

Legal and sustainable wild species trade

Learnings and implications for nature market governance

June 2023

TRAFFIC



Taskforce on
**Nature
Markets**

KNOWLEDGE PRODUCT

About



Taskforce on Nature Markets

The Taskforce on Nature Markets' core objective is to shape a new generation of purposeful nature markets that deliver nature positive and equitable outcomes. It seeks to achieve this by:



Landscaping, analysing, and socialising **existing and emerging approaches**



Building awareness of **opportunities and risks** across policy, business, and civil society



Building the basis for a **community of practitioners** with a shared vision and narrative



Encouraging synergies between **innovations and innovative people/platforms**



Recommending and advancing **standards of practices** and enabling principles and supportive governance arrangements

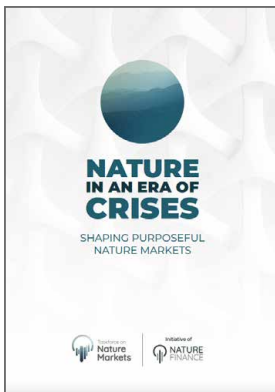


Initiating and supporting **pathfinder initiatives** to scale the implementation of recommended approaches and actions.

The Taskforce is an initiative of, and hosted by, NatureFinance (previously the Finance for Biodiversity Initiative - F4B). It benefits from the broader portfolio of NatureFinance's work and the extensive knowledge of its partners and networks. The Taskforce is supported by the MAVA Foundation.

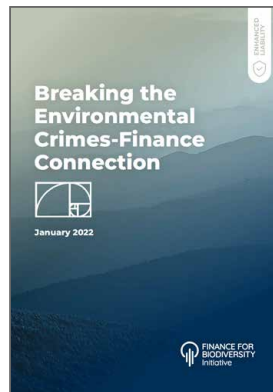
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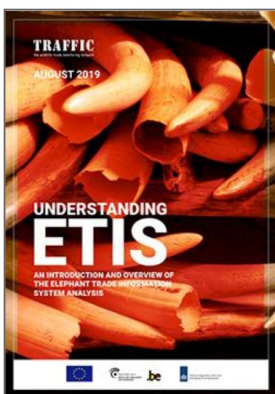
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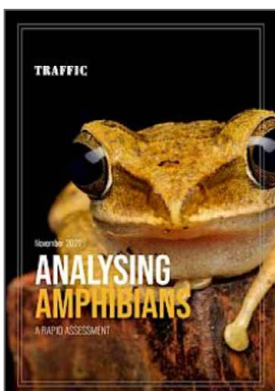
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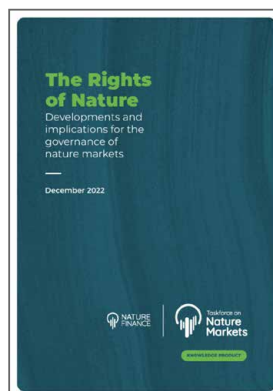
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About this report

The Taskforce on Nature Markets was established in March 2022 in response to a rise in markets that explicitly monetise and trade nature ('nature markets'). The broad contours of this development were set out in the Taskforce's formative white papers, 'The Future of Nature Markets' and 'Nature in an Era of Crises'. This paper is part of the learnings and findings of the Taskforce's second phase of work of deeper dives.

This knowledge product is part of the Taskforce's knowledge ecosystem, which aims to support the Taskforce in delivering its mandate of ensuring the global economy interfaces with nature in ways that deliver nature positive, equitable, and net zero outcomes.

This paper was a collaborative piece of work, with the Taskforce's Knowledge Partner, TRAFFIC, researched and written by Paola Mosig Reidl, Co-lead, Data, Research, and Enforcement Support and Sarah Baker Ferguson, Crime Convergence Lead, with guiding feedback from Simon Zadek, Taskforce on Nature Markets Co-Lead, and editorial support from Matthew Doncel, Nature Crimes Associate and Monique Atouguia, Knowledge Manager for the Taskforce.

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The Taskforce on Nature Markets is an initiative of Nature Finance which also hosts its secretariat. NatureFinance is a Geneva-based, international not-for-profit dedicated to aligning global finance with climate resilient, equitable and nature positive outcomes. Its work spans initiatives that are building and using biodiversity data to better manage nature related risks, developing purposeful nature markets, advancing financial innovations including in sovereign debt markets, strengthening nature related liabilities and citizen action on nature.

The views expressed in this paper are those of the author's alone. Any errors are our own.

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TRAFFIC

TRAFFIC is a leading non-governmental organisation working to ensure that trade in wild species is legal and sustainable, for the benefit of the planet and people.

www.traffic.org

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Legal and sustainable wild species trade

Learnings and implications for nature market governance

Executive Summary

This paper, conducted by the Taskforce on Nature Markets in collaboration with TRAFFIC, explores nature as an emerging market that is increasingly monetised. It focuses on the necessary governance and financial sector structures that must be built to promote legal, sustainable, and transparent nature markets. TRAFFIC contributes its expertise in wild species governance and trade to identify key points for intervention, governance design, and framework considerations herein. Drawing from lessons learned, the paper extrapolates market interventions that could promote nature positive and equitable outcomes across a variety of other nature markets.

Nature markets, as defined by the Taskforce on Nature Markets,¹ are a subset of the economy where nature is specifically traded and valued. This includes large markets such as agricultural commodities and emerging markets that reflect the growing economic value of nature, such as nature-based solutions for carbon sequestration.² In this report, we will review nature markets where wild species³ are traded.

Illegal and unsustainable nature markets involving wild species have significant detrimental impacts on biodiversity and can have severe consequences for indigenous peoples (IP) and local communities (LC) who depend on nature for their livelihoods. These illegal nature markets disrupt ecosystems and food chains, fuel organised crime and corruption, and increase the risk of zoonotic spillover, that is diseases spreading between wild species and humans. Evidence of illegal nature markets, exacerbated by inadequate governance, ranges from illicit methods for smuggling and transportation of nature-based products, including protected species for sale in markets. These markets are fuelled by unsustainable or illegal harvesting of wild species for nature products.

Human pressures undermine the biodiversity, which serves as the foundation for all life on land and in water. Biodiversity provides essential ecosystem services, such as crop pollination, water purification, flood protection and carbon sequestration. The estimated value of these services amounts to USD125-140 trillion per year, surpassing global GDP⁴ by more than one and a half times.

Business and financial organisations depend on biodiversity and ecosystem services to produce goods and services. The costs of inaction to address biodiversity loss are high. Between 1997 and 2011, the global economy suffered an estimated annual loss of USD4-20 trillion in ecosystem services due to changes in land-cover and USD6-11 trillion per year from land degradation.⁵

Whether managing downside risks, creating business value through sustainable solutions, or identifying innovative ways to finance sustainability, the private sector is emerging as the driving force behind competitive and sustainable solutions. It has a potential to play a crucial role in financing and addressing sustainability challenges in the years ahead. Both governments and the private sector are increasingly recognising the importance of 'nature positive' markets in achieving sustainable outcomes. The recent outcome document of the Conference of the Parties to the Convention on Biodiversity (CBD), the 2030 Biodiversity Agenda, promotes this concept and describes the growing trend in which businesses and investments should aim to have a positive impact on the environment, adopt sustainable business practices, and protect natural resources and biodiversity.

In addition to avoiding severe and unpredictable losses, the conservation, sustainable use and restoration of biodiversity can provide substantial business opportunities. These include ensuring long-term viability of business models, cost savings and operational efficiency, increasing market shares, exploring new business models, markets, products and services; and fostering better relationship with stakeholders. Similarly, effective risk monitoring systems, primarily focused on protecting consumers and markets, are fundamental for those responsible for addressing and combating the illegal trade of wild species. Furthermore, the advanced use of data can and should be tailored to identify firms that contribute to the harm caused to wild species.

Through the demonstrative use of case studies from around and across the world, this paper illustrates the 15 building blocks that should be applied in nature markets to ensure that they have more nature positive and equitable outcomes. Namely:

- 1 Laws and Regulations**
- 2 International and Regional Cooperation**
- 3 Policy Frameworks with Full Participation of IP and LC**
- 4 Respect for IP and LC Rights**
- 5 Benefit-Sharing Mechanisms**
- 6 Robust Institutions**
- 7 Transparent and Accessible Policies**
- 8 Traceability Systems**
- 9 Monitoring, Reporting, and Evaluation**
- 10 Addressing Corruption**
- 11 Strong Enforcement Mechanisms**
- 12 Mechanisms for Accountability**
- 13 Multi-Stakeholder Engagement**
- 14 Adaptive Management and Innovation**
- 15 Combination of Tools and Instruments**

As the impacts of climate change and biodiversity loss continue to worsen, it is increasingly important for investors to consider the long-term sustainability of their investments. To address this need, governments from around the world, from Europe and North America to Asia, are formalising sustainability standards for investment products and company reporting. These standards include initiatives such as the Task Force on Nature-related Financial Disclosures (TFND), the Sustainability Accounting Standards Board (SASB), and the Global Reporting Initiative (GRI), which are already underway.⁶ The objective of these standards is to promote consistent and comparable reporting of environmental, social, and governance (ESG) factors, to help investors make more informed decisions about the long-term sustainability of their investments.

In alignment with these policy frameworks, the Kunming-Montreal Global Biodiversity Framework (GBF) has set ambitious sustainability targets to support its mission of fostering a sustainable and equitable global economy. By incorporating these targets into investment strategies, investors can help mitigate risks but also contribute to the transition towards a more sustainable future. The finance sector plays a crucial role in facilitating nature markets, making their involvement in addressing illegal and unsustainable nature markets critical. The following are key considerations for their role:

Cutting off the flow of funds that support illegal and unsustainable nature markets by **monitoring and reporting** suspicious transactions and closing accounts linked to these transactions, including individuals and entities involved.

Developing **risk frameworks** for evaluating individuals/companies that utilise the formal financial sector for capital/business loan applications and other financial transactions (e.g. insurance).

Guiding businesses, business organisations (e.g. associations), and investors on appropriate frameworks, including voluntary standards and certification schemes, benchmarking and reporting initiatives, that could **verify sustainable, legal and traceable practices** in wild species and products supply chains.

Raising awareness among stakeholders, including employees, clients, and investors, about the risks associated with illegal and unsustainable nature markets and the importance of biodiversity conservation.

While these methods could be effective, measures taken in this sphere by the financial sector are often voluntary. Therefore, for them to achieve genuinely measurable success, they must be accompanied by nature positive enabling governance structures within the financial sector and improvements in the governance of nature markets at large. These structures should promote transparency and accountability while implementing stronger governance models that promote sustainable practices and protect natural resources. Additionally, they should consider the rights of IP and LC in their design and ownership, recognising them as custodians of ecosystems.

When governed effectively, legal and sustainable nature markets involving wild species incentivise and contribute to biodiversity conservation, enhance the livelihoods of IP and LC and benefit other stakeholders involved in the supply chains. The financial sector, as well as the industrial and consumer sectors, also have an important role in promoting and enhancing these nature positive markets. Access to reliable data, accurate information, and increased transparency are essential for identifying and supporting these markets.

Achieving good governance of nature markets requires a combination of international cooperation, national laws and regulations, established financial mechanisms, market-based initiatives, accurate, up-to-date data and information, traceability and transparency. This includes the implementation of market monitoring and enforcement systems, as well as establishment of clear regulations governing the access, use and trade of natural resources throughout the entire supply chain, from land use planning and resources allocation to harvesting. Additionally, good governance entails providing legal protection for the rights of IP and LC and ensuring effective conflict resolution when corporate and private sector rights overlap with those of the IP and LC due to inefficient legal frameworks. Effective policy structures and political commitment are integral elements of good governance in nature markets.

To protect the interests of IP and LC involved in established and emerging nature markets, it is essential to adopt a comprehensive and integrated approach that considers the economic, social, and environmental context. Effective community-based management is crucial and involves several key components. These include community engagement and consultation to support their access to and use of natural resources, while also providing opportunities for sustainable livelihoods and establishing benefit-sharing arrangements. It is important to have appropriate legal frameworks and regulations in place to address the limitations faced by these communities in terms of resources, structure, knowledge, and financial capital. Furthermore, implementing monitoring and enforcement measures are necessary to ensure that these communities can participate in nature markets in a sustainable and equitable manner.

Applying best practices from legal and sustainable trade in wild species to other existing and emerging nature markets can help achieve nature positive and equitable outcomes.

Introduction

This Taskforce on Nature Markets paper draws out learnings and valuable insights from TRAFFIC's work and knowledge on wild species trade. It explores various tools and interventions that can effectively govern nature markets and promote equitable and nature positive outcomes.

In this paper, wild species trade is broadly defined to encompass all wild species of flora, fauna, and fungi, including the fisheries and timber sectors. According to the Global Nature Markets Landscaping Study produced by the Taskforce of Nature Markets,⁷ specific revenues generated from wild species trade are considered "products" within the larger scope of "intrinsic" nature markets.

To ensure that existing nature markets centered on the trade in wild species achieve more equitable and nature positive outcomes, they must build a strong foundation of clear environmental, social, and economic benefits. This requires good governance of nature markets, strategic interventions, and also a comprehensive understanding of the impacts and consequences of inaction.

It is necessary to understand the trends in the flow and value of wild species trade, as well as the underlying drivers that contribute to the problems and potential solutions we identify.

**Legal and
sustainable
wild species trade**

General Context around nature markets based on trade in wild species



Taskforce on
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General Context around nature markets based on trade in wild species

A Nature markets centred around wild species trade

Trade in wild species encompasses a range of characteristics, including its legality, regulation, domestic or international nature, and its potential for sustainable or unsustainable use.

Wild species are traded for different purposes, such as display, ornamentation, or companionship (e.g. as pets). They are also primary raw materials for numerous industrial sectors including, but not limited to, construction, cosmetics, clothing, energy, food, pharmaceuticals, and traditional medicine. Markets for wild species, both at the national and global levels, have annual values ranging from billions to trillions of US dollars.

According to the IPBES (2022) Sustainable Use Assessment, approximately 70% of the world's poor directly depend on wild species for their food and income. Billions of people worldwide rely on around 50,000 wild species for their sustenance, fuel, medicine, textiles and other purposes worldwide.⁸

Globally, the trade of products derived from wild species primarily flows from the Global South to the North, mainly driven by consumer demand from developed countries.⁹

The annual value of international trade in legally considered wild species amounts to billions of dollars. A recent estimate by Andersson et al.¹⁰ calculated an average global annual value of USD220 billion based on the declared value of all wild species-related imports reported in the United Nations Comtrade database from 1997 to 2016. Seafood accounted for the highest commercial category during this period, comprising 82% of the value, followed by timber for use in furniture and furs and hides for use in fashion, accounting for 7% and 6% respectively.¹¹ Trade in wild species also includes lesser-known commodities, such as wild plant and fungi ingredients used in everyday food, cosmetics, and health products.

Illegal trade in wild species is defined by the International Consortium on Combating Wildlife Crime (ICWC) as “any criminal activity connected with the taking, trading (supplying, selling, or trafficking), importing, exporting, processing, possessing, obtaining and consumption of wild fauna and flora, including timber and other forest products, in contravention of national or international law.”¹² This illicit trade involves numerous species and often leads to unsustainable use.

