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An Illusion of Legality: Wildlife Laundering in Colombia and Mexico

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Executive Summary

The term 'wildlife laundering' refers to a phenomenon whereby legitimate corporate entities are exploited by illicit actors to fraudulently pass illegally harvested or obtained wildlife into legal supply chains. Despite growing recognition of the phenomenon among the international community, the role of legitimate businesses in transnational wildlife trafficking networks remains poorly understood, including their links to corrupt facilitators and other criminal associates, associated illicit financial flows and convergence with other serious crimes.

Wildlife laundering poses a serious risk to national and international security, causing environmental and socioeconomic harms and creating opportunities for organised crime and conflict actors, while reducing opportunities for local communities to benefit from sustainable legal wildlife trade.

This paper is a step in addressing this knowledge gap by examining wildlife laundering trends in Colombia and Mexico, offering novel insights into wildlife laundering methods and the legislative and institutional gaps that facilitate them. It finds evidence to suggest that corporate entities – such as breeding farms, wildlife sanctuaries, commercial traders and seafood companies – can be used by rogue traders and organised criminal groups, sometimes in collusion with corrupt facilitators, to exploit regulatory and enforcement gaps and launder illegally sourced species.

Evidence of wildlife laundering remains limited due to the small number of documented wildlife laundering cases in Colombia and Mexico. This paper finds that due to technical challenges, resource constraints and limited international cooperation, enforcement and justice agencies struggle to detect and disrupt wildlife laundering. As such, recognition and understanding of the multidimensional harms of wildlife laundering and the organised, transnational nature of the crime remains limited. To overcome these gaps, this paper argues for greater transparency and traceability, routine international cooperation and more targeted enforcement and judicial resource to be spent on exporters and buyers.

Introduction

International legal trade in wildlife constitutes an immense industry. Between 1997 and 2016, it was valued at between $2.9 and $4.4 trillion globally,[1] supplying an array of commodities – including food, medicine, furniture, fashion, ornaments and pets[2] – which provide income and make it an important industry, particularly for countries rich in biodiversity. However, high levels of international demand for wildlife products have created a black market so large that illegal wildlife trade (IWT) is valued at an estimated $20 billion annually.[3] Unsustainable or illegal exploitation of wildlife not only threatens to drive species to extinction, but has harmful, cascading consequences for ecosystem stability, climate security, public and animal health, rule of law and good governance. It reduces opportunities for local income-generation through increased competition over resources, reduced tourism opportunities and unfulfilled tax revenue potential.[4]

To ensure that wildlife trade is sustainable, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) entered into force in 1975 as a legally binding international instrument that currently regulates trade in more than 40,900 species which are deemed to be at risk from over-exploitation due to international trade (Table 1).[5] CITES member states commit to aligning their national legislation to comply with the CITES Convention, while imposing additional regulations or restrictions on the management, use and trade of wildlife as necessary.

1. Astrid Alexandra Andersson et al., 'CITES and Beyond: Illuminating 20 Years of Global, Legal Wildlife Trade', *Global Ecology and Conservation* (Vol. 26, Art. e01455, April 2021), p. 1.
2. Alice C Hughes, 'Primer: Wildlife Trade', Current Biology (Vol. 31, No. 19, 2021), pp. 1218–24; Oscar Morton et al., 'Impacts of Wildlife Trade on Terrestrial Biodiversity', *National Ecology and Evolution* (Vol. 5, February 2021), pp. 540–48.
3. Interpol, 'Poaching and the Illegal Wildlife Trade has Become a Major Area of Activity for Organized Crime Groups', 6 November 2023, <https://www.interpol.int/en/News-and-Events/News/2023/Illegal-wildlife-trade-has-become-one-of-the-world-s-largest-criminal-activities>, accessed 3 November 2025.
4. Annika Mozer and Stefan Prost, 'An Introduction to Illegal Wildlife Trade and its Effects on Biodiversity and Society', *Forensic Science International: Animals and Environments* (Vol. 3, Art. 1000064, February 2023), pp. 4–6.
5. This number refers to species, subspecies and geographically separate populations of species (for example, the population for just one country). See CITES, 'The CITES Species', <https://cites.org/eng/disc/species.php>, accessed 25 August 2025.

Table 1: How CITES Works

CITES Appendices	Species Classification	Rules on International Trade
CITES Appendix I	• Species threatened with extinction	• International trade for commercial purposes is prohibited – apart from in exceptional circumstances – for non-commercial purposes (such as scientific research) and is subject to import and export (or re-export) permits being provided by the relevant authorities.
CITES Appendix II	• Species that may become threatened if trade is not closely controlled	• International trade may be authorised by the granting of an export permit or re-export certificate if relevant authorities are satisfied that trade will be non-detrimental to survival in the wild and specimens are obtained legally.
CITES Appendix III	• Species included at the request of a country reliant on other countries' cooperation to prevent unsustainable or illegal exploitation.	• International trade is allowed with the appropriate permits or certificates.

Source: CITES, 'The CITES Appendices', <https://cites.org/eng/app/index.php>, accessed 25 August 2025.

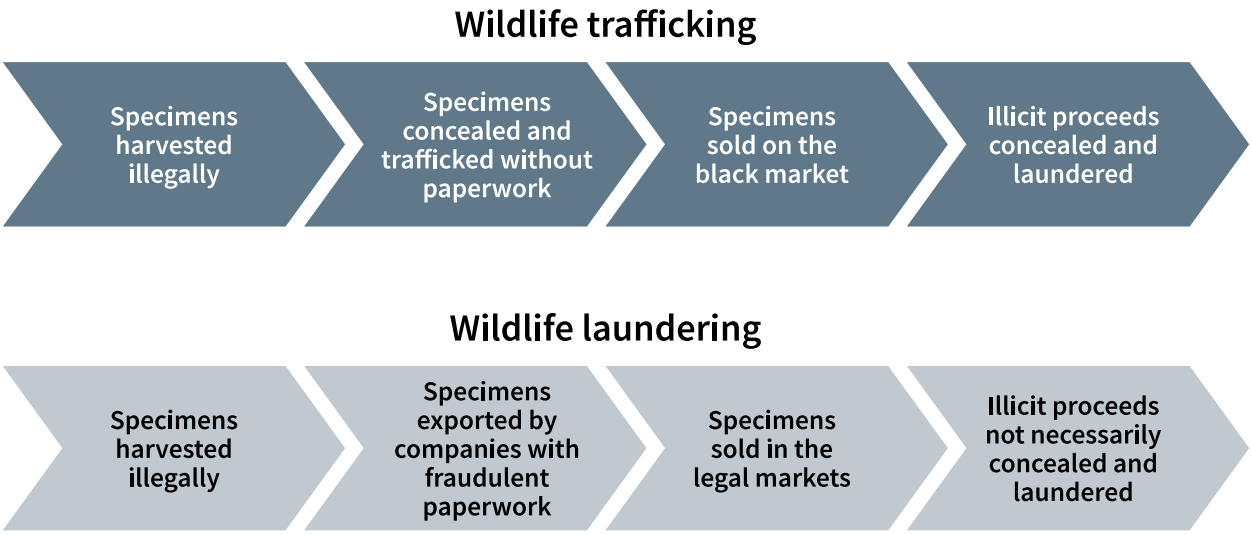
However, wildlife authorities and enforcement and justice agencies often lack the resources to enforce legal frameworks. Without effective enforcement, stricter rules do little to deter IWT, and the coexistence of legal and illegal markets creates loopholes that enable 'wildlife laundering', a form of trafficking whereby illegally harvested wildlife and wildlife products enter legal supply chains.[6] Compared with conventional wildlife trafficking, wildlife laundering allows protected wildlife and derivative products to be shipped without concealment, instead relying on document fraud or falsification to appear as legitimate commerce (Figure 1). This appearance of legitimacy also reduces the effort involved in disguising illicit proceeds as they pass through the financial system, as related financial flows do not appear to be suspicious. The scale of wildlife laundering is under-evidenced and is likely to vary significantly according to different factors. A 2023 study estimated that between 9% and 77% of 'legal' wildlife trade could be illegal in nature, depending on the enforcement capacity of the country and susceptibility to laundering of the taxa.[7]

