involved in programs that benefit local communities through direct support for neighboring activities and philanthropic initiatives aimed at community development.

Malawi provides a strong example of how farms support local communities. Here, villages receive assistance from a crocodile farm to enhance their agriculture. Water from the crocodile ponds is used to irrigate crops, and organic matter in the water acts as a natural fertilizer. The results have been remarkable: the community has overcome food insecurity and is generating income from its crops. This income has also eliminated child labor and allowed children to attend school.

In Zimbabwe, Padenga farm participates in an education support program, providing classrooms, school supplies, books, and solar panels to bring electricity for evening studies. The farm also directly funds the education of around 30 students, from primary school to university.

In Kenya, along the Tana River, an innovative program has been developed in a region where half the population is under 15 and crocodile attacks have long been a threat to both people and livestock. The establishment of a crocodile farm has transformed the community. Now, the collection of crocodile eggs generates around 40% of local income—equivalent to $450,000 (adjusted for 2017 purchasing power). This income also funds development initiatives like well construction, reducing the need for people and livestock to approach the river, and thereby preventing crocodile attacks. The farm also provides healthcare, education funding, and donates crocodile meat to local communities via NGOs. This program has ended the practices of poisoning and hunting crocodiles, while helping to restore wild populations through reintroduction efforts.

In Australia, Indigenous Aboriginal communities are increasingly involved in the conservation and development efforts related to crocodile farming. A pilot program, supported by the Northern Territory government, allows Aboriginal communities to manage the hatching and rearing of crocodiles in their first year. This initiative will increase local incomes and builds on the existing income from egg collection. It also helps secure food and education resources for Aboriginal communities.

In the United States, Donald Farms engages in child welfare programs, including providing education for children from low-income families, organizing activities for children with disabilities and autism, and funding medical care through partnerships with St. Jude Children's Research Hospital for children with cancer.

ICFA farms in the U.S. play a vital role in supporting local communities during extreme weather events such as hurricanes by providing disaster relief. For example, staff from Wall's Gator Farm have deployed across the southeastern United States with equipment to assist in clearing fallen trees and distributing essential supplies such as food and water to those affected by storms and power outages. Additionally, they have provided generators to families without electricity, offering further critical support during these challenging times.

The key principle: Crocodilian farms play a vital role in improving local communities' quality of life by creating jobs, supporting education and healthcare, and actively participating in sustainable development and disaster relief efforts.

ICFA's Commitment to Research

Since its founding, ICFA has established that crocodilian farming standards should be based on two core principles: the expertise and best practices of farmers and the latest scientific advancements. This dual approach reflects ICFA's strong commitment to scientific research aimed at improving farming methods and enhancing the understanding of crocodilian welfare.

To manage research efforts and funding, ICFA created a dedicated research organization. Decisions are made by a "Scientific Research Committee" consisting of about ten members who meet regularly. A coordinator has been appointed to oversee the implementation of research programs, facilitate the sharing of results, ensure their validation, and monitor the application of recommendations derived from the research.

In 2022, ICFA adopted a multi-year research program focused on five major areas:

- Animal Welfare Measurement: Developing criteria to assess and evaluate the welfare of crocodilians
- Validation of Farming Practices: Confirming the scientific basis of key farming practices, such as animal density management and light cycle control
- Enhancing Animal Health: Improving operational practices that affect animal health, including veterinary care and nutrition
- Minimizing Environmental Impact: Reducing the environmental footprint of farming operations, particularly in relation to water, air, and energy use
- Traceability and Compliance: Implementing effective traceability systems to monitor certified farm products and prevent illegal practices.

Current Research on Crocodilian Welfare Biomarkers

An ongoing research project is examining the use of biomarkers as indicators of stress in farmed crocodilians, with the aim of improving the understanding of how farming practices (such as housing and transportation) affect animal welfare. The study is focused on establishing baseline stress biomarkers for four species: saltwater crocodiles (Crocodylus porosus), Nile crocodiles (Crocodylus niloticus), American alligators (Alligator mississippiensis), and caimans (Caiman crocodilus), using both fecal and blood samples from animals in captivity and in the wild.

The key principle: ICFA is deeply committed to advancing scientific research that enhances farming practices, improves animal welfare, and ensures environmentally sustainable operations, combining industry expertise with cutting-edge scientific knowledge.

www.internationalcrocodilian.com

ICFAcommunication@internationalcrocodilian.com