According to a report by the World Bank (2019), UNEP-INTERPOL (2016) estimated the annual value of illegal trade in wild species, including logging and fishing, to range from USD69 to 199 billion. The Global Financial Integrity (2017) estimated the value to be between USD73 to 216 billion annually. In a broader context, the gains generated from ‘environmental crimes’, defined by the Financial Action Task Force (FATF) to include illegal mining, waste dumping and other crimes, are estimated at around USD110 to USD281 billion.¹³ While the volumes and value of illegal trade are highest for fish and timber, even lower levels of illegal trade have a strong impact on the sustainable use of wild species,¹⁴ particularly those already affected by other threats like habitat loss, climate change, pollution and invasive species among others. However, when considering the impacts on ecosystem services, the estimated value of illegal trade in wild species reaches as high as USD1 to 2 trillion per year.¹⁵

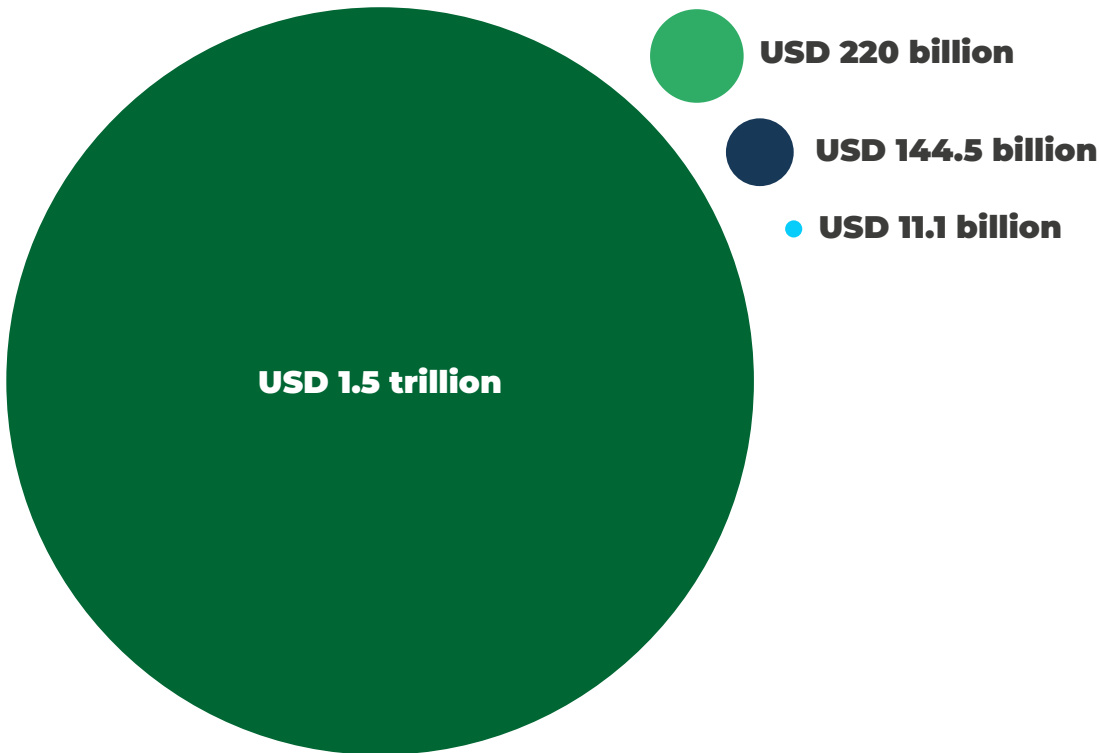
i. Overview of regulated wild species trade

Approximately 40,000 species/subspecies are included in the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which is an international agreement between governments aimed at ensuring that international trade in wild animals and plants does not threaten their survival, and remains legal, sustainable, and traceable. However, out of these 40,000 species, only around 12,000 are actually found in trade. This number represents only a fraction of the numerous wild species traded internationally, as most of them are not covered by international regulations.

According to the IPBES Global Assessment Report on Biodiversity and Ecosystem Services published in 2019,¹⁶ the value of international legal wild species trade has increased by 500% since 2005 and by 2,000% since the 1980s.

The World Wildlife Trade Report 2022, which examines wild species trade listed under CITES, indicates that between 2011-2020, over 1.3 billion individual organisms were legally traded, including 1.26 billion plants and 82 million animals. Additionally, 279 million kg of products were reported by weight, consisting of 193 million kg of plants and 86 million kg of animals. These trades occurred through approximately 3.5 million shipments crossing borders, as reported by exporters. Cumulating an average annual value of approximately USD11.1 billion, which accounts for around 5% of the total legal trade in wild species as estimated by Andersson¹⁷ (2021).

Figure 1 Estimations of the annual value of wild species trade, both legal and illegal



- Illegal wildlife trade inclusive of impact on ecosystem services
- Legal trade in all wildlife
- Illegal wildlife trade
- Legal trade in CITES-listed species

The USD11.1 billion in legal trade includes exports of mainly captive-bred sturgeon for caviar and wild, ranched and captive-bred crocodile skins. These two categories alone account for over two-thirds of the average annual value of global CITES-listed exports related to animals, which is estimated to be around USD1.8 billion based on direct exports reported in the CITES Trade Database from 2016-2020. Over the same period, the estimated average annual value of global exports of CITES-listed plant species was approximately USD9.3 billion.¹⁸ Regarding plant commodities, approximately two-thirds of the estimated average annual value of global CITES-listed exports were attributed to the timber trade, predominantly wild African rosewood, with a value of USD6.2 billion. The remaining third (34%) of global exports by value, amounting to USD3.17 billion, consisted of non-timber plants, with artificially propagated live orchids being the top export in this category.

CASE STUDY

Legal and Illegal Trade in Big Cats, a Study in Support of Decision 18.246

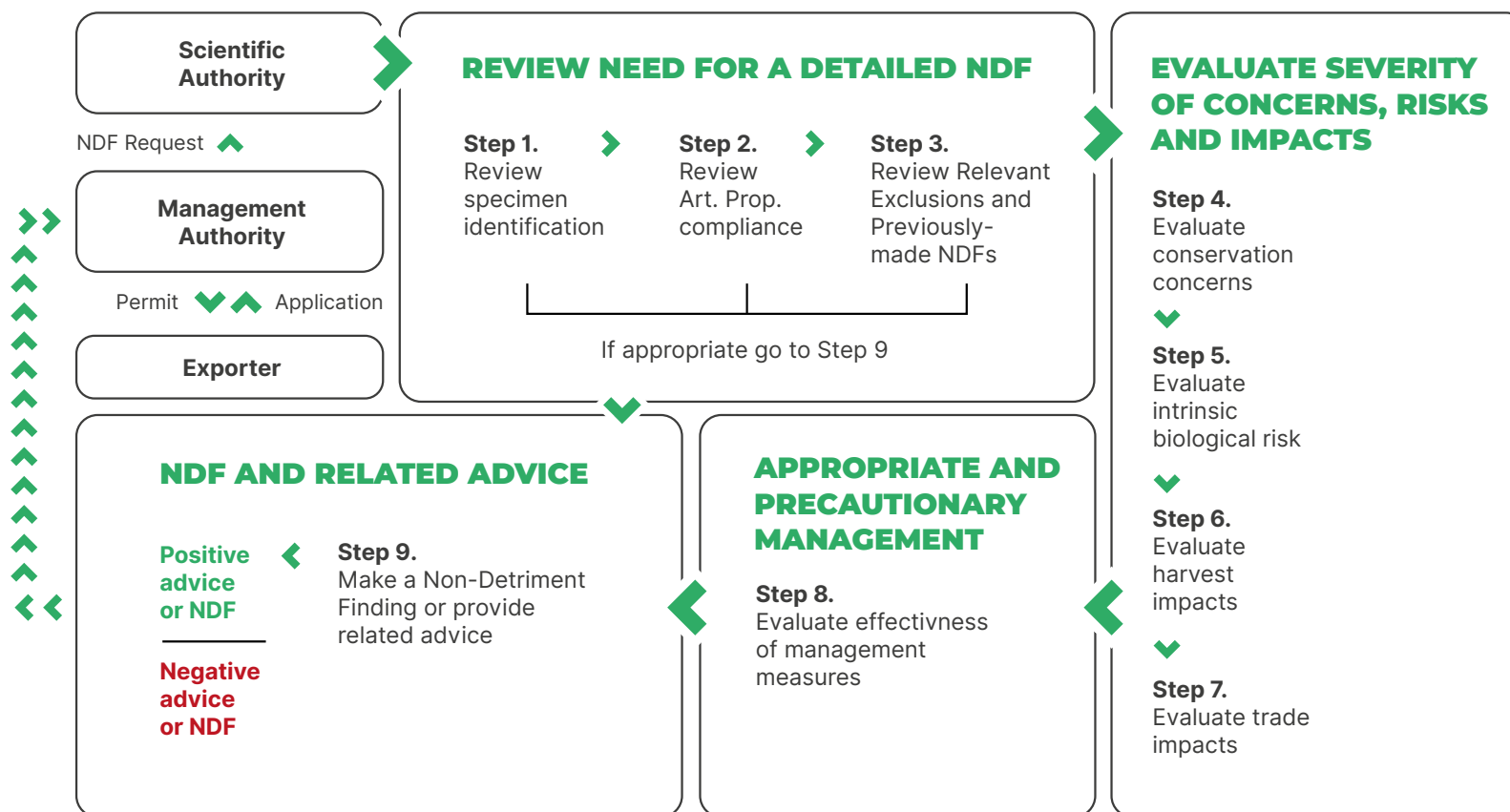
Since the inception of CITES, big cat species have been protected by CITES Appendix listings. However, big cat species across their range are in decline due to trafficking, human-wildlife conflict, loss of prey species, and habitat loss. Additionally, big cats serve as an example of how illegally wild-sourced big cat products can be laundered into the legal market through mislabelling source codes.

A report prepared by TRAFFIC under contract from the CITES Secretariat (2022) uses CITES Trade Data, TRAFFIC Wildlife Trafficking and Information System (WITIS) database, literature reviews and expert interviews. The report highlights the challenges associated with determining whether a specimen of the eight big cat species was bred in captivity or sourced from the wild. Furthermore, due to consumer preference for certain big cat species and wild-sourced ones over captive-bred ones, the labelling of the specimen's source and the species is often mislabelled. Consequently, an otherwise "illegal" big cat part or product to be sold under the guise of a "legal".

The sustainability of trade in wild species commodities is ensured through a system of Non-Detriment Findings (NDF). Under this system, a permit may not be issued unless a Scientific Authority has determined that the trade will not be detrimental to the survival of the species in the wild. This requires the Parties to CITES to monitor the status of the species populations in the wild, as well as the levels of harvesting and exporting. Ongoing efforts are being made by Parties to strengthen their capacities and methodologies for conducting these findings. The NDF reports available on the CITES website can provide insights into taxa that are being traded at sustainable levels in specific countries and regions.

CASE STUDY

Ensuring wild species trade is within sustainable limits and the 9-step guidance for NDFs in support of parties of the implementation of CITES



A permit for the trade of CITES-listed species may only be issued if the Scientific Authority of the exporting State has advised that “such export will not be detrimental to the survival of that species”, or in other words, has submitted a non-detriment finding (NDF). Solid and reliable NDFs are a critical step to ensure the export of any specimen will not negatively impact the survival of that species in the wild and to ensure these species maintain their role in the ecosystem. Therefore, NDFs play a vital role in the effectiveness of the Convention. However, due to the diverse range of species on the CITES Appendices and the complex biological and legal issues at play, obtaining an NDF can be an elusive undertaking.

To support Parties with this task, TRAFFIC, in collaboration with the German Federal Agency for Nature Conservation (BfN), produced a comprehensive 9-step guidance and online learning tools specifically designed for formulating NDFs for perennial plant and timber species. The guidance describes a systematic process that enables Scientific Authorities to make NDFs that are science-based, using information with appropriate data quality that aligns with the level of conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified for the species in question.

TRAFFIC has also developed similar guidance for sharks and has assisted Parties in developing NDFs for sea cucumbers.

In cases where proper safeguards are not properly followed or the trade of a CITES-regulated species becomes unsustainable, various measures, including pressure and sanctions, such as trade suspensions, may be applied through the Review of Significant Trade (RST) process. The RST involves monitoring levels of trade in regulated species and identifying those that warrant further analysis based on various risk factors, specifically their conservation status, high volumes of trade, and a significant or increasing levels of trade.

Other compliance processes within CITES can also lead to trade suspensions. Such suspensions may occur for instance, when Parties fail to submit annual reports for three consecutive years or when a compliance matter remains unresolved and persistent, with little or no intention to achieve compliance. The unique ability of CITES Parties to impose sanctions on non-compliant third Parties is essential towards achieving compliance with the Convention. Without such a mechanism, adherence to laws and regulations would rely solely on political will, as further discussed below.

Regulations drafted by Parties to CITES have successfully reduced pressure on wild populations of a number of traded species, leading to positive outcomes such as population increases often associated with recovery from illegal and unsustainable trade before regulation.¹⁹

Indications of non-sustainable practices or unsustainable trade may lead to the transfer of species in trade from CITES [Appendix II to Appendix I](#). [Appendix I](#) includes species for which trade poses a risk of extinction and stricter regulations are imposed. Alternatively, species may be reclassified to a higher risk category in either the IUCN Red List of Threatened Species or equivalent national lists.

For other wild species not necessarily regulated by CITES, there are also a number of international and regional standards, agreements and certification schemes that can support management for sustainable use and provide an indication of sustainability in traded commodities. These are discussed in more detail below.

CASE STUDY


WildCheck: Assessing Risks and Opportunities of Trade in Wild Plant Species - Environmental and social costs in supply chains

Thousands of plant species used in everyday products are at risk of extinction primarily due to habitat loss and other factors such as climate change and over-exploitation. Out of the 21% of medicinal and aromatic plant species whose vulnerability status has been assessed, 9% are threatened with extinction. It is important to note that the income derived from wild plants is significant across socio-economic groups and geographic regions. However, those people who depend on specific species for vital income are often exposed to socio-economic, political, and sometimes health risks. Behind seemingly insignificant ingredients lie complex supply chains, accompanied by substantial environmental and social risks. Nevertheless, there are opportunities for sustainable management that can bring benefits to the local ecosystem and communities dependent on these plants.

WildCheck is a collaborative initiative led by TRAFFIC, FAO, and the IUCN Species Survival Commission Medicinal Plant Specialist Group. Its purpose is to raise awareness among governments, the private sector and consumers about the importance of precious, yet often overlooked, plant ingredients. The initiative emphasises the need for responsible sourcing practices that can support broader wild species conservation efforts and the livelihoods of marginalised communities.

The legality of trade in wild species is primarily linked to meeting obligations under conservation or environmental regulations, it also includes compliance with regulations and policies covering socio-economic aspects. These include labour conditions, human rights, and various issues linked to, for example, modern slavery and fair wages. In recent times, these issues have begun receiving exposure within the wild species trade sector, such as instances of forced labour and human rights violations in the fisheries sector, as well as social risks within the supply chains of wild plant ingredients.²⁰ Consequently, these concerns are likely to become important motivations, prompting action by financial institutions and the business sector.

Illegal trade in CITES-listed species has been analysed thoroughly in many instances, including the United Nations Office of Drugs and Crime (UNODC) through its Wildlife Crime Reports (2016²¹ and 2020²²). These analyses generally focus on the illegal trade of wild species linked to organised crime and serious offences. Wildlife crime is a lucrative global business, with high demand driving high prices. According to UNODC (2020), nearly 6,000 different species of fauna and flora were seized between 1999 and 2018. The trade's value is largely attributed to rosewood timber (composed of several tree species such as *Dalbergia* and *Pterocarpus*), elephant ivory, pangolin scales and rhino horn. Remarkably, illegal wild species trade involves the participation of nearly every country in the world. Organised crime engages in these activities for material gain, and the extent of this gain holds great relevance for traffickers.²³



CASE STUDY

Red Flag Indicators and spotting wild species crime

Traffickers have adopted a variety of techniques to avoid detection in the smuggling of illegal products, which can vary depending on the type of cargo and consumer preferences. However, corruption frequently facilitates the transfer of illicit goods throughout the maritime transport infrastructure. Bribes are common among the wild species trade chain, occurring at the, transit and export stages. To address these issues, TRAFFIC worked with partners to produce 'The Red Flag Compendium for Wildlife and Timber Trafficking in Containerised Cargo.' This compendium details the warning signs of corruption, smuggling, and other related crimes. It also outlines red flags and additional tools to identify prolifically trafficked CITES-listed species, such as big cats, specific marine species, elephant ivory, and timber. It includes information on at-risk routes and typical indicators of illicit activities, such as suspicious paperwork and discrepancies in information, such as value, weight, and appearance. Furthermore, irregular behaviours, including consignments split across multiple shipments, last-minute requests for shipment clearance and abnormal or sudden changes in routes or destinations, may be signs of illegal activity.