In some cases, wildlife trafficking and wildlife laundering can also occur at different stages within the same illicit supply chains, creating a hybrid trafficking–laundering typology. For example, pangolins and big cats are illegally harvested and smuggled

6. Daan P van Uhm, 'Wildlife and Laundering: Interaction Between the Under and Upper World', in Toine Spapens et al. (eds), *Green Crimes and Dirty Money* (Abingdon: Routledge, 2018), p. 197.
7. Mozer and Prost, 'An Introduction to Illegal Wildlife Trade and its Effects on Biodiversity and Society', p. 4.

across borders, and their scales and bones are later laundered into supply chains feeding the legal pharmaceutical industry.[8]

Figure 1: Conventional Wildlife Trafficking and Wildlife Laundering Processes



Source: The authors.

Wildlife laundering has received increased attention in recent years as awareness of the role that legitimate businesses play in IWT has grown.[9] Some legally registered businesses – such as wildlife import/export companies, breeding farms, zoos, fashion companies and pet shops – deliberately commit illegal acts or make omissions to circumvent wildlife trade restrictions, often acting in conjunction with other corporations, individuals or organised crime groups.[10] They may operate as fronts to launder illicit products sourced by poachers and blend them into licit wildlife trading activities, either to increase profits or satisfy demand from hobbyist collectors for rare species.[11] Having expertise in wildlife import/export regulations processes, these corporate supply and retail actors are familiar with regulatory loopholes, and

8. Faith Hornor, Devin Thorne and Amanda Shaver, 'Tipping the Scales – Exposing the Growing Trade of African Pangolins into the Chinese Traditional Medicine Industry', C4ADS, September 2020, <https://c4ads.org/reports/tipping-the-scales/>, accessed 29 September 2025; Environmental Investigation Agency, 'Investing in Extinction: How the Global Financial Industry Profits from Traditional Medicine Firms Using Protected Species', October 2023, <https://eia-international.org/report/investing-in-extinction-how-the-global-financial-sector-profits-from-traditional-medicine-firms-using-threatened-species/>, accessed 29 September 2025.
9. van Uhm, 'Wildlife and Laundering', p. 198.
10. Tanya Wyatt, Daan van Uhm and Angus Nurse, 'Differentiating Criminal Networks in the Illegal Wildlife Trade: Organized, Corporate and Disorganized Crime', *Trends in Organized Crime* (Vol. 23, May 2020), pp. 356–59.
11. *Ibid.*, p. 356.

have the organisational capacity to obtain the necessary permits to legitimise illegally sourced products.[12]

Past research reveals evidence of wildlife laundering across diverse geographies, often using captive breeding or aquaculture businesses. In Indonesia, reptile farms have been found to report export volumes far beyond their breeding capacity. Lacking the facilities or stock to satisfy these volumes, these operations are therefore believed to be sourcing from the wild.[13] Similar methods have been identified in enterprises exporting 'captive-bred' birds from the Solomon Islands, when in fact they are allegedly sourced from the wild, illegally.[14] The export of Galapágos land and marine iguanas – a rare endemic Ecuadorian species – from a breeding facility in Uganda has also led to allegations of wildlife laundering, due to there being no formal record of this species ever having left Ecuador.[15]

Comparable dynamics occur with aquatic species. In Mexico's Yucatán Peninsula, sea cucumber fisheries – an economic lifeline for many coastal communities – have expanded unsustainably due to high levels of international demand involving illegal actors and large-scale buyers, who launder out-of-season or otherwise illegally sourced sea cucumber by purchasing fishing permits from cooperatives. This has led to calls for responses to target actors further up the value chain rather than vulnerable local harvesters.[16]

In 2020, the Financial Action Task Force (FATF) – the global standard setter on anti-money laundering (AML) – recognised IWT proceeds as 'a global threat', stressing how criminals misuse legitimate wildlife trade to 'move and hide illegal proceeds from wildlife crimes' through corruption, fraud and tax evasion.[17] FATF urged countries to equip relevant agencies with 'the necessary mandate and tools to conduct successful financial investigations into IWT' and sanction criminal networks, targeting the ultimate beneficiaries of the crime.[18] Despite these efforts, misconduct by legitimate wildlife businesses is often treated as a compliance issue and handled as an

12. Jesús Ignacio Castro Salazar and José Luis Carpio Domínguez, 'Criminología Verde: Lavado de Vida Silvestre Desde la Legislación y Las Autoridades Ambientales en México' ['Green Criminology: Wildlife Laundering Through Legislation and Environmental Authorities in Mexico'], *Revista de investigación en Derecho, Criminología y Consultoría Jurídica* (Vol. 16, No. 2, 2022–23), p. 229.
13. Vincent Nijman and Chris R Shepherd, *Wildlife Trade from ASEAN to the EU: Issues with the Trade in Captive-Bred Reptiles from Indonesia* (Brussels: European Commission, 2000).
14. Chris R Shepherd, Carrie J Stengel and Vincent Nijman, *The Export and Re-Export of CITES-Listed Birds from the Solomon Islands* (Selangor: TRAFFIC Southeast Asia, 2012).
15. Mark Auliya et al., 'Trafficking of Galápagos Iguanas as an Example of a Global Problem: CITES Permits, Laundering and the Role of Transit Countries in Europe and Africa', *Biological Conservation* (Vol. 305, Art. 111104, May 2025).
16. Carmen Pedroza-Gutiérrez and Jorge A López-Rocha, 'Ungovernable Systems: The Strength of Informal Institutions in the Sea Cucumber Fishery in Yucatán, Mexico', *PLoS ONE* (Vol. 16, No. 3, March 2021).
17. FATF, 'Money Laundering and the Illegal Wildlife Trade', 2020, p. 67, <https://www.fatf-gafi.org/content/dam/fatf-gafi/reports/Money-laundering-and-illegal-wildlife-trade.pdf.coredownload.pdf>, accessed 30 August 2025.
18. FATF, 'Money Laundering and the Illegal Wildlife Trade', p. 6.

administrative offence. There remains a disproportionate focus on outright smuggling methodologies, and the international community's understanding of wildlife laundering remains limited – including the role of legitimate businesses, their corrupt facilitators and criminal associates and the associated illicit financial flows and convergence with other serious crimes. As a result, the risks wildlife laundering poses for national and international security, such as its damaging environmental impact, socioeconomic harms and use by organised crime groups, remain largely overlooked and inadequately addressed.

This paper takes a step in addressing this knowledge gap by examining wildlife laundering trends in Colombia and Mexico – geographies that have received limited attention and coverage in IWT literature – offering novel insights into wildlife laundering modalities and the legislative and institutional gaps that facilitate them. For both countries, the paper focuses specifically on the laundering of terrestrial and aquatic fauna, excluding flora. Although the focus is on Colombia and Mexico, the transnational dimension of wildlife laundering flows and the identified global enforcement challenges signify that the research findings and recommendations are more widely applicable.

Methodology

Research for this paper began with a literature review, covering peer-reviewed academic articles and reports from media outlets, NGOs, governments and intergovernmental organisations. Data relating to wildlife laundering risks identified in open sources and structured proprietary data was collated with support from LSEG's World-Check, which helps companies conduct due diligence and screen for money laundering risks.[19] The information identified which species and business type would be researched in more detail in each country.

The initial data-collection phase was followed by 30 semi-structured interviews conducted from April to September 2025. Research participants included current and former officials from relevant agencies in Colombia and Mexico, representatives of international bodies and experts from across academia, civil society and the private sector. These included individuals with knowledge on wildlife laundering in the international context, in the case study countries, or both. Preliminary findings were tested in validation meetings with subject matter experts and public officials in relevant government departments in Colombia and Mexico. Due to the risk of sensitivities associated with the research topic, all interviewees were offered anonymity and confidentiality.

19. LSEG, 'LSEG World-Check', <https://www.lseg.com/en/risk-intelligence/search/world-check-kyc-screening>, accessed 30 October 2025.

The authors also submitted a right to public information request to Colombia's Autoridad Nacional de Licencias Ambientales (ANLA, National Environmental Licensing Authority) for information on captive breeding facilities registered in the country, which was granted. The same approach was not taken in Mexico, because it has many wildlife facilities that are licensed to conduct a broad range of wildlife use activities and are not limited to captive breeding – as outlined in the sections 'Terrestrial Wildlife' and 'Enabling Factors'. In addition, the paper focuses on wildlife sanctuaries in Mexico, instead of captive breeding facilities.

Definitions

In this paper, wildlife laundering is understood to involve hiding the illegal origin of wildlife and wildlife products to enable them to be legitimately traded,[20] or as efforts to pass off illegal wildlife products as legal, placing them for sale in legal outlets.[21] This applies to wildlife specimens sourced in contravention of national or international regulations or any offspring or derivative products sourced from illegally obtained founder stock.

Biopiracy refers to activity described as 'the misappropriation of genetic resources and traditional knowledge without consent or compensation' that results in 'inequities in the division of benefits derived from biodiversity-based commercialization'.[22]

Structure

The first chapter explores wildlife laundering trends in Colombia and Mexico, uncovering evidence of terrestrial and aquatic wildlife laundering. The second chapter explores the conditions that allow wildlife laundering to take place, in terms of both source and destination country regulatory and resource constraints, which fail to prevent exports and imports of laundered products. It also explores opportunities for strengthening responses. The paper concludes with recommendations for policymakers, wildlife authorities, enforcement and justice agencies, civil society and donors seeking to more effectively combat wildlife laundering.

20. van Uhm, 'Wildlife and Laundering', p. 197.
21. Brendan Moyle, 'Wildlife Markets in the Presence of Laundering: A Comment', Biodiversity and Conservation (Vol. 26, July 2017), pp. 2979–85.
22. Wynberg, 'Biopiracy: Crying Wolf or a Lever for Equity and Conservation?', *Research Policy* (Vol. 52, No. 2, 2023), p. 1.

Wildlife Laundering Trends in Colombia and Mexico

This chapter explores wildlife laundering trends in Colombia and Mexico, uncovering evidence of terrestrial and aquatic wildlife laundering. Colombia and Mexico have a rich diversity of native terrestrial and aquatic wildlife species. Some of these are in high demand in the food trade, exotic pet trade and in fashion markets, and are at risk of unsustainable exploitation.[23] Illicit actors have found ways to exploit endangered species under the cover of legal trade, despite international and national efforts to protect these species from excessive trade by listing them on the CITES appendices and introducing national legislation to set trade restrictions.

Terrestrial Wildlife

In both Colombia and Mexico, regulatory systems require licensed wildlife businesses to respond to international demand for native terrestrial wildlife products through sustainable, often farmed, supply (Tables 2 and 3), such that their operations contribute to the domestic economy while safeguarding against negative biodiversity impacts. As seen in the trends analysed in this chapter, there are indications that some licensed businesses, including breeding farms and wildlife sanctuaries, can find ways to exploit regulatory and enforcement gaps to launder wildlife. However, challenges to revealing illegal actions – including perceptions of irregularities as administrative

23. Karen Noboa et al., 'Informe sobre el tráfico de vida silvestre en Colombia' ['Report on Wildlife Trafficking in Colombia'], TRAFFIC, October 2024, p.12, <https://www.traffic.org/site/assets/files/25935/trafico_ilegal_de_vida_silvestre_en_colombia_october_24_2024-2-1.pdf>, accessed 27 August 2025; Ernesto Méndez and Alejandro Olivera, 'Merciless Markets: How Wildlife Trafficking Threatens Mexico's Biodiversity', Center for Biological Diversity, November 2022, <https://www.biologicaldiversity.org/campaigns/Mexico-wildlife-trafficking/pdfs/Mexico-wildlife-trafficking-report-English.pdf>, accessed 15 September 2025.

errors, resource challenges and political sensitivities – mean that these gaps are not being addressed effectively.

Colombia: Breeding Domestic Species

Colombia's legal trade in terrestrial wildlife is dominated by large-scale farming of caiman (a member of the Alligatoridae family), where enforcement and traceability remain challenging. At the time of writing, there were 32 *zoocriaderos* (breeding farms) in operation in Colombia, 29 of which (91%) were licensed to breed and sell the skins of brown caimans (*Caiman crocodilus fuscus*) and American crocodiles (*Crocodylus acutus*) for the fashion industry, despite both being CITES-listed species.[24] In response to rising international demand for crocodile skins and corresponding pressures on wild crocodilian populations, in the mid-1980s, Colombia established a caiman farming industry of considerable economic value, with exports of caiman skin and leather products valued at an estimated $46.2 million per year by 2024.[25] Colombia's contemporary captive breeding regulations were therefore largely developed around the caiman trade and are perceived to be rigorous (Table 2).[26]

Despite these safeguards, experts estimated in 2016 that around a third of all caiman skins exported from Colombia since 1990 were illegally sourced from the wild, equivalent to more than 4 million specimens.[27] Allegedly, zoocriadero owners had paid independent technical experts to manipulate and overestimate stock records to secure large export quotas. Consignments would then be filled with a blend of wild-caught and captive bred specimens and fraudulently assigned the 'captive bred' source code in CITES export permits.[28]

Since 2007, all zoocriaderos have also been obligated to remove the 10th 'caudal scute' – the fin-like scales along a caiman's tail – from captive-bred hatchlings. This process, which creates permanent scarring, is used to ascertain the provenance of exported skins. Zoocriaderos have reportedly circumvented this requirement by removing caudal scutes from wild-caught hatchlings before introducing them to the farm, or by claiming that unscarred skins were stockpiled prior to this requirement entering into force.[29]

24. A list of active and inactive *zoocriaderos* in Colombia and the species they were licensed to breed and export was provided to the authors by the Autoridad Nacional de Licencias Ambientales (ANLA, National Environmental Licensing Authority) per public information request.
25. Noboa et al., 'Informe sobre el tráfico de vida silvestre en Colombia' ['Report on Wildlife Trafficking in Colombia'], p. 26.
26. Author interviews with subject matter experts, online, 9 May and 15 April 2025.
27. CITES, 'Concerns about the Production and Trade in Brown Caimans (Caiman crocodilus fuscus) from Colombia', Sixty-sixth meeting of the Standing Committee Geneva (Switzerland), 11–15 January 2016, para. 5, <https://stag.cites.org/sites/default/files/eng/com/sc/66/Inf/E-SC66-Inf-20.pdf>, accessed 17 August 2025; UNODC, World Wildlife Crime Report – Trafficking in Protected Species (Vienna: UNODC, 2016), pp. 53–54.
28. CITES, 'Concerns about the Production and Trade in Brown Caimans (Caiman *crocodilus fuscus*) from Colombia', para. 4.
29. *Ibid.*