By highlighting these potential risks, shipping companies can implement greater safeguarding measures to protect their employees and businesses, and the environment. This information is critical to protecting the integrity of maritime supply chains from operational, economic, security and zoonotic health risks.

Data from the CITES Illegal Trade Database, maintained by UNODC, revealed the seizure of around 95,000 commodity records from 2010 to 2021. More than half of these seizures consisted of commodities of species currently listed on CITES [Appendix II](#).²⁴ Among these, the most commonly seized taxa were corals (29% of commodity records), plants (22%) and other invertebrates (19%). Birds and reptiles accounted for around 10% of all reports, with significantly smaller volumes of mammals, fish and amphibians.²⁵

ii. Impacts of wild species trade

The legal wild species trade can have both positive and negative impacts on biodiversity conservation. When managed sustainably, it can incentivise habitat and species conservation, while also providing benefits to indigenous peoples, local communities and others involved in the supply chains. On the other hand, when managed and harvested at unsustainable levels, it can directly harm wild species populations, hinder habitat preservation, undermine livelihood subsistence and impede economic development.

Furthermore, trade in other nature markets, such as those related to soft commodities like crops and livestock, can indirectly affect the sustainable use and conservation of wild species. For example, land use change and habitat transformation to produce these commodities can have adverse consequences on the preservation of wild species and their habitats.

When governed effectively, legal and sustainable nature markets that involve wild species can provide incentives and contribute to their conservation, enhance the livelihoods of IP and LC and benefit others involved in the supply chains. The Convention on Biological Diversity (CBD) recognised the positive impact that biodiversity and healthy ecosystems provide to livelihoods and local communities in Goal 1 of its 2030 Biodiversity Agenda. It states that “Ecosystem services and other non-marketed goods are estimated to make up between 50% and 90% of the total source of livelihoods among poor rural and forest-dwelling households – the so-called ‘GDP of the poor.’”²⁶

Trade in sustainably managed wild-sourced commodities of regulated species can also help reduce pressure on associated species. It encourages habitat conservation and restoration, leading to biodiversity conservation and the maintenance of ecosystem services.

Empowering communities to manage their resources by strengthening land and resource rights can serve as a strong motivating force for conservation. However, it is crucial that the overall benefits of conservation outweigh the costs associated with it.²⁷ The socio-economic impacts of wildlife trade include macro-economic impacts, such as GDP contributions, income generation, job creation, market integration, enterprise development and local economic development, food security and nutrition, health improvement, strengthened rights and empowerment (including gender equality), skill development, capacity building, education enhancement and the reduction of human-wildlife conflict, among other factors.

The benefits derived from conservation efforts can extend beyond financial gains, although in situations of acute poverty or prevalent human-wildlife conflict, financial incentives may be critical. Community incentives can take various forms, such as income generated from wildlife-based tourism activities, subsistence obtained from sustainable hunting of wild species, sustainably harvesting and trading of non-timber forest products (NTFP), payments for ecosystem services (PES) and employment opportunities related to wild species (e.g., as guards or guides). These different options must be culturally appropriate and chosen voluntarily by local communities,²⁸ as certain approaches may be effective in certain contexts and counterproductive in others.

The illegal and unsustainable trade in wild species poses serious threats to biodiversity. It can cause species to become endangered or face extinction, leading to ecosystem degradation and impacting other species and people.²⁹ The IUCN Red List cites overexploitation of threatened and near-threatened species as the predominant threat facing the wildlife it has assessed, with 42,100 species currently at risk of extinction.³⁰ It can affect ecosystem services and cause an imbalance in local economies, impacting local communities and livelihoods dependent on wild species for food, income, and other subsistence needs.³¹ In remote areas, where alternatives are limited or non-existent, the trade exacerbates poverty among vulnerable populations.

Additionally, wild species trade can pose health threats to humans, native species and livestock, especially if it introduces viruses, bacteria, or species to which native populations lack adequate resistance.³² The proliferation of the Internet and e-commerce including social media have contributed to a noteworthy increase in the illegal trade of many species worldwide in the past few decades.³³ This concerning trend has further intensified during COVID-19 lockdowns.³⁴

Environmental damage is also an important matter to business success. It is critical for businesses to understand environmental risks and implement adaptation measures to support their operations. The consequences of climate change, such as shifts in temperature, rainfall patterns, sea level and storm conditions will have long-term impacts that require new adaptation strategies. Moreover, the increasing costs of resources, including food, energy and water, can fuel unpredictable market conditions. The volatility of resource prices causes uncertainty for the private sector, creating risks associated with productivity investments and potentially distorting supply chain efficiency.

Sustainability too has become an important factor in business strategies. Both large multi-nationals and mid-sized companies are increasingly taking a long-term view toward managing environmental and social risks. Many companies recognise that by addressing these issues, they can achieve better growth, cost savings, improve brand image and reputation, strengthen stakeholder relations and ultimately, boost financial performance. By strategically integrating sustainability into their operations, companies are better equipped to anticipate and understand long-term trends, assess the effect of resource use and address stakeholder expectations.

B Frameworks and governance models around the legal and sustainable trade in wild species

Good governance in nature markets is a global challenge that requires coordinated action and sharing of information at the international level, making international cooperation and collaboration indispensable. This is particularly true regarding international trade in wild species, for example, where the supply chain of a species harvested for trade may involve multiple source, transit and consumer countries.

i. International Conventions

Developing and implementing biodiversity conventions and treaties have significantly increased cooperation and collaboration among governments over the past few decades. A prime example is CITES, which initially covered only 80 species in 1973 but has since expanded to include almost 40,000 species/subspecies of animals and plants. What started with 80 signatories that signed the Convention in 1973, has now grown to include 184 countries around the globe. CITES provides a system of checks and balances among the signatories and regulates the trade of species listed in its Appendices, between and among Parties and non-Parties.

Conventions provide an essential framework to facilitate international cooperation and collaboration among countries, providing a platform for sharing information, knowledge and resources among governments, scientists and conservation organisations worldwide.³⁵ Conventions also play a pivotal role in creating platforms for the development of joint conservation and sustainable management strategies, coordinating these efforts across national borders,³⁶ and establishing legal and policy frameworks that guide nations in their endeavours to conserve biodiversity and ensure its sustainable use.³⁷

Conventions play an important role in promoting the use of science-based approaches to biodiversity conservation and encouraging the implementation of sustainable management practices. For instance, the Convention on Biological Diversity (CBD) provides guidance on the development of national biodiversity strategies and action plans, assisting countries to set conservation targets and develop plans to achieve them. These conventions provide an international mechanism for monitoring progress and ensuring accountability by setting common global targets for biodiversity conservation and indicators of progress for all countries. Countries are required to report on their progress in meeting these targets, which facilitates the identification of areas requiring further action and promotes transparency and accountability. Such reporting enables Parties to support the national implementation of other countries, identify compliance issues and push for improvement.³⁸ Non-compliance concerns can be brought to a Compliance Committee, which, unlike CITES, is not compelled to consider or take action on non-compliance reports. If a Party is found to be in non-compliance, the Compliance Committee can make recommendations to the Conference of the Parties to the CBD. These recommendations may include suggestions that the Party itself can consider, relying on the political will of the identified Party to act on the concerns.

The sharing of Party progress reports and the use of robust indicators promote international cooperation and partnership not only between governments but also among other stakeholders, such as NGOs, indigenous communities and the private sector.³⁹ Through these partnerships, countries can share sector-specific information, expertise, and best practices, working together to address common challenges facing biodiversity conservation.

Agreements developed around a specific subject matter, such as the International Tropical Timber Organization (ITTO), that revolves around the timber trade, have developed frameworks and governance models, such as the Guidelines for Sustainable Forestry Management (SFM), which are comprehensive and integral to protecting timber markets. However, a particular challenge lies in ensuring sufficient use of these guidelines by government members. Since agreements and conventions are usually optional, the implementation ultimately depends on the political will of the involved parties. Furthermore, such guidelines often set high standards, and many governments may prefer to initially adhere to lower requirements.

Other sectors have also developed guidelines to address similar challenges of illegal wildlife trade. Some examples include the Global Sustainable Tourism Council (GSTC), which has established criteria for sustainable tourism, including guidelines for wildlife and biodiversity protection (<https://www.gstcouncil.org/>). The International Air Transport Association (IATA) has developed the IATA Live Animals Regulations (LAR) to ensure the safe transportation of live animals while preventing illegal wildlife trade (<https://www.iata.org/>). The Equator Principles, adopted by financial institutions, provide a risk management framework and guidelines against financing projects linked to illegal wildlife trade, among other issues (<https://equator-principles.com/>). Customs and border control efforts are strengthened through guidelines and tools provided by the World Customs Organization (WCO), such as the WCO Guide to Customs Valuation and Transfer Pricing and the WCO Guide to Key Multilateral Environmental Agreements, including CITES: (<https://www.wcoomd.org/>). Additionally, the United Nations Office on Drugs and Crime (UNODC) has published guidelines for prosecutors combating wildlife and forest crime (<https://www.unodc.org/>).

ii. National and Regional Laws and Regulations

National governments bear the primary responsibility for adopting, implementing and enforcing regulations for the use and trade of their natural resources. Such laws and regulations may include various measures and requisites that must be met for the legal use and trade of wild species, individuals and commodities, including restrictions and prohibitions for endangered species, licensing systems and penalties for illegal activities.

The 184 countries that are Parties to CITES have an obligation to adopt national legislation with specific domestic measures to implement and enforce the Convention. These measures aim to ensure that trade in CITES-listed species is legal, sustainable, and traceable. Each Party is required to designate at least one Management Authority and one Scientific Authority. Parties must enact laws that allow them to prohibit trade in specimens that violate the Convention, impose penalties for such trade and confiscate specimens that are illegally traded or possessed. The National Legislation Project is a mechanism CITES uses to encourage and assist Parties' legislative efforts and further compel adherence to the Convention. The Secretariat analyses national legislation against the minimum requirements, ranking each in one of three categories ("1" for Parties that meet requirements and "3" for those that do not meet them). Parties that do not meet requirements may be compelled to adopt national legislation for the implementation of CITES, and those with a "3" rating may be recommended for trade suspensions.

Besides these minimum requirements set by CITES, Parties have the right to adopt more stringent domestic measures regarding the conditions for trade, capture, possession, or transportation of specimens of species listed in the CITES Appendices, or impose the complete prohibition on such activities.

Effective regulations take into account the sustainable use of different species and ecosystems, as well as the socio-economic costs and benefits associated with their use, while considering the local social and ecological context. Standards and quotas can be employed to ensure that the use of wild species is compatible with their long-term survival. Such regulations serve as effective safeguards for sustainability when they are accompanied by robust monitoring, adaptive management and strong institutions that contribute to strengthened governance.⁴⁰



CASE STUDY

Sustainable Timber Trade facilitating strengthened legislation and sustainable harvesting

Timber is one of the world's most valuable legal wild species commodities in trade and supports the livelihoods of millions of people along supply chains across the globe. However, the illegal logging industry poses a significant challenge, estimating an annual loss amounting to USD10 billion, according to the World Bank (2019). A substantial proportion of the global trade in timber, knowingly or unknowingly, violates national or international laws. Without effective enforcement measures against illegal loggers and clear understanding by the private sector of their obligations, the future biodiversity of the world's forests looks grim.

TRAFFIC has drafted a series of briefing documents to support countries in understanding National Legality Frameworks and help companies conduct timber trade in compliance with the law. These documents are circulated to timber companies in countries with high timber exports, translated into local languages, to support training on legality frameworks. Their purpose is to reduce the consumption of illegal timber products support enforcement efforts and enhance forest governance. These Frameworks are also distributed to businesses and importing governments to help promote a clear understanding of whether exports adhere to the various regulations of the country in question. For example, compliance with European Union trade-related regulations on deforestation-free products. These regulations include a system of due diligence that operators must undertake to minimise the risk of placing illegally harvested timber or timber products containing illegally harvested timber on the EU market.

Countries have also formed regional political and economic unions to create standardised regulations and action plans for facilitating free trade agreements and regulating and enforcing trade of illicit goods. Examples of these unions include, but are not limited to, the European Union (EU) which has implemented action plans on bird species in the EU and a habitat-protection directive; the African Union (AU) with action plans to support collaboration around the elephant, great apes, and lion trade enforcement; the Association of Southeast Asian Nations (ASEAN) with a Wildlife Enforcement Network aimed at combating wildlife trafficking in Southeast Asia; and the Mesoamerican Biological Corridor aiming to conserve biodiversity in Mexico and Central America. These bodies often serve as effective platforms for countries with shared borders to support enforcement efforts and improve regional economic stability through trade agreements. They can improve their effectiveness in public fora such as CITES and other global meetings by speaking with a unified voice.


C Market-based voluntary standards, certification schemes, benchmarking and reporting initiatives

Market-based voluntary standards and certification schemes cover a range of activities that incorporate a market component, ranging from market creation, through market devices, to drawing on market principle. They include sustainability standards, certification and labelling aimed at promoting responsible trade and consumption of products derived from wild species. These initiatives seek to establish a framework for verifying the sustainable sourcing and legal trade of these products. However, with the breadth of standards in place, each with its own purpose and impact, there is often a great deal of overlap among them, leading to misunderstandings and mistrust regarding their intentions. Additionally, some standards may not be suitable for their intended purpose, further complicating the landscape.

The 2022 Sustainable Use Assessment (SUA) by IPBES considers that the effectiveness of these initiatives, particularly certification and labelling schemes is varied. They have primarily benefited large-scale operations and have generally been limited to high-value markets. These schemes operate on the premise that providing information to consumers will result in a market shift, favouring legal and sustainable products, thereby incentivising and rewarding sustainable practices by producers through increased market share.

Some market-based initiatives have demonstrated effectiveness in promoting ecological, economic, and to some extent, social sustainability. Certification schemes are widely used in large scale commercial fishing and logging practices. However, the extent to which these schemes have successfully supported the transitions from unsustainable to sustainable practices remains uncertain. Furthermore, the relatively high costs to obtain certifications often make them inaccessible to small-scale producers, including IP and LC. Consequently, the promotion of these mechanisms can lead to a power shift around the use of wild species from local people to more powerful organisations.⁴¹

The viability of market-based initiatives is highly dependent on appropriate design, alignment with international trade regulations, monitoring and enforcement are critical to their successful implementation.



CASE STUDY

Preventing misleading “greenwashing”


Greenwashing is a marketing technique employed by companies or marketing firms to mislead consumers or investors by presenting their products as environmentally friendly. The prevalence of greenwashing is alarming and can have negative consequences for consumers trying to make well-informed purchasing decisions. Misleading environmental claims can lead to confusion, and in the context of wild species trade, illegal goods are often disguised as “sustainable” or “eco-friendly”. To protect consumers from exploitation, it is essential to establish clear definitions and standards for green investments, as well as increased regulation and transparency within the industry. Furthermore, consumers should be educated on the potential dangers of greenwashing to empower them and enable informed decision-making.

One such example is seen in the case of Global Forestry International (GFI) – Brazilian Teak Forestry Fund. GFI marketed a green retirement pension scheme, which had underlying investments in the Brazilian Teak Forestry Fund. The scheme was presented as a secure, well-managed, ethical investment scheme that would help protect the Amazon rainforest and support local communities. GFI attracted approximately GBP37M of investment before going into liquidation. Disappointingly, it was later revealed that the investment scheme was, in fact fraudulent. Earlier this year, the Serious Fraud Office (SFO) successfully prosecuted the two directors of GFI. Many of these investments were recommended by now-failed Independent Financial Advisors (IFAs) or SIPP Operators. Thankfully, the Financial Services Compensation Scheme (FSCS) has been able to provide protection to the majority of these investors.