Table 2: Regulatory Requirements for *Zoocriaderos*

Licensing	Controls and Requirements
• The ANLA issues licences to zoocriaderos to breed CITES-listed species. • Corporaciónes Autónomas Regionales (CARs, Regional Autonomous Corporations) issue licences to zoocriaderos to breed non-CITES species in their jurisdictions, as well as hunting permits required to collect the parent breeding pair from the wild. • The Instituto Nacional de Pesca y Acuicultura (INPA, National Institute of Fisheries and Aquaculture) oversees licensing of aquaculture, the breeding of aquatic species.	• To establish a zoocriadero, breeders must acquire a hunting permit to capture the parent breeding pair, demonstrating that this will not be detrimental to the wild population • Breeders must then develop an environmental management plan that meets strict technical, environmental and sanitary requirements and submit this to the relevant environmental authority. After an initial test phase demonstrating that the facility is technically and economically viable and has implemented the correct marking system, a commercial licence is granted. • The relevant authority counts the specimens and assesses their ages to determine the breeding potential of the zoocriadero and to establish production quotas, specifying the maximum number of exports permitted.

Source: Author interviews with subject matter experts, online, 15 April and 12 May 2025; Colombian Government, 'Ley 99 de 1993' ['Law 99 of 1993'], <https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=297>, accessed 3 October 2025; Colombian Government, Ley 611 de 2000 ['Law 611 of 2000'], <https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=9019>, accessed 3 October 2025; Ministerio de Ambiente y Desarrollo Sostenible [Ministry of Environment and Sustainable Development], 'Decreto Numero 1076 de 2015' ['Decree 1076 of 2015'], 16 May 2015, <https://www.minambiente.gov.co/wp-content/uploads/2021/06/Decreto-1076-de-2015.pdf>, accessed 3 October 2025.

Colombian authorities appear to have taken steps to identify these regulatory discrepancies and detect zoocriaderos' intentional laundering of wild-caught specimens, by shifting licensing responsibilities for CITES species from CARs to ANLA for greater federal oversight, and conducting inspections.[30] Since 2016, the ANLA has issued public notices to four of the 10 registered caiman breeding farms it currently lists as inactive, citing irregularities including a lack of updated records on stock production and mortality, inconsistent harvest quotas, a lack of caudal scute scarring and poor animal welfare.[31] These irregularities may well have been a factor in the closure or inactivity of these operations, although one expert interviewed for this paper noted the challenges of determining whether such irregularities are linked to criminal activity, or are simply administrative errors.[32]

According to Colombian Law 1333 of 2009, the ANLA is responsible for investigating and sanctioning regulatory violations, which can result in fines, temporary or permanent closure, licence revocation, demolition, specimen confiscation, restitution

30. Interview with subject matter expert, online, 12 May 2025; *ibid.*, para. 15.
31. Information provided to the authors by the ANLA, per public information request.
32. Author interview with subject matter expert, online, 13 June 2025.

of wild species and community work.[33] This reflects the overwhelmingly administrative response to offences by zoocriaderos in Colombia. Indeed, other than in one case of suspected animal mistreatment, there is limited evidence of the ANLA referring cases to the Fiscalía General de la Nación (FGN, National Prosecutor's Office) for investigation of potential criminal offences, in which licensed zoocriaderos have been found to operate unlawfully.[34] Even the much-publicised US-prosecuted case of Nancy Teresa Gonzalez de Barberi did not result in any Colombian legal actions against zoocriaderos or tanneries involved in this supply chain. The founder of luxury New York-based design company Gzuniga Ltd, de Barberi was sentenced to 18 months in prison for paying couriers to smuggle handbags made in Colombia from wild-caught CITES-protected caimans and pythons into the US.[35]

Beyond caimans, Colombia's legal industry for other terrestrial species is relatively small, creating limited opportunities for laundering. At the time of writing, only three zoocriaderos in Colombia held commercial licences for non-crocodilian species. Among them is Tesoros de Colombia Sustainable Farm SAS, established to restore populations of Lehmann's poison frog (*Oophaga lehmanni*), which became critically endangered from rising illegal demand from hobbyist collectors and the international pet trade. It offers a supposedly cheaper, more sustainable supply of poison frogs than the black market could offer as well as supporting local livelihoods through job creation.[36] The farm is now licensed to breed 10 poison frog species (*Dendrobatidae*)[37] and claims to have reduced illegal trade in wild-caught specimens.[38]

Such initiatives demonstrate how legitimate businesses and community-led breeding projects operating responsibly can potentially offer a positive alternative to illegal trade by providing local employment and supporting conservation of native wildlife.[39] By comparison, illegal harvesting not only causes ecological harm, but denies rural

33. Colombian Government, Ley 1333 de 2009 ['Law 1333 of 2009'], <https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=36879>,accessed 25 September 2025; CITES, 'Notification to the Parties: Colombia: Trade of Caiman *crocodilus fuscus* Skins', 15 March 2016, <https://cites.org/sites/default/files/notif/E-Notif-2016-017.pdf>, accessed 31 August 2025.
34. Carolay Morales, 'Anla traslada a Fiscalía caso del maltrato animal' ['ANLA Transfers Animal Abuse Case to the Prosecutor's Office'], *RCN Radio*, 11 September 2018, <https://www.rcnradio.com/estilo-de-vida/anla-traslada-fiscalia-caso-del-maltrato-animal>, accessed 31 August 2025.
35. US Department of Justice, 'Luxury Handbag Company, Founder and Co-Conspirator Sentenced for Smuggling Handbags Made from Caiman and Python Skin', press release, 22 April 2024, <https://www.justice.gov/archives/opa/pr/luxury-handbag-company-founder-and-co-conspirator-sentenced-smuggling-handbags-made-caiman>, accessed 17 August 2025.
36. Author interview with subject matter expert, online, 15 April 2025; Jon-Rob Pool, 'Farmed and Legally Exported Colombian Poison Frogs Take on the Illegal Pet Trade', *Mongabay*, 18 November 2015, <https://news.mongabay.com/2015/11/farmed-and-legally-exported-colombian-poison-frogs-take-on-the-black-market-pet-trade/>, accessed 31 August 2025.
37. Information provided to the authors by ANLA, per public information request, May 2025.
38. Author interview with subject matter expert, online, 15 April 2025.
39. Leonardo Güiza Suárez, Andrés Balcázar Salazar and Luz Dary Acevedo Cendales, 'Tráfico ilegal de anfibios en Colombia: un análisis jurídico' ['Illegal Amphibian Trafficking in Colombia: A Legal Analysis'], Universidad del Rosario and Wildlife Conservation Society, 2022, p. 118, <https://doi.org/10.12804/urosario9789587848519>, accessed 3 October 2025.

communities with limited livelihood options the economic benefits of sustainable legal trade. Local people engaged in illegal harvesting may receive as little as $0.50 for an Oophaga frog[40] which can sell for $50–850 abroad, depending on its age and species.[41]

Nonetheless, establishing an approved captive breeding project in Colombia is a lengthy and costly process. The licensing phase is reportedly so rigorous that it can take several years for a zoocriadero to pass the test phase and begin exporting, and in some cases, CARs have reportedly prolonged the process by delaying the issuance of hunting permits.[42] Originally designed for large-scale crocodilian farms,[43] these procedures create steep barriers to entry for small-scale entrepreneurs and indigenous or local communities seeking to establish legal and sustainable wildlife ventures, which led one interviewee to describe setting up a viable captive breeding business in Colombia as 'practically impossible'.[44] These strict regulations instil confidence in Colombia's export system. However, the barriers to legal markets for certain species facing significant international demand in Colombia through local breeding operations may cause breeders to cut corners.[45] Barriers to legal markets may also result in biopiracy and the displacement of laundering via breeding operations in neighbouring countries with weaker controls.