Permits, quotas, taxes and restrictions on trade are often employed to regulate the use of wild species, particularly when these are already overharvested. Nonetheless, the most effective measures often involve incentives and supportive legal frameworks. These may include support for producers, trade and processing groups, granting market access and premium prices through certification and labelling, and conducting outreach and educational initiatives on new policies and laws. However, in situations of sudden and high commercial demand, a variety of approaches might be necessary.

While nature markets related to wild species trade may not be explicitly designed to achieve nature positive and equitable outcomes, it is crucial to recognise their legal and sustainable aspects. This can be achieved through proper verification. CITES already provides clear policies, regulations, institutional frameworks, reporting mechanisms, and compliance measures (including sanctions, trade suspensions and other enforcement actions) for wild species that might become threatened if international trade were unregulated.

The CITES Trade Database has also created a benchmarking scheme by allowing users to search the types of animals and plants, and their derived products involved in trade, the origin and destination of species, source codes, and identify geographical regions most affected by trade. There is existing support for capacity building and technical assistance for governments to strengthen and maintain regulations and institutional capacities. Furthermore, there are globally recognised voluntary certification standards, such as Forest Stewardship Council (FSC), Marine Stewardship Council (MSC), and FairWild, which provide varying levels of assurance.



CASE STUDY

Certification schemes that support local harvesters, the case of FairWild

One in five wild plant species is currently facing the threat of extinction. In 2008, the FairWild Foundation was founded to promote the sustainable use of wild-collected plant ingredients in trade and ensure a fair deal for the communities engaged in harvesting them. Wild plant ingredients are found in a variety of common household products, including food and beverages, traditional medicine, beauty and cosmetic items as well as Western pharmaceuticals. The act of harvesting these widely used goods poses risks to ecosystems and jeopardises the livelihoods of collectors, who often belong to the most economically disadvantaged social groups in the countries of origin. The FairWild Standard assesses the harvest and trade of wild plants, fungi, and lichen against various ecological, social and economic requirements. This standard ensures that harvesting does not negatively impact target local ecosystems, fauna, or flora. Additionally, it guarantees that harvesters receive fair payment and are provided with ethical working conditions.

However, there are fundamental issues associated with standards. One common issue is that a criterion set by standards often rely on the legal frameworks of individual countries, which may not be sufficiently comprehensive or robust enough to meet and effectively measure the means of verification. The implementation of standards necessitates additional development costs for the industry in systems and procedures. Moreover; standard-setting bodies must invest in the training of auditors who will be responsible for verifying these systems.

Some governments prefer to take the lead in the development of standards. This is often driven by discontent with international standard-setting or processes, due in part to local industry challenges and specific problems. It is important to sufficiently consider existing regulatory frameworks to ensure their alignment with the requirements.

Voluntary environmental standards and their certification schemes are some of the most preferred standards adopted by the industry and accepted by governments to fulfil their legal requirements, such as the EU timber trade-related legislation for imported timber-based products. However, when applying a combination of voluntary and mandatory instruments, the overall impact can be enhanced.

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Opportunities for more equitable and nature positive markets



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Governance interventions

Like political will, good governance underpins efforts to prevent and tackle criminality, including wild species trafficking and establishing sustainable and transparent supply chains. It serves as the foundation for decision-making and its implementation (or a decision not to implement), playing a crucial role in creating a legally functioning nature market. The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) has identified eight major characteristics that define good governance: participation, consensus, accountability, transparency, responsiveness, effectiveness, efficiency, equity, inclusiveness and adherence to the rule of law. It ensures that corruption is minimised, considers views of minorities and gives voice to the most vulnerable members of society in decision-making processes. It is also responsive to both present and future needs of society.⁴²

Robust governance systems demonstrate accountability and adaptability in response to changes in social and ecological conditions. They incorporate participatory mechanisms that are more effective when implemented through inclusive processes. These processes should integrate both customary and statutory laws, include the participation of IP and LC in policy design, recognise gender differences and undergo thorough monitoring. Strong governance systems are also usually characterised by transparent distribution of roles and responsibilities, reporting and communication channels, built-in feedback mechanisms and a comprehensive understanding of operational realities.⁴³

i. Stronger laws, regulations and policies and their enforcement

The IPBES SUA (2022) states that policy instruments that are aligned at the international, national, regional and local levels and maintain coherence and consistency with existing international obligations are more effective in supporting sustainable use of wild species, while also minimising negative and unintended consequences.

Context-specific policies are needed to ensure the sustainable use and trade of wild species. In order for these policies to be effective, they need to consider the local social and ecological conditions in which these uses take place. Actions to empower IP and LC and respecting their rights, access and customary rules are fundamental to the development of context-specific policies.⁴⁴

Policy instruments and tools will only be effective if they ensure fair and equitable distribution of costs and benefits resulting from the sustainable use of wild species. Policies that fail to overlook social equity increase the risk of unsustainable use of wild species. Policies must not criminalise or deprive IP and LC of access to and equitable distribution of costs and benefits.⁴⁵

On the flip side, wild species trafficking must be treated as a serious crime. A number of international organizations and high-level commitments, including UNODC,⁴⁶ INTERPOL,⁴⁷ and the UN General Assembly,⁴⁸ have recognized that trafficking in some species sits alongside other forms of transnational organised crime. As a result, it must be prioritised in law enforcement work programmes alongside other serious offenses such as human, drugs and arms trafficking. Some countries have taken this on board, handing out sentences of ten or more years to the most prolific offenders.⁴⁹ In many parts of the world, wild species trafficking is still considered a low-risk/high-reward enterprise due to the relatively lenient punishments received in comparison to the amount of money earned in the transaction.⁵⁰

Treating wildlife trafficking as a serious crime and supporting the livelihoods and sustainable use activities for IP and LC are not mutually exclusive. In fact, involving IP and LC in enforcement and conservation of wildlife has proven to be successful. The International Institute for Environment and Development (IIED) assessed effective approaches aimed at engaging communities in tackling illegal wildlife trade across three regions. The study found that strengthening disincentives for illegal behaviour and increasing incentives for wildlife stewardship were the most effective strategies.⁵¹

Many of the initiatives aimed at strengthening disincentives for illegal behaviour focused on improving the training and equipment of local community rangers/guards. They also emphasised strengthening collaboration between community members and professional anti-poaching response units. On the other hand, initiatives aimed at increasing wildlife stewardship involved activities to generate financial and/or non-financial benefits from wildlife. Interestingly, very few made these incentives conditional on reducing poaching activities.⁵²

ii. Robust and adaptive institutions

Robust and adaptive institutions refer to regulatory frameworks and institutions that are resilient, flexible and capable of adapting to changing circumstances and new challenges related to, in this case, the legal and illegal trade in wild species. Strong institutions, including customary institutions, are essential to the future of sustainable use of wild species.⁵³ Institutions that support collaborative learning and share interests in sustainable use can be more effective than centralised systems focused on top-down governance.

These institutions typically operate within a strong legal framework, employing effective enforcement mechanisms, and fostering close collaboration with other relevant agencies and stakeholders from different sectors, including indigenous peoples and local communities. They may implement a range of measures such as monitoring trade routes and markets, gathering intelligence, conducting capacity building programmes for law enforcement officers, and undertaking public education and awareness campaigns. Policies and tools are most effective when they consider not only the social and cultural contexts in which they are applied but also the ecological context. Additionally, they are strengthened by robust and adaptive institutions that are inclusive, include participatory mechanisms and can adjust to ecological and social challenges in the sustainable use and trade of wild species.⁵⁴

In addition, these institutions may adopt innovative approaches to combat trafficking, such as utilisation of technology for tracking and identifying illegal wild species trade and markets. They can also promote sustainable alternatives to the use of illegal wild species products and collaborate with private sector actors to encourage sustainable business practices.

Robust formal or informal institutions, equipped with clear mechanisms to monitor, detect and enforce rules, are relevant across various forms of governance. Implementing transparency initiatives connected to legally mandated accountability measures will enhance trust in these institutions.⁵⁵

Overall, robust and adaptive institutions are critical for combating trafficking and ensuring the conservation and sustainability of legal wild species markets.

iii. Improved resource governance, transparency and community empowerment

Indigenous peoples and local communities⁵⁶ have engaged in the trade of wild species and materials derived from them for millennia. Trade is an important source of acquiring goods and monetary income for many IP and LC worldwide, operating in both informal and formal markets. Additionally, trade provides multiple benefits beyond income generation.

The rights, access, participation and empowerment of IP and LC are foundational to sustainable use and for those who are dependent on wild species.⁵⁷ According to the IPBES SUA (2022), IP and LC manage fishing, gathering and terrestrial animal harvesting in about 40% of terrestrial conserved areas. It is also noted that deforestation rates are generally lower on indigenous territories, particularly where land tenure is secure. The extensive knowledge of IP and LC regarding the use of wild species, including monitoring practices, is widely recognised. Therefore, policy options would be strengthened by acknowledging and supporting multiple forms of knowledge, including indigenous and local knowledge.

Actions aimed to empower indigenous peoples and local communities and respect their rights, access and customary rules are fundamental to developing context-specific policies. It has been widely recognised that to succeed, policy instruments and tools need to be tailored to local ecological and social contexts. Respectful engagement with IP and LC will enhance national and international policy related to sustainable use of wild species at large.

The use of wild species takes place within landscapes and seascapes characterised by diverse ecologies, cultures, politics and histories, all of which impact policy outcomes.⁵⁸ It is important for policies and regulations to recognise and account for the diversity of uses and benefits associated with a practice to avoid adverse social and ecological outcomes. These consequences tend to be magnified in cases where there are differences between large-scale commercial actors and subsistence or small-scale actors. Despite the widespread recognition of the need for context-specific policies, it is still commonly ignored.

iv. Political Will

Political will is the first and crucial step towards good governance, and lack of political will often goes hand-in-hand with a failure of anti-corruption efforts. Political will involves decision-makers who share a common understanding of a particular problem on the formal agenda and are committed to supporting it with a commonly perceived, potentially effective policy solution.⁵⁹ Transparency International defines political will as a combination of “political want, political can and political must”.⁶⁰ A series of high-level commitments in various fora have made great progress towards addressing wild species crime and nature markets. However, it is the operationalisation of these commitments that makes political will such an elusive target.

Examples of high-level commitments in the wild species trade sphere include the 2014-2018 London, Kasani, and Hanoi Illegal Wildlife Trade Conference Series and outcome statements. These conferences resulted in commitments at the heads of state level, focusing on strengthening legislation, capacitating law enforcement, reducing demand and supporting IP and LC. The 2021 Resolution on Tackling illicit trafficking in wildlife adopted by the United Nations General Assembly (UNGA) reaffirmed and built upon other Resolutions on wildlife trafficking adopted by the UNGA in 2015, 2016, 2017 and 2019. The resolution recognised the legal framework provided by CITES and urges UN Member States to treat wildlife trafficking as a serious crime.

These high-level statements and resolutions come on top of obligations that States have entered into as part of the membership in the international and regional agreements mentioned above. However, raising the profile of these commitments may raise the obligation to adhere to them and increase political will. Even with treaties that mutually compel implementation and the presence of high-level statements, a lack of political will can hinder effective implementation. Transparency International reviewed other bottom-up factors that may support building political will. These factors include seeking critical collaboration, demonstrating clear benefits of anti-corruption policies, engaging in lobbying efforts and making use of policy reforms.⁶¹ However, it is important to note that without adequate financial and human resources to deliver political will, the ambitions and commitments may fall flat.

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Traceability

Over decades of research conducted by TRAFFIC on wild species trade, a commonly recommended solution to resolve issues related to identifying the provenance of wild species products was the introduction of traceability systems along the supply chain. The purpose of these systems was to add transparency and allow identification of products that come from legal and sustainable sources. The effectiveness of traceability systems relies on the willingness of individuals to employ such tools or the presence of accountability mechanisms, such as regulations, that compel their use.

i. Traceability in the forestry industry

Traceability requirements in the forestry sector are very much dependent on the needs of the stakeholders. Governments that exploit their forests require traceability from the stump or logging area to the first point of transformation or export. This ensures the accurate collection of revenue from the harvest of logs and helps prevent inter-mingling with other logs from other supply chains, such as those from illegal sources and illegal logging activities. However, government traceability systems and platforms are often lacking transparency, and the information and data they hold are not accessible to the public. As a result, only the government has the ability to monitor and correct any flaws or misuse of the traceability systems.

Companies involved in the movement and trading of timber along the supply chains may necessitate traceability to meet legal requirements, such as the due diligence requirements of the US Lacey Act, the EU Timber Regulation, the Australian Illegal Logging Prohibition Act, of the South Korean Act on the Sustainable Use of Timbers, among others. These acts do not prescribe detailed systems to determine legality at the source and along the supply chain. Many companies depend on voluntary certification schemes to audit their supply chains, using chain-of-custody (CoC) certification to make such determinations. Certification audits can be conducted by the company itself (first party), their associations (second party), or through registered certification bodies (third party), mainly through organisation like the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC), and a few national certification schemes. The standards developed and used in these certifications vary, depending on the level of detail, complexities and transformation of raw materials within the monitored supply chains. Companies also use the services of CoC to ensure legality in their supply chain for marketing purposes and to enhance their reputation with their customers and the public.

The traceability system consists of a mix of government procedures and documentation, such as licensing, permits, certificates, and various business processes and documents. Technology tools have been developed to overlay parts of the system, especially for primary products such as logs, lumber and sawn timber. Still, the use of technology becomes more challenging when it comes to further processed timber. The complexity of supply chains and the transformation of raw materials as they move along the chains add further complication to the system and tools used, thereby reducing confidence in achieving complete traceability in the system back to the stump.

ii. Traceability in the fisheries sector

Traceability systems have also been effectively employed in the fisheries sector. In response to concerns raised by importing countries regarding the provenance of CITES-listed shark and ray products and the transparency around their sourcing, TRAFFIC conducted a review in 2015 focusing on CITES listed species and their traceability requirements. A number of species were reviewed including sturgeon, crocodiles, queen conch, etc., which had requirements that went beyond the normal permit/certificate requirements of CITES. This was primarily due to instances of illegal activities where products were falsely claimed to be from legitimate permitted sources.⁶² A common finding from the review emphasised the need for a traceability system that is tailored to the specific supply chain and products in question.

Following this 2015 review, TRAFFIC developed a traceability system for sharks and rays, known as SharkTrace. The development of this traceability system spurred due to the ever increasing need for transparency in the trade of shark and ray products. Since 1996, TRAFFIC has been undertaking major trade reviews of shark and ray products, highlighting the urgent need for traceability in supply chains.

Effective monitoring of shark stocks and transparency around which the species are being caught and traded are a vital first step in shark conservation. Species identification tools can play a vital role in achieving these objectives by:

- supporting enforcement efforts to intercept illegal catches, and;
- contributing to existing fisheries management measures.

SharkTrace was developed as a traceability solution, commonly known as “Chain of custody”, to address these gaps and act as a crucial tool to combat the current over exploitation of sharks. Its implementation not only instils consumer confidence in the legality and responsible management of the products they buy but also provide essential protection to species already threatened by trade. This simple, user-friendly and cost-effective app is explicitly designed for use on board of fishing vessels, in processing plants and during transport, ensuring transparency throughout the supply chain.

It aims to enable governments and traders to verify the legality of shark and ray products, while also assisting regulators, including those implementing CITES, in excluding products that do not meet these criteria.



CASE STUDY

SharkTrace

To develop SharkTrace, it was imperative to review a particular fishery's supply chain, understand critical events as they occurred and decide which data to capture in a traceability system. This process also involved developing software capable of capturing, storing and managing the information for future use. The software needed to be simple to use and compatible on the cheapest smart phones, transferable to other fisheries/locations/species and capable of supporting multiple languages through the use of tags and others while being cost-effective. Due to the remoteness of some fishing activities, the software also needed to be downloadable when suitable connections were available after the recording was made.

SharkTrace has the potential to be customized for any product or taxa based on adequate knowledge and review of the supply chain involved. In addition, when considering transparency, it is important to take into account factors beyond sustainability and legality, such as risks of Zoonotic disease,⁶³ slavery, etc. Such concerns could be addressed by appropriating suitable critical events along the supply chain that enable the identification and exclusion of sources associated with such issues.

Digitalisation

Digitisation of the documentation process has been an important anti-corruption trend in many governmental departments. In the area of illegal wild species trade, several high-level corruption cases in recent years stemmed from the ease of misuse associated with paper permits.⁶⁴ The roll-out of e-permitting has been underway within CITES. The CITES Secretariat explains that the system “helps government agencies to target their inspections better and identify those actors that break the law. Implementing eCITES facilitates collaboration and electronic information exchange with Customs and other border control agencies for efficient control of CITES trade. Parties will benefit from increased transparency, prevention of fraudulent permits, faster and more robust reporting and better data to decide on non-detriment findings. Finally, simplified and automated procedures could create new business opportunities for compliant traders and rural communities”.

Similar systems will need to be introduced throughout supply chains by multiple authorities to ensure that corruption risks are limited.

Transparency and public access to information

Public access to information is usually guaranteed by Constitutions as well as separate laws, such as Freedom of Information Acts. Currently, over 130 countries in the world have enacted such legislation. However, many countries restrict certain types of information (environmental or corporate) on the grounds of national security or trade secrets. In contrast, some fail to provide the mandated information despite the laws, other implementation processes tends to be slow and inconsistent. To address these challenges, there are a range of global initiatives and agreements, such as Open Government Partnership, FATF Coalition and OECD, to create transnational standards and platforms for data access, particularly concerning some types of information like Beneficial ownership of companies.

With increased pressures on supply chain actors to comply with new laws and regulations, whether mandatory or voluntary, the risk of fraud and corruption in trying to show compliance “on paper” is likely to increase. In other words, there is an increasing likelihood that efforts to legitimise illegal or unethical commercial activities and trade will rise in the coming years. Key dangers include creating counterfeit or illegitimate documentation, including land zone decisions, fishing rights, trade permits, veterinary records and corporate records, in order to hide actual trade and source of origin patterns.

Corruption is the leading facilitator of many nature crimes, including the illegal wild species trade.⁶⁵ Countries that possess some of the largest biodiversity in the world suffer from some of the weakest rule-of-law regimes. Even with multiple layers of international and national regulations, nature crimes repeatedly occur due to deliberate targeting of key actors along the supply chains, often orchestrated by organised crime networks. These actors might include local communities in source countries, customs and border officials, permit-issuing officials and law enforcement. The private sector is not exempt from corruption risks, as companies involved in local and transnational transportation, captive breeding facilities, zoos, pet shops and the finance industry are also vulnerable. Hence any scheme that aims to limit the profitability of nature crimes must incorporate effective anti-corruption tools and measures.

CASE STUDY

Strengthening Alliances to Counter Environmental Corruption

Corruption is becoming synonymous with alarming rates of biodiversity loss and is driving the expansion of illegal wild species markets. Corruption fosters alliances between criminal networks and dishonest corporations, exploiting the environment with the complicity of those entrusted with its protection. But there is also a growing influx of investments into projects that address these same environmental challenges. The demand for green finance in developing countries and emerging markets is estimated at USD one trillion per year and rising.⁶⁶ To counter the environmental corruption that is enabling the destruction of our planet, undermining human rights, and threatening the global transformation to environmentally sustainable economies, a new practitioners’ forum has been established. This forum brings together some of the world’s leading conservation and anti-corruption organisations, including Transparency International, TRAFFIC, World Wildlife Fund (WWF) and the Basel Institute on Governance.

Conducting a corruption risk assessment on any new regulatory initiative is an essential first step. Consequently, it is imperative to incorporate anti-corruption tools, such as multiple checks, traceability (see above), document digitisation and ensuring general transparency of the process. These measures are essential to effectively curb corruption and fraud.

Internal controls and transparency are important, but they are often not a sufficient way of keeping corruption risks in check. Given that governments and their agencies in many countries are prone to collusion in corruption, it is ideal to have an independent external entity that can access at least some information on supply chain actors, including government actions. In practice, this often calls for public access to various datasets and indicators that document decisions, impacts and goods or money flows within the system.

Some of the key datasets would include governmental decisions on the sale or rent of natural resources, related subsidies and subsequent trade flows of such products. Information on beneficial ownership, government contracts and other details (sales, taxes paid, cross-border transactions) about the companies involved in the natural resource sector are also often useful for analyses of any illegal activities. Finally, data on law enforcement efforts including prosecutions, court verdicts, non-judicial sanctions, can be instrumental in tracking the effectiveness of government agencies in enforcing the legislation (see example from TRAFFIC's work using the big data approach below).

Overall, there is a noticeable trend towards making information accessible to the public. Along with the increasing availability and speed of the internet, more information is being provided online, 24/7 (Open Data Barometer Global Report). Combined with the sharply rising number of internet users in both professional and personal environments, the potential for using this increased data access to monitor both companies and governments is enormous.



CASE STUDY

Publicly available information on the Wildlife Trade Portal

The Wildlife Trade Portal is the most comprehensive open-access repository of wildlife seizure data. Recognising the need to make information related to illegal wildlife trade publicly available, TRAFFIC developed a user-friendly interactive tool. It allows the general public to search the open-source area of TRAFFIC's wildlife trade incident database, known as WITIS (the Wildlife Trade Information System) and filter the results. These search results are displayed not only as a list but also in a dashboard format, showing, for example, a visual summary of the data through charts or maps. Users can gather in-depth information about specific incidents, such as the species or groups of species involved, products seized, or the location, and export the results for further analysis.

Monitoring and Multistakeholder Engagement

The Relational Database

Monitoring wild species trade is synonymous with collecting, processing, storing, and querying wild species trade data. Using a relational database model ensures consistent data collection, logical processing, secure storage and easy querying.

In a relational database, data is presented to the user via a relational model, which in its simplest form, displays information in a tabular format, resembling a table with rows and columns.⁶⁷ The table stores information about a single “entity type”, such as a person, a location, or a species. A row in the table represents an instance of that entity type, for example, “Mr Smith”, “London”, or “Panthera leo”. A column in the table represents a value, for example, “Age”, “Country”, or “Genus”.

In a relational database, a relationship is formed by connecting two tables. There are a number of benefits to this model, such as its flexibility, its support of ACID (Atomicity, Consistency, Isolation, Durability) properties, its reduction of record duplication and its ease of querying data.⁶⁸ Relational databases work best when managing structured data types, such as names, dates, addresses, numbers, coordinates, etc., rather than unstructured data types, such as documents, media files, communications, etc. For this reason, relational databases work well for storing information about people, objects, locations and events.

TRAFFIC's Wildlife Trade Information System (WITIS) database runs on a relational model. This allows us to find connections between different data points, for example, showing if a wild species trade incident implicates a particular person, involves a certain species, or a specific location. Viewing these data connections at a micro level helps in understanding the intricacies of a specific wild species trade incident, while considering them at a macro level helps identification of patterns in the data that can uncover emerging trends in wild species trade.

CASE STUDY

Elephant Trade and Information System (ETIS)

In response to the increase in elephant poaching, illegal ivory trade and the subsequent decline in elephant populations, CITES Parties passed a Resolution on Trade in elephant specimens (Res. Conf. 10.10 (Rev. CoP19)) at their 10th meeting of the Conference of the Parties. The Parties established two programmes to monitor illegal elephant killing and the illicit trade in elephant specimens: Monitoring of Illegal Killing of Elephants (MIKE) and Elephant Trade Information System (ETIS). The objectives of MIKE and ETIS are to establish an information base on illegal killings and trade, analyse trends and assess linkages to decisions taken by the CITES Parties.

TRAFFIC has been managing ETIS since its inception, and Parties are urged to submit data annually on seizures of elephant specimens to the ETIS database. Also known as ETIS Online, the database holds over 35,000 records on seizures of elephant specimens from over 100 countries and spans over 30 years. Using advanced, peer-reviewed statistical methods to account for differing reporting and seizure rates, TRAFFIC analyses the ETIS data to produce reports on long-term illegal ivory trends and identify emerging trade flows. Providing results on the latest trends ensures that informed and effective conservation policy is reached by the CITES Parties, helping to protect elephants from threats as they emerge.

The ETIS report serves as the foundation to identify Parties that are most affected by illegal trade and may require attention under the National Ivory Action Plan (NIAP) process. Parties selected by the CITES Standing Committee to participate in the NIAP process are encouraged to develop plans to address critical areas of concern. These include the enactment of national legislation, increasing national and international law enforcement efforts and collaboration to reduce illegal ivory trade. Therefore, the ETIS programme is uniquely situated to provide decision-makers with evidence-based data to achieve on-the-ground policy and conservation outcomes at national and international levels.

CASE STUDY

Connecting national enforcement agencies across Europe and Africa through Trade in Wildlife Information eXchange (TWIX)

Law enforcement faces an ongoing challenge in dealing with transnational wildlife smuggling networks, particularly in ensuring smooth and timely communication between nations. To address this issue, TRAFFIC developed the TWIX platform, an online tool available to enforcement and management officials responsible for implementing international wildlife trade and CITES regulations. The platform helps connect officials across borders, enabling them to rapidly share information and expertise.

TWIX is available to eligible parties operating within the regions currently supported by one of the four operational TWIX platforms: (Europe (EU-TWIX), Central Africa (AFRICA-TWIX), Southern Africa (SADC-TWIX) and Eastern Africa (Eastern Africa-TWIX)). To be eligible, parties must fulfil one of the following roles: Customs, CITES Management Authorities, wildlife and forestry services, police, prosecutors, criminal justice departments or international organisations such as EUROPOL, INTERPOL or the World Customs Organization.

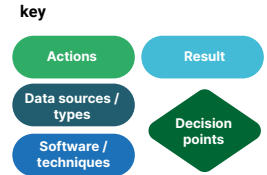
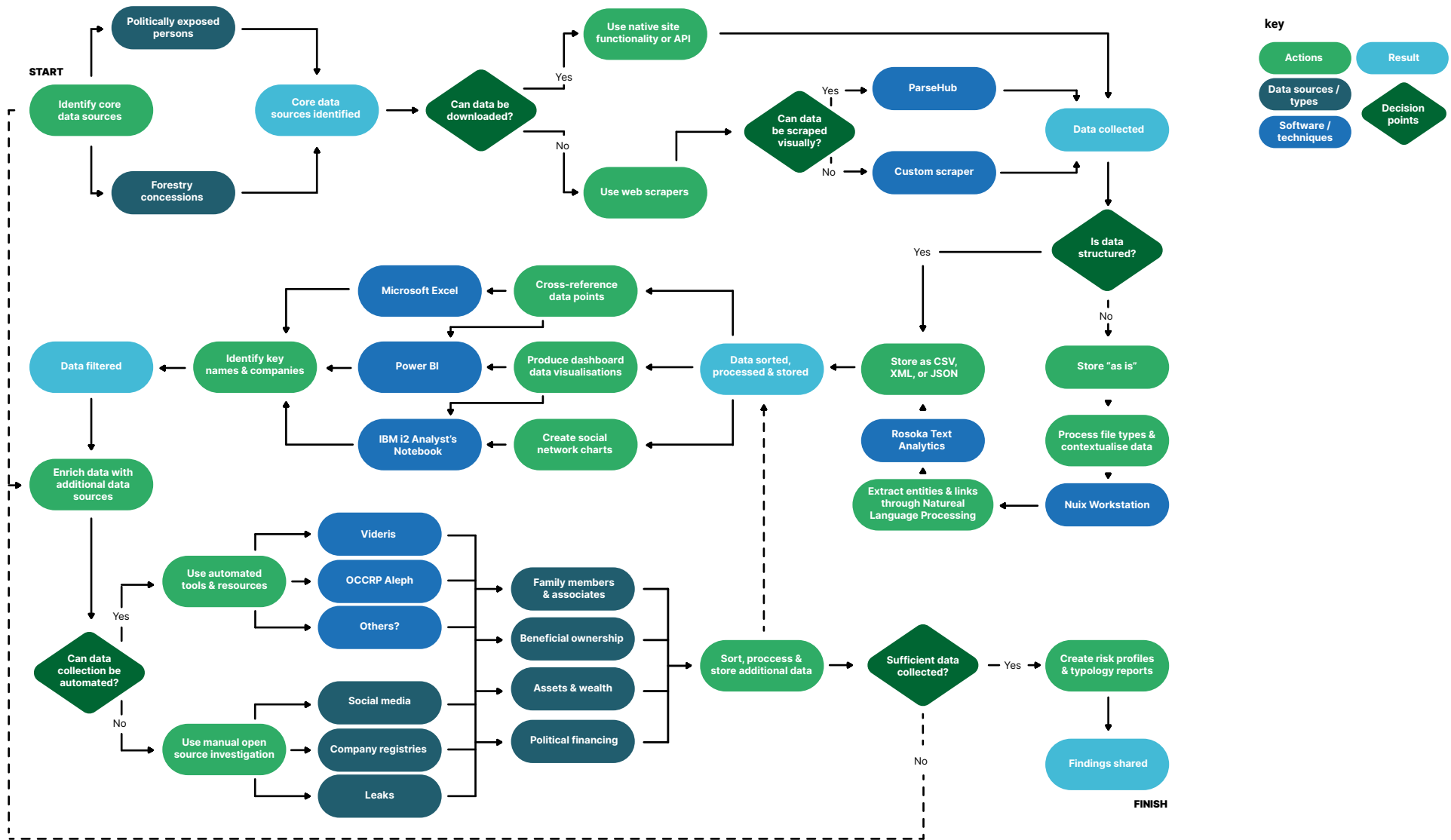
Gathering of Open-Source Intelligence (OSINT) via Big Data Analytics

Open-Source Intelligence, or OSINT, refers to intelligence collected from publicly available sources, predominantly (and increasingly) from the Internet, but also via other mediums such as radio, television and print media.⁶⁹ In the context of OSINT, the gathered information usually refers to individuals or organisations, aiming to better understand their characteristics and analyse potential threats. OSINT sometimes involves using big data analytics, employing analytical techniques such as data mining, data visualisation, text analytics and artificial intelligence to narrow down and extract valuable insights from large data sets.⁷⁰

The use of big data analytics offers a way to increase transparency by uncovering patterns of bribery and other corrupt acts. Indeed, these techniques have proven to be effective in identifying corruption. For example, investigative journalists and data analytics start-ups used such techniques on the Panama Papers – a database of 11.5 million leaked documents – to reveal the opaque dealings of offshore companies, trusts and foundations that use tax havens to hide the wealth of the global elite.⁷¹ By combing through available datasets of administrative information and applying the appropriate analytical tools, meaningful relationship can be found among different pieces of data on a large scale.

TRAFFIC has applied these techniques to uncover corruption risks in the logging sector, specifically when government agencies allocate companies the rights to harvest timber. Following extensive research and consultation with experts and stakeholders, TRAFFIC created a data flow model that outlines the necessary processes to achieve this.

Figure 2 Data flow model to uncover corruption in the logging sector



The data flow model developed by TRAFFIC begins with collecting core data such as lists of Politically Exposed Persons (PEPs) and registries of forestry concessions. Web scraping tools such as ParseHub are used when native site functionality is not possible. Data is then stored and processed, with structured data stored in formats such as CSV, XML, or JSON, while unstructured data is processed using digital investigation tools such as Nuix Workstation and Natural Language Processing (NLP) tools such as Rosoka Text Analytics. Analytical software such as Microsoft Excel, Fuzzy Lookup Add-In for Excel, Power BI, and i2 Analyst's Notebook is then used to query and analyse the data to identify entities of interest. Finally, social media sites, company registries and leaked documents are used to enrich the data through the use of tools like Videris for OSINT extraction. The insights gained from this process can be used to produce a more comprehensive risk profile for further investigation and action.

iii. Monitoring of enforcement

Effective monitoring systems are fundamental for those in charge in addressing and combating the illegal wild species trade. In the case of governments, while many have internal monitoring systems and auditing departments, the vast infrastructure of government bodies can make it difficult in ensuring frequent audits of individual Ministries or sectors. In the context of wild species markets, this in turn means that illegal activities may go undetected for long periods, perpetrating the continued exploitation of endangered species. Additionally, without proper enforcement measures in place, recommendations made in audit reports may not be effectively implemented, making it challenging to address the root causes of the problem.