Indeed, certain species endemic to Colombia – for which there are no licensed domestic zoocriaderos – are suspected of being smuggled abroad to licensed farms, which fraudulently claim that the specimens were captive-bred in their establishments. This reflects the hybrid trafficking–laundering model outlined in the Introduction. A 2021 study by German Forero-Medina and others found evidence of extensive international trade in poison frog species endemic to Colombia prior to 2011, when legal exports were first permitted.[46] This suggests that the frogs originated from illegal founder stock that was subsequently used to breed specimens elsewhere, mainly in the US and Europe. According to one interviewee, this form of biopiracy deprives Colombia of the economic benefits from its natural heritage that could have been generated from legal breeding and trade of these species in Colombia.[47]

40. Author interview with subject matter expert, online, 19 August 2025.
41. For prices in the US, see Frog Daddy, 'Oophaga', <https://frogdaddy.net/collections/oophaga>, accessed 3 October 2025; for prices in the UK, see Frog Father, 'Oophaga', <https://frogfather.co.uk/?s=oophaga>, accessed 3 October 2025.
42. Author interview with subject matter expert, online, 15 April 2025.
43. Author interview with subject matter expert, online, 12 May 2025.
44. Author interview with subject matter expert, online, 15 April 2025.
45. Author interview with subject matter expert, online, 12 May 2025.
46. *Ibid.*; German Forero-Medina et al., 'Navigating Access and Benefit Sharing in International Trade of Endemic Species: The Case of Colombia's Poison Frogs (Dendrobatidae)', *Conservation Science and Practice* (Vol. 7, No. 1, 2025); Devin Edmonds, 'Poison Frogs Traded and Maintained by U.S. Private Breeders', *Herpetological Review* (Vol. 52, No. 4, 2021), p. 782, Table 2.
47. Author interview with subject matter expert, online, 12 May 2025.

Box 1. Blending Wild-Caught Reptiles into Captive-Bred Stock

Open sources and interviews with research participants indicated that illegally harvested CITES Appendix II-listed reptile species native to Colombia – such as two species of matamata turtle (*Chelus fimbriatus* and *Chelus orinocensis*), the yellow-spotted river turtle (*Podocnemis unifilis*) and the giant South American river turtle (*Podocnemis expansa*) – are smuggled into Peru, where conditions for wildlife breeding and trade are viewed as more permissive than in Colombia. Here, it is suspected that they are laundered into the stock of licensed breeding farms, before being exported for hobbyist and collector markets in Asia, Europe and the US.[48]

In one example, licensed breeding farms in Peru's Loreto department that export large quantities of *C. fimbriatus* and *P. unifilis* to Asian markets have come under scrutiny for unrealistic management plans and economic irregularities, including an unexplained growth in assets (such as real estate) and trade imbalances of approximately $4 million.[49] Interviewees pointed to suspicions that *P. unifilis* specimens are smuggled across the border from Leticia, in Colombia's Amazonas department, to be laundered into the captive-bred stock of these farms.[50] However, this could not be corroborated in this research.

It is also suspected that species such as *C. orinocensis,* which are found in a range of locations encompassing Colombia's Orinoquía region and parts of Brazil, Guyana and Venezuela, are smuggled into Peru and mislabelled as lookalike species found in Peru (such as *C. fimbriatus*).[51] From here, they are exported to collectors seeking species coveted in the pet trade that are

48. Author interview with subject matter experts, online, 14 April and 12 May 2025; WCS, 'Análisis de la dinámica del comercio legal e ilegal de tortugas matamata (*Chelus fimbriata* y *Chelus orinocensis*) en Perú, Colombia y Brasil' ['Analysis of the Dynamic of Legal and Illegal Trade in Matamata Turtles (*Chelus fimbriata* and *Chelus orinocensis*) in Peru, Colombia and Brazil'], February 2022, <https://cdn.wcs.org/2022/10/18/3iiv7w0ha2_Tortugas_matamata_ES_1_1.pdf>, accessed 3 November 2025; María del Carmen Yrigoyen, 'Perú: Capital Del Blanqueo Del Tráfico De Tortugas Matamata' ['Peru: Capital of the Laundering of Trafficked Matamata Turtles'], Consejo de Redacción, 28 August 2024, <https://consejoderedaccion.org/sello-cdr/investigacion/peru-capital-del-blanqueo-del-trafico-de-tortugas-matamata/>, accessed 3 November 2025.
49. Aramis Castro, 'Juzgado falla contra bienes de exportadora de fauna por presunto tráfico de animales' ['Court Rules Against Wildlife Exporter's Assets For Alleged Animal Trafficking'], *Ojopúblico*, 3 March 2024, <https://ojo-publico.com/ambiente/territorio-amazonas/pj-falla-contra-bienes-exportadora-por-presunto-trafico-animales>, accessed 3 November 2025.
50. Author interview with subject matter expert, online, 14 April 2025.
51. Author interview with subject matter expert, online, 12 May 2025; Santiago Wills, 'Smuggled, Killed or Free: Three Fates of the Matamata Turtle', *Sumauma*, 20 August 2024, <https://sumauma.com/en/raptada-morta-ou-livre-os-tres-destinos-da-tartaruga-matamata/>, accessed 3 November 2025.

unavailable in legal markets. Despite the large number of matamata turtle seizures in Colombia, such suspicions have proven difficult to verify, although the case of a seizure of *C. orinocensis* bound for Peru in Leticia in 2015 appears to support these claims.[52] In 2023, Peruvian authorities detected at least 400 specimens of *P. expansa* of unknown legal provenance mislabelled and co-mingled in a legal shipment of 4,001 *P. unifilis* specimens bound for Indonesia, confirming that this methodology is used by exporters in Peru.[53]

While breeding farms in Peru and neighbouring countries exist as licensed businesses, the blending of captive-bred and illegally caught wild stock can result in certain financial 'red flags'. These include an unexplained growth in assets in a short timeframe that does not correlate with expected breeding rates, as well as major discrepancies between company revenues and market values, potentially indicating that the buyer is receiving larger payments than invoiced, perhaps due to co-mingling of a rarer higher-value species in a mislabelled shipment.[54]

This has led to calls for third countries with captive breeding operations to more responsibly enforce legal sourcing of founder stock, and more equitably share the economic benefits with the countries where founder stock was sourced, in order to support local economies and protect the wild populations of these species.[55]

Nonetheless, limited evidence exists on the countries implicated in this dynamic, owing largely to a lack of investigation into the supply chain. One interviewee speculated that a zoocriadero in Panama was being used to launder poison frogs illegally sourced in Colombia into international supply chains, but these allegations have not been substantiated.[56] There are also suspicions that the laundering of other Colombian species is occurring in Peru (Box 1). The lack of substantive evidence underscores the need for greater information sharing and transparency in licensed breeding operations to support intelligence gathering on transnational wildlife laundering methods and networks.