There are also auditing authorities that oversee the private sector. For example, the UK's Financial Conduct Authority (FCA) focuses on reducing the number of financial sector firms with inadequate harm-prevention controls entering the market, delivering good outcomes for consumers and taking assertive action on market abuse. While their primary focus is consumers and market protection, the use of advanced data can and should be tailored towards identifying firms aiding in the harm to nature. Other regulatory authorities can take a harder stance towards what constitutes market abuse and harm, including the degradation of biodiversity facilitated by those organisations they oversee. This can be done by re-framing the definition of financial crimes, an area where the FCA is committed to reduce and prevent, to include profiting from businesses that conduct crimes against the environment.

However, there remain three outstanding issues:

The lack of data and analysis hinders the assessment of the effectiveness of sanctions as a suitable measure of justice. Currently, there is a lack of examples where sanctions have been used, whether successfully or unsuccessfully. In other crime areas, sanctions have been used when governments are unable or unwilling to act against criminals who engage across jurisdictions. This can be used as a comparable measure, as offences such as cybercrime often also transcend international boundaries and necessitate approaches beyond traditional law enforcement techniques. Alongside this is the point that sanctions simply restrict access to certain identifiable assets, allowing offender(s) to remain at liberty and continue their illicit operations.

The current existing regimes, orders and legislations primarily focus on implementing financial sanctions for auxiliary crime types or related to illegal wild species trade, which is a more specific subset of crimes within the realm of environmental crimes. However, there is a lack of provisions that allow governments to impose international restrictions on those engaging in or facilitating broader environmental crimes such as deforestation and biodiversity loss.

The need for governments to act and recognise the impact of environmental crimes against their societies.

iv. Multi-stakeholder engagement

Inclusive and participatory policies and regulations will strengthen the sustainable use and trade of wild species. A multi-stakeholder approach, characterised by the absence of power imbalances, promotes buy-in, collaboration and expansion of the knowledge base for decision making. Actions to promote inclusive and participatory processes include endorsing policies with clear guidance on procedures for decision-making and representation, and building capacity that enables all actors to fully participate.⁷² Multi-stakeholder engagement is most effective when used to create consensus on complex and layered issues or opportunities, where competition is not an influential factor, and where common goals and objectives serve mutual benefit. Although this type of approach often requires more time due to its participatory and consultative nature, it can be more efficient overall in terms of any required sectoral or industry shifts in behaviour or responses to any existing or emerging topics. This method is increasingly being utilised in the financial sector to generate shared understanding and develop approaches that improve collective understanding of complex topics, with the ultimate goal of compliance and greater efficiencies.

CASE STUDY

Multi-Stakeholder Approach to Tackle Illegal Wildlife Trade and the United for Wildlife Financial Taskforce

The United for Wildlife Financial Taskforce was launched in 2018 during the London Conference on Combating Illegal Wildlife Trade. The Financial Taskforce is a consortium of 45 leading global financial institutions and resource partners designed to raise awareness of illegal wildlife trade in an evidence-based and consistent manner. The taskforce also refines risk profiling systems and reporting of suspicious activities of proceeds facilitated through the formal banking sector. This multi-stakeholder model allows information to be disseminated evenly and consistently across the membership and directly responds to the knowledge gaps identified by consortium stakeholders. It provides a space for active participation and places partners on an even playing field to collectively address common challenges, improve information sharing between partners and develop sector-appropriate responses.

To bridge knowledge gaps concerning wildlife trade issues, a series of products and standardised training packages have been developed since the launch of the Taskforce. These resources include a Case Digest on financial flows and payment mechanisms behind wildlife and forest crime, jointly produced by TRAFFIC, UNODC, and other Financial Taskforce partners. This document has been routinely cited as a critical document for stakeholders in both the private and public sector. Notably, it was a central reference document used in the design and focus of the South African Anti-Money Laundering Integrated Task Force (SAMLIT). Furthermore, it assisted financial institutions internally with refining their intelligence systems and algorithms to identify suspicious transactions. Resources like the Financial Crime Toolkit led by the UK Government, and dedicated certificate training courses developed by WWF for the Association of Certified Anti-Money Laundering Specialists (ACAMS) have provided critical guidance to sector stakeholders.

Role of the finance sector in eliminating illegal and unsustainable nature markets and promoting sustainable, equitable, nature positive markets

The Finance sector comprises many different sections of business, from retail banking for the general population, to business banking investors and shareholders. Banks aim to maximise their profitability while adhering to the risk tolerance parameters set by regulators.

The Principles for Responsible Banking drafted by the Equator Principles acknowledge the importance of global climate goals. Still, despite the signing of the Paris Agreement, investment banks have continued to funnel trillions of dollars into fossil fuels.

The risks of climate change and biodiversity loss need to be articulated to the financial sector. These risks should be considered in future profit/risk calculations, as the profound consequences of these issues can lead to severe market disruption and financial losses. The Dasgupta Review suggests that natural resources should be viewed as finite and eroding rather than infinite and indestructible. This thinking should guide financial institutions in their decision-making on wild species trade at both project and local level.

The limitations placed on financial institutions regarding risk also define the types of investment that they can pursue. Unfortunately, many types of green investment are considered too risky and have insufficient liquidity, which undermines financial institutions' sufficient confidence in their ability to sell their positions if they choose to exit the investment due to underperformance.

Nature Finance Short-term vs Long-term Investments

As stated previously, illegal, but above all unsustainable, wild species trade not only threatens the survival of many species, but also significantly impacts ecosystems, human health and exacerbates climate change impacts.

Investors who incorporate Environmental, Social, Governance (ESG) factors into their investment decisions can help address the issue of illegal and unsustainable wild species trade. They can achieve this by avoiding investing in companies that engage in such practices and instead investing in companies that promote sustainable wild species management and conservation. For instance, some companies may invest in technologies that help reduce the demand for illegal products derived from wild species or support conservation efforts in areas with high levels of poaching.


Valuable lessons can be learned from other nature markets, as ESG factors were considered to correlate with good business practice and profitability through much of the early 2000s. Since then, changes to the global economy, coupled with disruptions from the war in Ukraine, have led many oil and gas suppliers to produce huge profits in the early 2020s. In fact, the combined profits of six global oil companies exceeded USD219 billion in 2022. This high profitability has led to a situation where indexes and portfolios that excluded oil and gas, such as ESG, comparatively underperform. Consequently, there has been a cooling in enthusiasm for green investment.

These figures undeniably show the short-term profitability of continuing to invest in carbon-heavy industries. However, the data around climate change and ecosystem degradation is becoming equally undeniable, with unknown tipping points. The majority of human industry and business relies on extracting resources from the natural world. As ecosystems suffer damage, these existing businesses are exposed to hard to assess variables and risks of catastrophic losses as seen from wildfires, flooding and the depletion of water supplies.

Specific trends are unfolding around the globe, and some of them are at such colossal scale or dependent upon the behaviour of a large percentage of the global human population that their inertia of scale suggests they will likely continue for some time. These trends include the increasing urbanisation of the human population, global population growth and the increasing global temperatures. While changes related to global temperatures may take centuries to materialise, they may not be immediately noticeable in the coming decades.

Conversely, investing in sustainable agriculture and food production can help reduce the pressure on wild spaces for human occupancy and food production, thus reducing the impact on biodiversity loss. Sustainable agriculture practices can include using less water, reducing pesticides and fertilisers, and implementing crop rotation to enhance soil health.

ESG investing can play a crucial role in addressing the issue of illegal and unsustainable wild species trade as well as biodiversity loss. By investing in companies that promote sustainable wild species management, conservation and sustainable agriculture practices, we can contribute to a more sustainable future for all while also creating long-term value.



CASE STUDY

Water - an example

Biodiversity conservation and healthy wild species populations are essential for providing ecosystem services, such as clean water. The global water crisis is a threat to human health and livelihoods, as well as countless plant and animal species. Without proper conservation efforts, we face the risk of losing critical species that contribute to maintaining a healthy and sustainable ecosystem.

One solution to address the ongoing water crisis is the implementation of water funds. These funds invest in upstream habitat protection and agricultural land management, resulting in improved water quality and quantity. They also provide shared benefits such as pollution control and biodiversity conservation. Investing in long-term water security ensures that future generations will have access to clean and safe water.

Investing in environmentally responsible sectors, such as renewable energy, is crucial for preserving biodiversity and ensuring long-term success. While short-term profits may be gained from industries such as fossil fuels, they are not sustainable and can lead to significant losses in the future. In contrast, environmentally responsible investments can lead to financial stability and nature positive outcomes.

CASE STUDY

Transforming the Unsustainable Crocodile Skin Market

Building on the governance options analysed in the report, we present a case study that illustrates how these interventions can facilitate the transformation of illegal markets, which contribute to biodiversity loss, into legal and sustainable ones. This transformation leads to markets that deliver nature positive and equitable outcomes.

Transforming the Unsustainable Crocodile Skin Market: Key Governance Interventions for Biodiversity Conservation, IP and LC Empowerment, and Nature Positive Outcomes

Overview

The global market for crocodile skins and leather is primarily driven by the fashion industry, which uses the material to create luxury goods such as handbags, shoes, and belts. CITES regulates the crocodile skins trade, and legal trade is typically limited to a few countries that produce crocodile skins through sustainable and humane methods.

According to a report by ResearchAndMarkets.com,⁷³ the global crocodile skin market size was valued at USD973.3 million in 2020. It is projected to reach USD1.5 billion by 2028, growing at a Compound Annual Growth Rate (CAGR) of 5.5% from 2021 to 2028. This estimation is based on a comprehensive analysis of the crocodile skin market, including factors such as market size, market share, growth rate and trends.

History

At the turn of the last century, the global demand for crocodile leather and fashion items almost drove many crocodile species and populations to the brink of extinction.⁷⁴ This was primarily due to the commercial hunting and unregulated trade of crocodile skins and other products derived from these species.⁷⁵

The unsustainable exploitation of crocodiles for their highly valued hides and other products has a long-standing history. In the late 1800s, the demand for crocodile skin grew significantly as the use of the material in fashion items such as handbags, shoes, and belts became increasingly popular. This demand continued to grow in the early 1900s, leading to the establishment of a thriving crocodile leather industry in many countries.⁷⁶

The over-exploitation of crocodile populations for commercial purposes, compounded by habitat loss, hunting and poaching, led to a significant decline in their numbers, pushing some species to the brink of extinction. One such example is the American crocodile (*Crocodylus acutus*), which was almost wiped out in the 20th century due to commercial exploitation, with some populations declining by up to 90% in certain areas.⁷⁷

However, conservation efforts, including establishing protected areas, implementing sustainable harvesting practices and regulating the trade in crocodile products have contributed to the recovery of many crocodile species. Today, many populations have stabilised, and in many other cases, have even increased, enhancing the livelihoods of IP and LC.

For instance, according to the IUCN Red List, Australia's saltwater crocodile (*Crocodylus porosus*) population is now considered stable and categorised as Least Concern after being listed as Endangered in the 1980s. Similarly, the American crocodile has made a remarkable comeback and was reclassified from Endangered to Vulnerable in 1994.⁷⁸

Transformation of Australia's Crocodile Skin Market

Currently, Australia is one of the largest exporters of crocodile skins in the world. The primary species of crocodile that is farmed and exported for its skins is the saltwater crocodile, which is considered a high-value leather product based on its durability, texture, and distinctive pattern.

During the 1940s to 1960s, uncontrolled hunting for the crocodile leather market depleted the Australian crocodile populations. To facilitate population recovery, the species was protected in 1969-1974 in different States and the Northern Territory (NT), prohibiting hunting or wild capture. Since introducing protection measures and subsequent sustainable use programmes, a significant recovery of all populations can be seen. As a result, the country has now developed a thriving crocodile farming industry that is largely based on sustainable and humane practices. According to the Australian government, the saltwater crocodile farming industry is worth approximately AUD20 million (equivalent to USD10.7 million) per year, with most of the crocodile skins exported to markets in Asia and Europe.⁷⁹

The Australian government strictly regulates the export of saltwater crocodile skins. Only farms that comply with strict animal welfare and environmental standards are allowed to export their products. The industry is also subject to regular inspections and audits to ensure these standards are met.

The export of saltwater crocodile skins from Australia is widely recognised as being legal and sustainable. The industry has played a vital role in conserving the species' populations by providing incentives for farmers, landowners and IP and LC to conserve wetland habitats that are important for crocodile populations.

The successful management of saltwater crocodiles in the Northern Territories of Australia is a prime example of effective governance and collaborative efforts that have led to positive outcomes for both biodiversity conservation and local communities. This analysis draws from the CITES and Livelihoods case study on the saltwater crocodile harvest and farming in Australia's Northern Territory (NT),⁸⁰ examining the governance elements that enabled the Australian saltwater crocodile skin market to turn from being a threat to the species and its habitat to being a nature positive, conservation success story).⁸¹

To ensure strict oversight and management, the NT and Commonwealth governments have implemented a robust Management Programme for the Saltwater Crocodile. This programme, subject to review every five years, includes consistent monitoring to ensure that the crocodile population remains healthy and the habitat is conserved. The government's strong commitment to the programme has resulted in significant benefits for the ecosystem, including the conservation of species and its habitat.

One of the key factors in the success of this programme is the generation of revenue through the sale of high-quality crocodile skins, which provides incentives for conservation. The equitable sharing of benefits between harvesters, farmers and landowners has also helped to promote conservation efforts. Additionally, the programme has helped build wildlife management capacity in remote indigenous communities, empowering them to play an active role in conserving their environment.

The market strategies adopted to sustain and build the crocodile farming industry have also contributed to the programme's success. The industry's growth and sustainability are critical to the conservation approach, and it has been well-managed to ensure that it remains viable and sustainable.

Laws and regulations

The export of saltwater crocodile skins is strictly regulated by the Australian government, and only farms that comply with strict animal welfare and environmental standards are allowed to export their products. The industry is also subject to regular inspections and audits to ensure that these standards are being met. The saltwater crocodile was listed in CITES Appendix II in 1975, then Appendix I in 1979 globally, except Papua New Guinea. The Australian population was transferred back to Appendix II for ranching in 1985 and later for unrestricted use and trade in 1994. The NT Government sets quotas and issues permits to crocodile harvesters and farmers.

Institutions

The Northern Territory Government's Department of Environment, Parks, and Water Security (DEPWS) manages crocodiles in the Northern Territory. To ensure strict oversight and management, the NT and Commonwealth governments have implemented a robust Management Programme for the Saltwater Crocodile. This includes conducting research on crocodile ecology and population dynamics to inform management decisions. Additionally, measures are taken to minimise the risk of crocodile attacks on humans, which include public education campaigns, signage and the removal of problematic crocodiles. The collaboration between DEPWS and other actors has been vital in strengthening governance around the management of saltwater crocodiles in Australia. DEPWS collaborates with researchers and wildlife experts to develop and implement crocodile management plans that balance conservation with public safety. Furthermore, close partnership with traditional owners ensures incorporation of Indigenous knowledge and cultural practices into crocodile management strategies.

DEPWS also partners with other government agencies, such as the Northern Territory Police, to ensure public safety around crocodile habitats. They advise and support tourism operators, landowners, and other stakeholders to manage crocodile risks and promote safe crocodile viewing practices.

In addition, DEPWS collaborates with researchers and scientists to develop new technologies and management approaches that can enhance crocodile management. For example, they work with researchers to monitor crocodile populations using drones and acoustic devices, which allows them to understand the species behaviour and movements better.

Multi-stakeholder engagement and consideration of indigenous peoples and local communities

The success of saltwater crocodile harvest and ranching in Australia's Northern Territory is attributed to the multi-stakeholder approach that has been adopted. It involves traditional Aboriginal communities, indigenous support organisations, landowners and the Northern Territory Crocodile Farmers Association.

The Australian government, including the Northern Territory government, is responsible for setting quotas and issuing permits to crocodile harvesters and farmers. They also conduct standardised spotlight surveys to quantify the recovery of the wild population. In addition, the government involves Indigenous Ranger groups with formal, paid conservation responsibilities on Aboriginal land and sea country. These groups are now engaged in crocodile management and harvest, with some involved in incubation and crocodile farming.

The harvesting of crocodiles from the wild in the NT primarily involves collecting wild eggs for ranching, with limited direct harvesting of subadults/adults. Local community members, both Indigenous and non-Indigenous, are involved in almost all aspects of crocodile harvesting and trade. This includes collecting and incubating eggs, raising and processing crocodiles for skins and meat, and producing and selling crocodile skin products.

The landowner on which eggs are collected receives a payment for each egg collected. Around 30-50 thousand eggs per year are harvested from Aboriginal lands. Women are also involved in most aspects of the harvesting of saltwater crocodiles, including hatcheries or farms, processing captive crocodiles for skins and meat, and producing and selling crocodile skin products.

Traditional knowledge is also an essential element of the crocodile harvesting and ranching programme, as Indigenous egg collectors rely on this knowledge to search and locate crocodile nests. Saltwater crocodiles are recognised as a valuable commercial resource, generating income and employment for local communities, both Indigenous and non-Indigenous. The economic value of the crocodile farming industry is estimated to be USD71 million per year. The equitable sharing of benefits between harvesters, farmers, and landowners has helped to promote conservation efforts. Additionally, the programme has helped build wildlife management capacity in remote indigenous communities, empowering them to play an active role in conserving their environment. The livelihood benefits derived from the crocodile harvest and trade to IP and LC are diverse, significant and hard to replace.

The collaboration of these stakeholders and institutions has ensured the success of the saltwater crocodile harvest and ranching programme. As a result, populations have significantly recovered and reached their carrying capacity.

Transparency, traceability and access to information:

Crocodile skins are processed locally at a specialist abattoir. To ensure traceability, these are marked with the universal tagging system for the identification of crocodilian skins in accordance with CITES Resolution Conf. 11.12 (Rev. CoP15). They are then exported with CITES permits for further processing overseas.

There has been an increased effort to collect and analyse data on saltwater crocodile populations and their habitats. This data is now publicly available, allowing researchers and conservationists to access and use it for their studies and initiatives. This transparency in data sharing has enabled a more comprehensive understanding of crocodile populations, their behaviours and the factors influencing their survival.

Additionally, there has been a concerted effort to engage local communities in conservation efforts. This includes sharing information on the importance of crocodiles in the ecosystem and educating people on safe coexistence with these animals. By involving local communities in the conservation process and providing accessible information, there is a greater likelihood of long-term success in preserving crocodile populations.

The transparency and accessibility of information have helped to build a collaborative and informed approach to the sustainable use and conservation of saltwater crocodiles.

Monitoring

The Management Programme for the Saltwater Crocodile in place, which is reviewed every five years, includes consistent monitoring to ensure that the crocodile population remains healthy and the recovery of the wild population. The NT Government sets quotas and issues permits to crocodile harvesters and farmers. A limited harvest of subadult/adult crocodiles has been allowed since 1997. In 2019, the annual quota was set at 90,000 viable eggs and 1,200 crocodiles. Over the years, the harvest quota has been regularly reviewed and increased as standardised spotlight surveys have quantified the recovery of the wild population.

Policy tools, including financial instruments

The Management Programme for the Saltwater Crocodile also employs various policy tools and instruments to support its objectives. Both regulatory and voluntary measures are put in place to ensure that crocodile farming and harvesting practices are sustainable and responsible. This includes licensing and inspection requirements for crocodile farms and harvesters, as well as training and education programmes to promote best practices in crocodile management.

The government has also established a Crocodile Compensation Scheme, compensating landowners for any damage caused by crocodiles on their property. This provides an important incentive for landowners to support crocodile management efforts and helps mitigate human-crocodile conflicts.

In addition, a Crocodile Management Fund has been established by the government, which provides funding for research and management activities related to saltwater crocodiles. This fund helps support the ongoing monitoring and research efforts necessary for effective crocodile management.

Overall, the successful management of saltwater crocodiles in the Northern Territories exemplifies the power of collaborative efforts and sound governance. The approach adopted in this region has not only helped to conserve the ecosystem but has also resulted in positive outcomes for indigenous peoples and local communities. The commitment to monitoring and research has also been essential in ensuring that the programme continues to be effective and that the crocodile populations and habitats are sustainably used and conserved in the long-term.

Risks and lessons learned:

At certain times, the management of the saltwater crocodile has experienced flaws. For instance, between 2005 and 2007, the NT Government failed to effectively monitor and regulate the crocodile harvest programme. Consequently, the number of harvested crocodile eggs surpassed the management programme's annual quota of 25,000 viable eggs. Although overharvesting had no discernible impact on crocodile populations, it created considerable confusion and inconvenience among stakeholders. As a result, the government and industry revised and restructured the programme, leading to considerable improvements in its management.

Despite the programme's successful sustainable use and livelihood model, the recent decision by the fashion industry to discontinue the use of wild reptile skins pose a severe threat. These decisions, attributed to animal rights lobbying campaigns, would undermine the livelihoods of Aboriginal communities and diminish the social tolerance for large saltwater crocodile populations. It is crucial for governance to prioritise sustainability and adopt policies and regulations to ensure long-term social wellbeing and ecological balance in the face of external factors such as these.

**Legal and
sustainable
wild species trade**

Key challenges for effective governance of wild species nature markets



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Key challenges for effective governance of wild species nature markets

The following are some of the main persistent challenges that must be addressed to achieve nature positive and equitable outcomes in wild species trade markets:

- Ensuring sustainability and identifying legal but unsustainable trade in wild species, for example in captive breeding operations, where illegal wild-source specimens could be laundered.
- Identifying and updating available, reliable information on wild species populations.
- Linking other nature market impacts (agriculture, mining, etc.) and their impacts on wild species (e.g. land use change and habitat loss, development and displacement of people establishing in natural areas eliciting illegal or unsustainable harvesting of wild species, etc.).
- Raising awareness of the negative impact that illegal/unsustainable wild species trade can have on nature and the importance of biodiversity conservation.
- Tackling ongoing demand for illegal wild species specimens and commodities.
- Addressing illegal wild species trade particularly when it is driven by poverty.
- Ensuring equitable benefit sharing along supply chains.
- Identifying corruption along supply chains.
- Reporting by governments (more challenging for non-CITES species) and others and transparency/data sharing.
- Addressing corruption when it is deeply entrenched in a society or institution or linked to organised crime.
- Overcoming limited and varying enforcement capacities across countries.
- Overcoming the lack of political will in many countries and institutions to implement laws and policies and adequately enforce wild species laws in the face of corruption.

**Legal and
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Key insights and recommendations for addressing these challenges



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Key insights and recommendations for addressing these challenges

Effective governance of wild species trade markets requires a multifaceted and holistic strategy. This strategy amalgamates regulatory, economic, and social interventions to promote legal and sustainable practices, while addressing the underlying causes of illegality and unsustainability. As explored in the report, the insights and learnings from TRAFFIC's work towards a legal, sustainable and traceable wild species trade, suggest the need for several essential elements that are necessary for effective governance, as well as combating illegal trade. The social, economic and environmental contexts of each situation should be considered. This approach should be applied, as appropriate, to other existing and emerging nature markets, ensuring that they are tailored to the specific context to achieve nature positive and equitable outcomes.

15 Building Blocks for the Good Governance of Nature Markets

- 1** **Laws and Regulations:** Establishing adequate laws and regulations based on scientific evidence and considering economic, social, and environmental contexts to guide sustainable practices.
- 2** **International and Regional Cooperation:** Encouraging collaboration and coordination among countries and regions to address transboundary challenges and promote harmonized approaches for nature-positive outcomes.
- 3** **Policy Frameworks with full Participation of IP and LC:** Developing clear policy frameworks that actively involve indigenous peoples and local communities, ensuring their full participation and engagement in decision-making processes.
- 4** **Respect for IP and LC Rights:** Upholding the rights of indigenous peoples and local communities to access lands, territories, and customary sustainable resource uses, respecting their traditional knowledge and practices.
- 5** **Benefit-Sharing Mechanisms:** Implementing mechanisms that share the benefits derived from nature markets, while incorporating environmental and social safeguards to ensure equitable distribution and sustainable outcomes.
- 6** **Robust Institutions:** Establishing institutions with strong capacities that can adapt to emerging challenges, enforce regulations, and promote responsible practices within nature markets.
- 7** **Transparent and Accessible Policies:** Promoting inclusive, transparent, and widely accessible policies and regulations that enhance public awareness and understanding of the importance of natural resources and biodiversity conservation.

8

Traceability Systems: Implementing traceability systems to monitor and track requirements across operations, supply chains, and portfolios, ensuring compliance and responsible practices.

9

Monitoring, Reporting, and Evaluation: Establishing ongoing and robust monitoring, reporting, and standardised evaluation systems supported by science-based indicators, including risk assessments, to assess the environmental, social, and economic impacts of activities in nature markets.

10

Addressing Corruption: Taking strong action to address corruption within nature markets through effective measures and deterrents.

11

Strong Enforcement Mechanisms: Developing strong enforcement mechanisms that hold individuals and organisations accountable for non-compliance and illegal activities in nature markets.

12

Mechanisms for Accountability: Establishing effective mechanisms for accountability that ensure responsible behaviour and promote adherence to regulations and ethical standards.

13

Multi-Stakeholder Engagement: Encouraging active engagement of various stakeholders, including civil society, the private sector, indigenous peoples and local communities, through collaboration mechanisms and partnership to foster inclusive decision-making and diverse perspectives.

14

Adaptive Management and Innovation: Embracing adaptive management practices and incorporating technology and innovation to enhance the governance framework, enabling flexibility and responsiveness to evolving challenges.

15

Combination of Tools and Instruments: Implementing voluntary and mandatory instruments, supported by economic incentives, to drive responsible practices and sustainable and more equitable outcomes in nature markets.

Promoting legal and sustainable wild species trade and combating illegal trafficking in nature markets has provided valuable insights into best governance practices. Lessons learned highlight the importance of adequate laws and regulations rooted in science-based evidence, while considering the economic, social, and environmental contexts. Furthermore, international and regional cooperation is crucial to effectively address cross-border challenges and harmonise efforts for nature conservation.

Clear policy frameworks actively involving IP and LC are essential for sustainable governance. Respecting the rights of IP and LC to access lands, territories, and customary sustainable resource uses is vital for their empowerment and the preservation of traditional knowledge. Implementing benefit-sharing mechanisms with environmental and social safeguards ensures equitable distribution of benefits derived from nature markets.

Establishing robust and adaptive institutions with strengthened capacities is necessary to enforce regulations and respond effectively to emerging issues. Inclusive, transparent, and widely accessible rules and regulations foster greater public awareness and understanding, promoting a culture of responsible and sustainable practices. Traceability systems along operations, supply chains, and portfolios enhance accountability and ensure regulation compliance.

To maintain integrity within nature markets, ongoing monitoring, reporting, and standardised evaluation systems supported by science-based indicators, including risk assessments, are essential. Taking decisive action against corruption, supported by robust enforcement mechanisms, is critical to combat illegal activities and promote fair and ethical practices. Multi-stakeholder engagement through collaboration mechanisms and partnership facilitate diverse perspectives and expertise, fostering inclusive decision-making.

Adaptive management, coupled with incorporating technology and innovation, enables flexibility and responsiveness to emerging challenges in nature markets. Complemented by economic incentives, a combination of voluntary and mandatory instruments, encourages responsible behaviour and supports the transition towards sustainable practices. Ultimately, implementing these best governance practices will contribute to biodiversity conservation, the protection of indigenous rights, and the promotion of sustainable, nature positive and more equitable existing and emerging nature markets.

Finally, the following considerations are highlighted for the financial sector, and others where relevant, in relation to nature markets and wild species trade. The financial sector can play a significant role in developing and implementing stronger governance models that promote sustainable practices and protect natural resources. This can be done by creating stepwise actions towards implementing pre-existing frameworks and governance models, incorporating solid monitoring systems, digital platforms, accountability, transparency in data and record keeping and regulatory oversight. Additionally, the legal rights of nature and IP and LC design and ownership as custodians of ecosystems should be considered.

Financial institutions can strengthen their internal monitoring systems by incorporating regular auditing of environmental impact, especially as it relates to wildlife impacts, as a necessary component of annual reviews, with the resulting reports shared with the general public. This will help promote transparency and accountability in managing natural resources and developing task plans and feedback loops to ensure the uptake of recommendations.

The financial sector can create a unified reporting initiative, considering the already existing initiatives such as GRI and ITTO/UNECE/FAO/EUROSTAT for the timber industry. This approach will help streamline reporting processes, improve transparency, contribute to the promotion of sustainable practices and the conservation of biodiversity and other natural resources.

The financial sector should embed consultation with IP and LC where relevant, and include this as a supply chain due diligence requirement.

The financial sector should encourage investment in sustainable practices by providing funding for research and development, supporting green bonds and sustainable investments, and creating incentives for companies to invest in sustainable practices. These measures will help promote sustainable development, the protection of natural resources and conservation of biodiversity for future generations.

Efforts should be made to strengthen the links of trade in captive-bred and artificially propagated specimens and species *in situ* conservation. This can be achieved by improving verification and traceability mechanisms to prevent laundering of wild-sourced specimens. Also, it is convenient to promote management schemes such as ranching for animals or assisted production for plants that depend on wild populations. These schemes will incentivise sustainable use and conservation of their habitat and ecosystems.

Integrity principles should be applied to both the supply and demand sides of these markets. This includes ensuring transparency, promoting sound governance, upholding equity, implementing effective measurement systems, establishing reporting mechanisms, conducting thorough verification processes and enforcing accountability.

A combination of voluntary and mandatory instruments can be more effective than applying them separately. For example, permits, quotas, taxes and restrictions on trade are often used to regulate the use of wild species. Additionally, providing incentives and supportive legal frameworks, such as support for producers, trade and processing groups, market access, tax breaks and outreach, and education on new policies are also beneficial.

Explore innovative instruments to support decision-making processes in the financial and other sectors. For example, use of visual tools to map sustainable management/use of wild species overlapping it with the IUCN Red List status of wild species in trade, as well as other equivalent national lists. Additionally, different Indexes (e.g. reporting, corruption, transparency, etc.), relevant rankings and information to identify potential risks and opportunities for nature positive markets around wild species trade.

Utilise the Environmental Conventions Index based on the submission of national reports to inform financial sector decisions and identify potential related risks or opportunities for promoting sustainable use, which can be translated into an incentive for Parties to become better at reporting within Conventions.

Investing and getting involved in legal and “regulated-sustainable-traceable wild species trade” in nature markets could merit a nature/ biodiversity credit scheme. This would support private sector resource mobilisation for biodiversity conservation (contributing to meeting the goals of the Kunming-Montreal Global Biodiversity Framework). Credits could also be provided for investing in wild species trade markets to help support these transformations in becoming “legal-regulated-sustainable-traceable” and to support strengthening governance around these markets. Furthermore, these credits can also be linked to favouring restoration efforts with the purpose of promoting sustainable use practices in restored/recovered environments.

Agreement on a methodology is needed to define prices/metrics for the nature credits/certificates that considers the real value of these markets to biodiversity conservation, the maintenance of ecosystem services and livelihoods as well as on other social and economic benefits to those involved in supply chains. A participatory approach with IP and LC would be ideal to agree on the value criteria of nature/ biodiversity credit schemes generated in each area-species commodity. IP and LC should have meaningful representation in decision making including free prior and informed consent (FPIC).