52. Santiago Wills, 'Smuggled, Killed or Free'.
53. Vanessa Buschschlüter, 'Thousands of Turtles in Peru Saved from Trafficking', *BBC News*, 20 December 2023.
54. Castro, 'Juzgado falla contra bienes de exportadora de fauna por presunto tráfico de animales' ['Court Rules Against Wildlife Exporter's Assets for Alleged Animal Trafficking'].
55. Forero-Medina et al., 'Navigating Access and Benefit Sharing in International Trade of Endemic Species'.
56. Author interview with Colombian law enforcement official, online, 5 May 2025.

Wildlife Sanctuaries in Mexico

Similarly to Colombia, Mexico has imposed regulations to promote the sustainable use of wildlife and support rural livelihoods, which include but are not limited to breeding (Table 3). Some of these facilities have faced similar enforcement and traceability challenges as Colombia.[57] In particular, there have been concerns about the reliance of Mexico's Procuraduría Federal de Protección al Ambiente (PROFEPA, Federal Attorney for Environmental Protection) on Unidades de Manejo para la Conservación de la Vida Silvestre (UMAs, Management Units for the Conservation and Sustainable Use of Wildlife) and Predios e Instalaciones que Manejan Vida Silvestre (PIMVS, Properties and Facilities that Manage Wildlife) to house confiscated wildlife, due to a lack of resources to sustain government-run Centros para la Integración de la Vida Silvestre (CIMVS, Centres for the Integration of Wildlife).[58]

Although UMAs and PIMVS cannot legally sell confiscated animals, there are suspicions that these types of operations are disguising confiscated animals as part of their commercial wildlife trade, through several fraudulent methods. For example, UMAs may falsely declare animals as deceased or stolen, before selling them as 'captive-bred'.[59] Resource constraints – including gaps in the availability of PROFEPA personnel to verify animal deaths via autopsy – mean that inspectors reportedly often accept owners' claims at face value.[60]

Additionally, several large international shipments of live animals have allegedly been made from Mexican wildlife sanctuaries to international wildlife facilities claiming to be focused on rescue and rehabilitation. For example, between April 2023 and March 2024, a zoological, breeding and rehabilitation centre in India reported receiving a total of 175 live specimens of exotic and native wildlife from Mexico, including substantial numbers of charismatic CITES Appendix I and II species such as lions (Panthera leo), tigers (Panthera tigris) and jaguars (*Panthera onca*),[61] as part of its accelerated global acquisition programme involving the collection of thousands of species.[62] These shipments, among others, have attracted scrutiny by the global conservation community. In November 2023, in a discussion at the Seventy-Seventh Meeting of the CITES Standing Committee, it was reported that sources in Mexico and the wider

57. Author interviews with subject matter experts, online, 24 April and 13 June 2025; Vanda Felbab-Brown, 'China-Linked Wildlife Poaching and Trafficking in Mexico', Brookings Institute, March 2022, <https://www.brookings.edu/wp-content/uploads/2022/03/FP_20220328_wildlife_trafficking_felbab_brown.pdf>, accessed 1 September 2025.
58. Author interview with subject matter expert, online, 13 June 2025; Government of Mexico, 'Ley General de Vida Silvestre' (LGVS) ['General Law on Wildlife'], 3 July 2000, Article 120.
59. Salazar and Domínguez, 'Criminología Verde' ['Green Criminology'], pp. 235–37.
60. *Ibid*.
61. Greens Zoological, Rescue and Rehabilitation Centre, 'Annual Report 2022–23', p. 56, <https://cza.nic.in/uploads/documents/reports/hindi/AR_greenszoojam_2223.pdf>, accessed 6 June 2025.
62. M Rajshekhar, 'The Costs of Reliance's Wildlife Ambitions', Pulitzer Center, 20 March 2024, <https://pulitzercenter.org/stories/costs-reliances-wildlife-ambitions>, accessed 14 October 2025.

region had raised concerns about the legality of such activities.[63] While India's Supreme Court recently cleared the centre of any suspicion of illegality in their wildlife sourcing,[64] the spotlight on international transfers of animals between wildlife sanctuaries has highlighted regulatory vulnerabilities which may be exploited by corrupt and criminal actors looking to use the sanctuary model to facilitate wildlife trafficking activities (Box 2).

Table 3: Regulatory Requirements for Wildlife Management Facilities in Mexico

Type of Facility	Purpose of Facility	Licensing/Control Authority	Controls and Requirements
UMA	UMAs manage native species in ex-situ and in-situ environments for activities including captive breeding, hunting, ecotourism and habitat restoration, if these activities support conservation efforts.	The Dirección General de Vida Silvestre (DGVS, General Direction of Wildlife) of the Secretaría del Medio Ambiente y Recursos Naturales (SEMARNAT, Ministry of Environment and Natural Resources) issues registrations for UMAs. PROFEPA enforces federal environmental laws and oversees compliance of UMAs obligations.	To register as an UMA, a technical expert must prepare a management plan containing details on the species and breeding stock (if relevant), conservation objectives and methodology, a calendar of activities, and details of the marking system (used to identify captive-bred specimens) and submit it to SEMARNAT for approval. UMAs are required to submit annual reports on their activities to SEMARNAT.
PIMVS	PIMVS manage exotic – and to a lesser extent native – wildlife species in confinement for controlled reproduction and commercial use, without the aim of reintegration into the wild.	The DGVS of SEMARNAT issues registrations for PIMVS. PROFEPA enforces federal environmental laws and oversees compliance of PIMVS obligations.	Since 2013, PIMVS have also been required to submit management plans to SEMARNAT. PIMVS are required to submit annual reports on their activities to SEMARNAT.

Source: Government of Mexico, 'Ley General de Vida Silvestre' (LGVS) ['General Law on Wildlife'], 3 July 2000, <https://www.gob.mx/semarnat/articulos/ley-general-de-vida-silvestre-conservacion-y-aprovechamiento-sustentable>, accessed 3 October 2025.

63. CITES, 'Implementation of Article XIII and Resolution Conf. 14.3 (Rev. COP19) on CITES Compliance Procedures', Seventy-Seventh meeting of the Standing Committee Geneva (Switzerland), 6–10 November 2023, <https://cites.org/sites/default/files/documents/E-SC77-33-01_2.pdf>, accessed 14 October 2025.
64. Bizz Impact, 'Supreme Court Delivers Landmark Judgment in Favour of Vantara', *Times Now*, September 2025, <https://www.timesnownews.com/bizz-impact/supreme-court-delivers-landmark-judgment-in-favour-of-vantara-article-152828592>, accessed 14 October 2025.

The Mexico–India shipments have also highlighted potential vulnerabilities in PIMVS that may facilitate wildlife laundering. First, PIMVS have historically operated in a looser regulatory context than UMAs, because they manage predominantly exotic species and have less of a conservation mandate (Table 3).[65] When Mexico banned the use of wild animals in circuses in 2015, many private sanctuaries reportedly registered as a PIMVS to house the animals in question.[66] Since then, it has been reported that some of these sanctuaries have rescued big cats previously owned by members of drug cartels,[67] which are part of the demand from wealthy elites to keep exotic pets as status symbols – a demand that fuels illicit markets for such species.[68]

Irregularities at some PIMVS may also suggest risk indicators for wildlife laundering. For example, PROFEPA has confiscated animals from PIMVS that lack management plans, adequate marking systems (used to identify captive-bred specimens) or proper licences, or on the basis of animal welfare issues.[69] Additionally, media reports have pointed to discrepancies in the number of resident populations of wildlife at certain facilities, with fewer animals present upon inspection than anticipated, based on quotas of confiscated wildlife received. In one case, individual animals made famous by PIMVS social media activity were later found to be missing from the relevant facilities, leading to speculation that they had been illegally traded.[70]

65. Asociación Mexicana de Mastozoología A C and Word Wildlife Fund (WWF), 'Diagnóstico del tráfico ilegal del jaguar y capacidades institucionales para la aplicación de la ley en el corredor selva maya: Resumen ejecutivo' ['Diagnosis of Illegal Jaguar Trafficking and Institutional Capacities for Law Enforcement in the Mayan Jungle Corridor: Executive Summary'], 2022, p. 72, <https://wwflac.awsassets.panda.org/downloads/diagnostico_trafico_ilegal_jaguar_peninsula_yucatan_ammac_wwf_2022.pdf>, accessed 25 August 2025.
66. Author interview with subject matter expert, online, 13 June 2025.
67. Luis Prada, 'Circus Animals Caught in a Cartel War are Fleeing a Mexican City', *Vice*, 21 May 2025, <https://www.vice.com/en/article/circus-animals-caught-in-a-cartel-war-are-fleeing-a-mexican-city/>, accessed 14 October 2025.
68. Ragnhild Sollund, 'Animal Trafficking and Trade: Abuse and Species Injustice', in Reece Walters, Diane Solomon Westerhuis and Tanya Wyatt (eds), *Emerging Issues in Green Criminology. Exploring Justice, Power and Harm* (London: Palgrave Macmillan, 2013), pp. 72–92.
69. Cámara de Diputados [Chamber of Deputies], proposition signed by Deputy Jorge Arturo Espadas Galván, 10 August 2022, <http://sil.gobernacion.gob.mx/Archivos/Documentos/2022/08/asun_4380635_20220810_1660148819.pdf>, accessed 11 June 2025; Government of Mexico, 'Black Jaguar White Tiger. A 2 años del rescate' ['Black Jaguar White Tiger: Two Years After the Rescue'], 5 July 2024, <https://www.gob.mx/profepa/prensa/black-jaguar-white-tiger-a-2-anos-del-rescate>, accessed 10 June 2025; Government of Mexico, 'En buenas condiciones, animales encontrados en operativo policial en Ocoyoacac: Profepa' ['Animals Found in Good Condition During Police Operation in Ocoyoacac: Profepa'], press release, 25 November 2024, <https://www.gob.mx/profepa/prensa/en-buenas-condiciones-animales-encontrados-en-operativo-policial-en-ocoyoacac-profepa>, accessed 1 September 2025.
70. Gabriela Gutiérrez, 'En las Garras de Black Jaguar White Tiger' ['In the Clutches of Black Jaguar White Tiger'], *Pie de Página*, 16 July 2022, <https://piedepagina.mx/en-las-garras-de-black-jaguar-white-tiger/>, accessed 12 June 2025; Ernesto Mendez, 'FOTOS: Animales Exóticos Asegurados Siguen en Predio de Ocoyoacac, No Hay Donde Llevarlos' ['Exotic Animals Seized Remain on the Property in Ocoyoacac; There is Nowhere to Take Them'], *Excelsior*, 4 December 2024, <https://www.excelsior.com.mx/comunidad/fotos-animales-exoticos-siguen-predio-ocoyoacac-edomex-cateo/1687883>, accessed 1 September 2025.

Authorities face resource constraints in housing confiscated wildlife, creating perverse incentives to permit trade that rehouses wildlife elsewhere to guarantee the welfare of specimens. This situation can, in turn, be exploited by illicit actors. Figure 3 illustrates how the legal process of rehousing confiscated wildlife may be abused by privately-owned sanctuaries that seek to generate illicit proceeds from trade in specimens provided to them by authorities for safekeeping.

Box 2. CITES Codes and the Use of Sanctuaries as Fronts for IWT

Legal loopholes and structural vulnerabilities can be exploited by criminal actors seeking to disguise wildlife laundering as rescue and rehabilitation activities. This can involve the exploitation of CITES codes[71], as follows:

- CITES purpose code 'Z' indicates a non-commercial transfer between zoos or aquariums. By using this code, trafficking of Appendix I species may be disguised as wildlife rescue or rehabilitation.[72]
- CITES source code 'I' indicates confiscated specimens, with shipments exempt from the requirement to prove legal acquisition or obtain non-detriment findings (NDFs, which show that the shipment will not be detrimental to the survival of the species) for wild populations. In Mexico, SEMARNAT is required to confirm the original confiscation seizure in the form of proof of an administrative or criminal resolution, but due to challenges of reaching a judicial resolution this check is reportedly rarely satisfied, creating a loophole (Figure 2).[73]
- CITES source code 'C' indicates captive-bred specimens, with shipments exempt from the requirement to obtain an NDF. Instead, operators must prove legal acquisition using a marking system (for example, caudal scales or microchips) to show specimens were captive bred, systems often lacking in PIMVS. One interviewee noted that exporters sometimes use source code 'C' instead of 'F' (farmed) for specimens that do not meet the CITES definition for captive bred, since 'F' codes require an NDF.[74]

71. CITES, 'A Guide to Using the CITES Trade Database: Version 9', September 2022, <https://trade.cites.org/cites_trade_guidelines/en-CITES_Trade_Database_Guide.pdf>, accessed 2 November 2025.
72. Author interview with subject matter expert, online, 9 April 2025.
73. Insights derived from verification meeting with Mexican government officials, online, 20 September 2025.
74. Author interview with former Mexican government official, online, 5 June 2025.

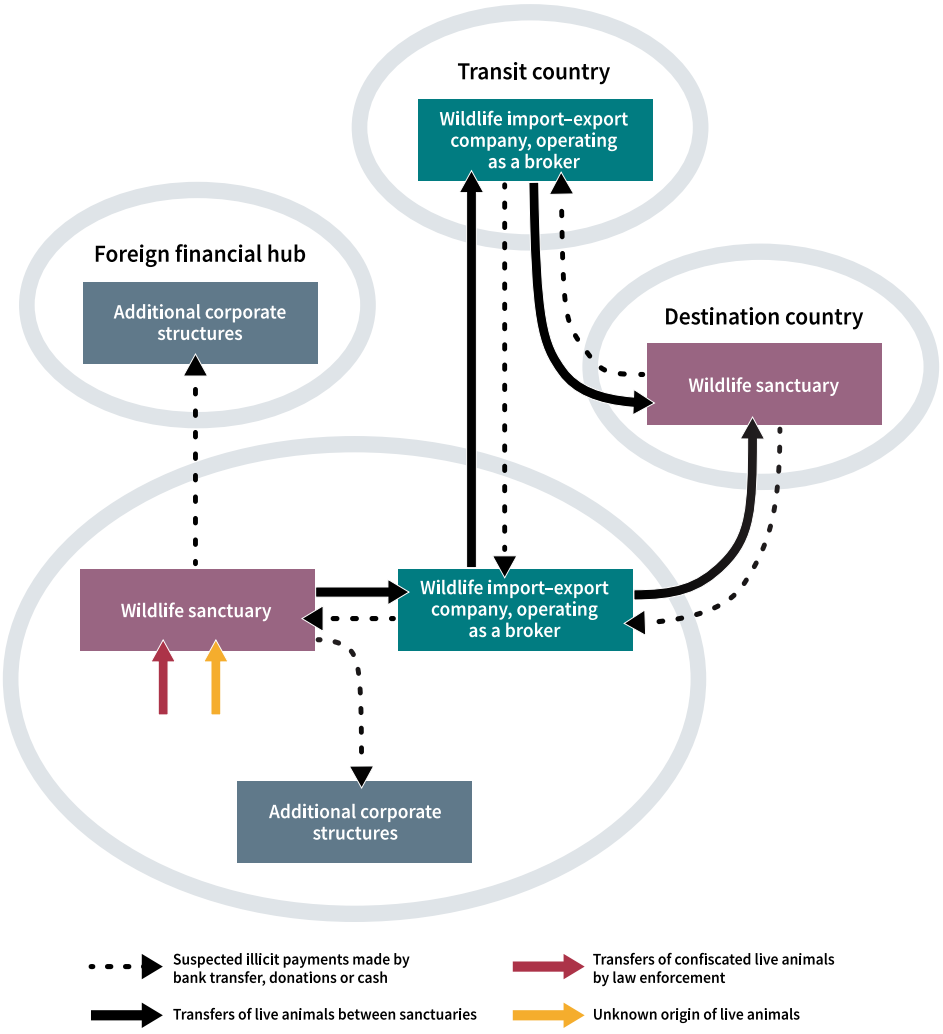
Interviewees considered that CITES codes were potentially being exploited in these ways by PIMVS in Mexico as a cover for illicit trade in specimens transferred under the pretext of rescue and rehabilitation.[75] Open source research indicates that such transfers between sanctuaries or zoos are arranged by brokers: well-connected individuals who operate through front companies posing as zoos and have the technical expertise and political connections to obtain export permits with the CITES codes above.[76]