ENDNOTES

- ¹ Nature Finance. Shaping Nature Positive Markets (2023). <https://www.naturefinance.net/making-change/nature-markets/>
- ² Ibid.
- ³ Wild species are understood to include all wild species of flora, fauna, and fungi
- ⁴ OECD (2019) Biodiversity: Finance and the Economic and Business Case for Action. Prepared for the G7. <https://www.oecd.org/environment/resources/biodiversity/G7-report-Biodiversity-Finance-and-the-Economic-and-Business-Case-for-Action.pdf>
- ⁵ Ibid.
- ⁶ (2019). Why ESG (environment, social, and governance) investing is a megatrend no asset manager can ignore. Sustainability will emerge a key factor for algorithmically-determined market moves. XIID. <https://latest.13d.com/esg-sustainable-investing-social-governance-environment-algorithmic-1b30afd373e4>
- ⁷ Taskforce on Nature Markets (2022). Global Nature Markets Landscaping Study. <https://www.naturemarkets.net/publications/global-nature-markets-landscaping-study>
- ⁸ IPBES (2022). Summary for Policymakers of the Thematic Assessment Report on the Sustainable Use of Wild Species of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Fromentin, J.M., Emery, M.R., Donaldson, J., Danner, M.C., Hallosserie, A., Kieling, D., Balachander, G., Barron, E.S., Chaudhary, R.P., Gasalla, M., Halmy, M., Hicks, C., Park, M.S., Parlee, B., Rice, J., Ticktin, T., and Tittensor, D. (eds.). IPBES secretariat, Bonn, Germany. <https://doi.org/10.5281/zenodo.6425599>
- ⁹ Balachander, G., Halmy, M.W.A., Parlee, B., Biggs, D., Chatakonda, M., Cisneros-Montemayor, A.M., Cormier-Salem, M.-C., Dasgupta, R., Devkota, S., Diniz, J., Elfaki, A., Hiwasaki, L., Lichtenstein, G., Richter, A., Shah, M.A., Shanley, P., Shrestha, U.B., Lee, T.M., Bayarbaatar, B. and Kieling, D. (2022). Chapter 4: The drivers of the sustainable use of wild species. In: Thematic Assessment Report on the Sustainable Use of Wild Species of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Fromentin, J.M., Emery, M.R., Donaldson, J., Danner, M.C., Hallosserie, A., and Kieling, D. (eds.). IPBES Secretariat, Bonn, Germany. <https://doi.org/10.5281/zenodo.6451494>
- ¹⁰ Andersson, A. A., Tilley, H. B., Lau, W., Dudgeon, D., Bonebrake, T. C. & Dingle, C. (2021). CITES and beyond: Illuminating 20 years of global, legal wildlife trade. *Global Ecology and Conservation* 26, e01455.
- ¹¹ Ibid.; CITES (2022). World Wildlife Crime Report. CITES Secretariat (CoP19. inf.) <https://cites.org/sites/default/files/documents/E-CoP19-Inf-24.pdf>
- ¹² International Consortium on Combatting Wildlife Crime (ICWC). (2022). <https://cites.org/eng/prog/icwc-c#:~:text=The%20mission%20of%20the%20International,combat%20wildlife%20and%20forest%20crime>.
- ¹³ FATF (2021). FATF High-Level Conference on Environmental Crime. <https://www.fatf-gafi.org/content/fatf-gafi/en/publications/Fatfgeneral/Environmental-crime-conference-dec-2021.html>.
- ¹⁴ Balachander, et al. (2022.)
- ¹⁵ Ibid.; World Bank. 2019. Illegal Logging, Fishing, and Wildlife Trade: The Costs and How to Combat it. World Bank, Washington, DC. World Bank. <https://openknowledge.worldbank.org/handle/10986/32806> License: CC BY3.0 IGO.
- ¹⁶ IPBES (2019), Global assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Brondizio, E. S., Settele, J., Díaz, S., Ngo, H. T. (eds). IPBES secretariat, Bonn, Germany. 1144 pages. ISBN: 978-3-947851-20-1
- ¹⁷ Andersson (2021).
- ¹⁸ CITES (2022).
- ¹⁹ Ibid.
- ²⁰ Schindler, C., Heral, E., Drinkwater, E., Timoshyna, A., Muir, G., Walter, S., Leaman, D.J. and Schippmann, U. 2022. Wild check – Assessing risks and opportunities of trade in wild plant ingredients. Rome, FAO. <https://doi.org/10.4060/cb9267en>
- ²¹ UNODC. (2016). World Wildlife Crime Report: Trafficking in protected species, 2016. New York, USA.
- ²² UNODC. (2020). World Wildlife Crime Report 2020: Trafficking in Protected Species. New York, USA.

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

²⁶ CBD (2023). Biodiversity and the 2030 Agenda for Sustainable Development, Technical Note. UN Convention on Biological Diversity. <https://www.cbd.int/development/doc/biodiversity-2030-agenda-technical-note-en.pdf>

²⁷ Cooney, R., Roe, D., Dublin, D., Booker, F. (2018). Wildlife, Wild Livelihoods, Involving local communities in sustainable wildlife management and combating illegal wildlife trade. UN Environment. https://wedocs.unep.org/bitstream/handle/20.500.11822/22864/WLWL_Report_web.pdf

²⁸ Ibid.

²⁹ Wilson, P. (2014). The London Declaration's Role in the Fight Against Wildlife trade. <https://www.un.org/en/chronicle/article/london-declarations-role-fight-against-wildlife-trade>. Viewed 16 May 2022.; Smith, F, Michael B., Schloegel, L. M., Marano, N., Burgiel, S., Daszak, P. (2009). Reducing the Risks of the Wildlife Trade. SCIENCE, 324(5927): 594-5951.

³⁰ IUCN Red List. (2023) Background & History. <https://www.iucnredlist.org/about/background-history>

³¹ Ibid.

³² Campbell, S., Timoshyna, A., Sant, G., Biggs, D., Brackowski, A., Caceres-Escobar, H., Indraswari, K., Compton, J., and Cheung, H. (2022). Options for Managing and Tracing Wild Animal Trade Chains to Reduce Zoonotic Disease Risk. TRAFFIC, Cambridge UK.

³³ TRAFFIC. (2019). Combating Wildlife Crime Linked to the Internet: Global Trends and China's Experiences. TRAFFIC, Cambridge, UK. <https://www.traffic.org/site/assets/files/12352/combating-wildlife-crime-online-chinas-experiences.pdf> Viewed 16 May 2022.

³⁴ Abano, I., & Chavez, L. (2021). Wildlife Trafficking, like everything else, has gone online in COVID-19. Mongabay. <https://news.mongabay.com/2021/06/wildlife-trafficking-like-everything-else-has-gone-online-during-covid-19/>.

³⁵ The CITES Strategic Vision (<https://cites.org/sites/default/files/documents/COP/19/resolution/E-Res-18-03.pdf>), CBD post-2020 global biodiversity framework (<https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf>), and Global Strategy for Plant Conservation.

³⁶ The Elephant Tracking and Information System (ETIS) <https://cites.org/eng/prog/etis> and CITES Trade database <https://cites.org/eng/node/7691>.

³⁷ CITES rhino enforcement task force, CITES Big Cats Task Force https://cites.org/sites/default/files/documents/E-CoP19-67_0.pdf, and CITES Sharks Working Group.

³⁸ Examples include CITES Strategic Vision indicators <https://cites.org/sites/default/files/eng/com/sc/69/inf/E-SC69-Inf-32.pdf>, RST process, <https://cites.org/eng/imp/sigtraderreview>, NIAP process <https://cites.org/eng/niaps> and post-2020 global biodiversity framework targets and indicators.

³⁹ CITES Non-detriment findings in CITES and <https://cites.org/eng/prog/ndf/index.php> guidance for legal acquisition findings <https://cites.org/sites/default/files/eng/com/sc/74/E-SC74-40.pdf>, demand reduction <https://cites.org/sites/default/files/documents/E-CoP19-38.pdf>.

⁴⁰ IPBES (2022). Summary for Policymakers of the Thematic Assessment Report on the Sustainable Use of Wild Species of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Fromentin, J.M., Emery, M.R., Donaldson, J., Danner, M.C., Hallosserie, A., Kieling, D., Balachander, G., Barron, E.S., Chaudhary, R.P., Gasalla, M., Halmy, M., Hicks, C., Park, M.S., Parlee, B., Rice, J., Ticktin, T., and Tittensor, D. (eds.). IPBES secretariat, Bonn, Germany. <https://doi.org/10.5281/zenodo.6425599>

⁴¹ Wilson-Holt, O., Roe, D., and Natusch, D., (2022). The CITES and Livelihoods: Guidance on maximising benefits to Indigenous peoples and local communities from trade in CITES-listed species. SC74 Doc. 21.2 Annex 1.

⁴² United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). What is Good Governance? <https://www.unescap.org/sites/default/files/good-governance.pdf>

⁴³ IPBES (2022).

⁴⁴ Ibid.

- ⁴⁵ IPBES (2022).
- ⁴⁶ UNODC (2020).
- ⁴⁷ INTERPOL (2023). Wildlife Crime. <https://www.interpol.int/en/Crimes/Environmental-crime/Wildlife-crime>.
- ⁴⁸ CITES (2023). Enforcement-Introduction. <https://cites.org/eng/prog/imp/enf/introduction>.
- ⁴⁹ EIA (2021). Notorious kingpin of wildlife crime syndicate gets 14 years in prison in Malawi. <https://eia-international.org/press-releases/notorious-kingpin-of-wildlife-crime-syndicate-jailed-for-14-years-in-malawi/>.
- ⁵⁰ United States Fish and Wildlife Service (2022). Wildlife trafficker Sentenced to 63 months in prison. <https://www.fws.gov/story/2022-08/wildlife-trafficker-sentenced-63-months-prison>
- ⁵¹ Booker, F., and Roe, D., (2017). First line of defence? A review of evidence on the effectiveness of engaging communities to tackle illegal wildlife trade. IIED. <https://www.iied.org/sites/default/files/pdfs/migrate/17591IIED.pdf>
- ⁵² Ibid.
- ⁵³ Ibid.
- ⁵⁴ IPBES (2022).
- ⁵⁵ Ibid.
- ⁵⁶ Indigenous peoples and local communities as defined by IPBES Values Assessment (IPBES, 2022a), typically are, ethnic groups who are descended from and identify with the original inhabitants of a given region, in contrast to groups that have settled, occupied or colonized the area more recently.
- ⁵⁷ Obura D, Agrawal A, DeClerck F, Donaldson J, Dziba L, Emery MR, et al. (2023). Prioritizing sustainable use in the Kunming- Montreal global biodiversity framework. PLOS Sustain Transform 2(1): e0000041. <https://doi.org/10.1371/journal.pstr.0000041>
- ⁵⁸ IPBES (2022).
- ⁵⁹ L.A. Post, E.D. Raile and A.N.W Raile. Defining political will. Politics & Policy, Volume 38, No. 4 (2010): 653-676. Available online at: https://www.researchgate.net/publication/229903315_Defining_Political_Will
- ⁶⁰ Transparency International (2014). https://www.transparency.org/files/content/corruptionqas/Topic_Guide-_Political_Will.pdf
- ⁶¹ Ibid.
- ⁶² Mundy, V. and Sant, G. (2015). Traceability systems in the CITES context: A review of experiences, best practices and lessons learned for the traceability of commodities of CITES-listed shark species. TRAFFIC report for the CITES Secretariat. http://www.traffic.org/general-reports/traffic_pub_gen103.pdf
- ⁶³ Campbell et al. (2022).
- ⁶⁴ Drinkwater, E., Outhwaite, W., Oldfield, T., Floros, C. TRAFFIC 2020. Cracking the Code: An analysis of Customs HS codes used in the trade in wild animals and plants from Africa to Asia. <https://www.traffic.org/-publications/reports/cracking-the-code-how-product-codes-can-support-conservation-and-combat-climate-change/>
- ⁶⁵ UNODC (2020).
- ⁶⁶ London School of Economics and Political Science (LSE). (2022). Finance For Climate Action: Scaling up investment for climate and development. <https://www.lse.ac.uk/granthaminstitute/publication/finance-for-climate-action-scaling-up-investment-for-climate-and-development/>
- ⁶⁷ A Relational Database Overview (The Java™ Tutorials > JDBC Database Access > JDBC Introduction) (oracle.com)
- ⁶⁸ A Survey and Comparison of Relational and Non-Relational Database (psu.edu)
- ⁶⁹ Intelligence in the internet age: The emergence and evolution of Open Source Intelligence (OSINT) - ScienceDirect
- ⁷⁰ <https://vivomente.com/wp-content/uploads/2016/04/big-data-analytics-white-paper.pdf>
- ⁷¹ <https://academic.oup.com/rfs/article/32/11/4117/5315531>
- ⁷² IPBES (2022).

⁷³ ResearchAndMarkets.com. (2021). Crocodile Skin Market by Type (Saltwater Crocodile, Nile Crocodile, and Others) and by Application (Fashion, Leather Goods, and Others): Global Opportunity Analysis and Industry Forecast, 2021-2028. Retrieved from <https://www.researchandmarkets.com/reports/5307753/crocodile-skin-market-by-type-saltwater>

⁷⁴ Ross, J. P., & Garnett, S. (2011). Crocodiles and Alligators. CABI.

⁷⁵ Thorbjarnarson, J. B., & Guerrero, B. (2013). Crocodiles: Biology, Husbandry and Diseases. CABI.

⁷⁶ Ross and Garnett (2011).

⁷⁷ IUCN Red List: <https://www.iucnredlist.org/>

⁷⁸ Ibid.

⁷⁹ Australian Government. (n.d.). Saltwater crocodile industry. Department of Agriculture, Water and the Environment. Retrieved April 24, 2023, from <https://www.awe.gov.au/animals/wildlife-trade/crocodile/salt-water>

⁸⁰ CITES and IUCN SULi (Sustainable Use and Livelihoods Specialist Group). 2019. Yusuke Fukuda, Wildlife Scientist, Northern Territory Government, and Grahame Webb, Chair, IUCN SSC Crocodile Specialist Group, based on desk review, direct observation through extensive field experience, and historic institutional knowledge. Edited by Rosie Cooney, IUCN CEESP/SSC Sustainable Use and Livelihoods Specialist Group. Retrieved from https://cites.org/sites/default/files/eng/prog/Livelihoods/-case_studies/1.%20Australia_crocodiles_long_Aug2.pdf


⁸¹ CITES and IUCN SULi (Sustainable Use and Livelihoods Specialist Group). 2019. Yusuke Fukuda, Wildlife Scientist, Northern Territory Government, and Grahame Webb, Chair, IUCN SSC Crocodile Specialist Group, based on desk review, direct observation through extensive field experience, and historic institutional knowledge. Edited by Rosie Cooney, IUCN CEESP/SSC Sustainable Use and Livelihoods Specialist Group. Retrieved from https://cites.org/sites/default/files/eng/prog/Livelihoods/-case_studies/1.%20Australia_crocodiles_long_Aug2.pdf

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The core mission of NatureFinance is to accelerate the alignment of global finance with equitable, nature positive outcomes. We do this by shaping the many dimensions, actors and change pathways at the nature-finance nexus.


How we make change:




Nature Markets: shaping principles-based nature markets by increasing awareness, innovations and better governance of nature-linked markets including nature credits and soft commodity markets.




Nature Liability: extending the liabilities of financial institutions for nature outcomes, including the application of anti-money laundering rules to break the links between investment and nature crimes.



Nature Data & Disclosure: Increasing the quality and quantity of nature data, risk assessment and transparency across financial markets to enable integrated assessments of nature-climate risks and impacts.



Sovereign Debt: Engaging market actors, and governing institutions in efforts to place nature in the world's sovereign debt markets, including scaling the issuance of sustainability performance-linked sovereign bonds.



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Our use of Fibonacci sequence imagery is inspired by the association of this unique ratio with the maintenance of balance, and its appearance everywhere in nature- from the arrangement of leaves on a stem to atoms, uncurling ferns, hurricanes and celestial bodies.

Legal and sustainable wild species trade

Learnings and implications for nature market governance

June 2023

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