The corresponding payments for 'non-commercial' transfers can be made in various ways, including via underground payment systems, crowdfunding platforms, donations to sanctuaries and outsized transportation or handling fees.[77] Open source analysis of PIMVS suspected of wildlife laundering revealed links to additional corporate structures in Mexico and the US, which could be used to funnel illicit financial flows (Figure 2).[78]

For example, some experts have expressed concern about potential conflicts of interest between entities that support PROFEPA with the relocation and housing of confiscated specimens and senior officials in Mexico's CITES management authority, SEMARNAT's DGVS. In 2024, SEMARNAT reportedly investigated 13 officials in the DGVS for misconduct, including alteration of documents and issuance of permits for illicit wildlife transactions.[79] However, the outcome of the investigation had not been made public at the time of writing. The methods outlined in Box 2 demonstrate how corrupt officials could potentially facilitate IWT under the cover of non-commercial transfers and use of the 'confiscated' source code. Yet, there has been no conclusive evidence of corruption and it is difficult to prove that officials did not simply authorise export permits in the interest of animal welfare, a challenge also seen in other countries.

75. *Ibid.*; author interview with former representative of intergovernmental organisation, online, 13 May 2025.
76. Mexico Public Registry of Commerce; Angélica Enciso L, 'Ven conflicto de intereses en nombramiento de Marie Palma en Vida Silvestre' ['Conflict of Interest in Marie Palma's Appointment to Wildlife'], *La Jornada*, 13 December 2018, <https://www.jornada.com.mx/2018/12/13/sociedad/036n3soc>, accessed 10 June 2025; Gutiérrez, 'En las garras de Black Jaguar White Tiger' ['In the Clutches of Black Jaguar White Tiger']; Rajshekhar, 'The Costs of Reliance's Wildlife Ambitions'.
77. Author interview with subject matter expert, online, 9 April 2025; Christoph Cadenbach et al., 'Wildlife Trade: "We'll Take Almost Anything!"', 27 June 2025, <https://www.sueddeutsche.de/wissen/artenschutz-wildtiere-tierhandel-vantara-actp-guth-zoo-indien-li.3273888>, accessed 3 November 2025.
78. Company Record in Mexico's Public Registry of Commerce; Company Record in US California Secretary of State, <https://bizfileonline.sos.ca.gov/search/business>, accessed 13 June 2025.
79. Zósimo Camacho, 'Desbaratan red involucrada en tráfico de especies al interior de la Semarnat' [Network Involved in Wildlife Trafficking within Semarnat Dismantled], *Contralinea*, 4 May 2024, <https://contralinea.com.mx/interno/semana/desbaratan-red-involucrada-en-trafico-de-especies-al-interior-de-la-semarnat/>, accessed 10 June 2025.

Figure 2: Illicit Financial and Wildlife Flows Between Sanctuaries

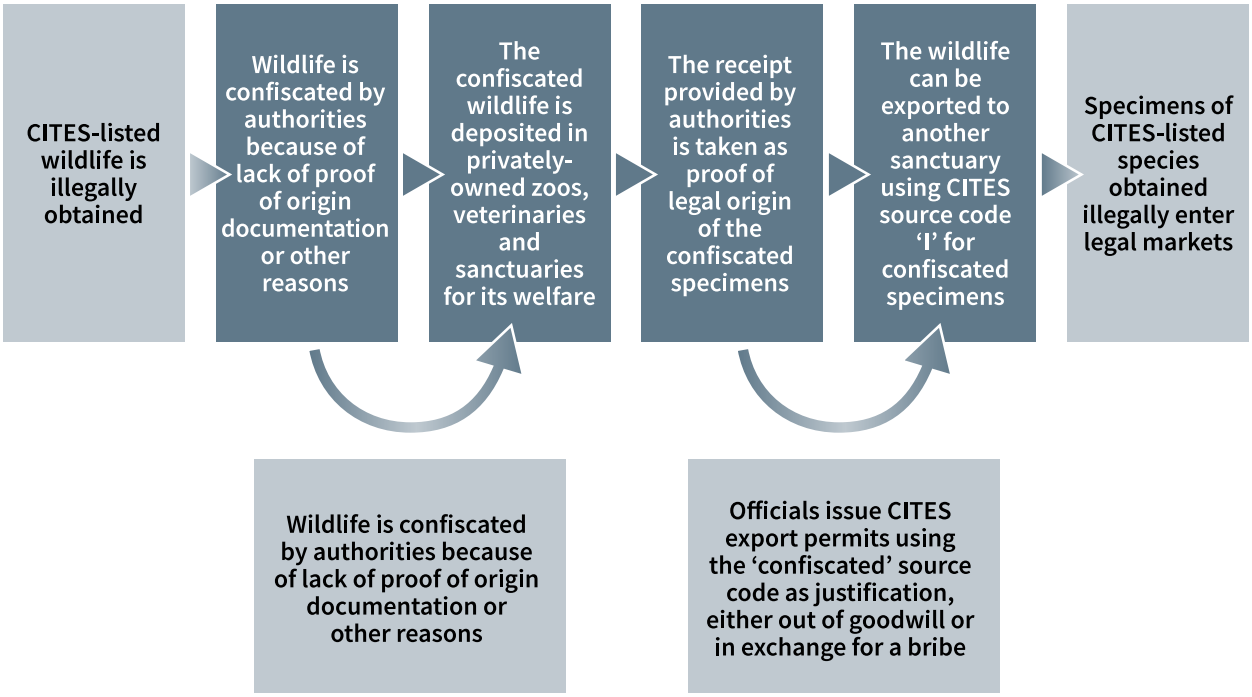


Source: The authors.

The challenges of alleging misuse of CITES codes has been exemplified in India, where speculation over CITES permits issued to the sanctuary which received the aforementioned shipments of big cats and other species from Mexico[80] led to an Indian Supreme Court ruling on 15 September 2025 which stated that the sanctuary was compliant with CITES, and that it was unacceptable 'to dispute the validity' of permits once issued.[81] This case reveals the political sensitivities that can arise from questioning the legality of CITES permits issued by senior government officials in source, transit or destination countries. This ruling risks setting a challenging legal precedent that could have bearings on the interpretation of international wildlife law elsewhere.

80. Cadenbach et al., "'Wildtierhandel" ["'Wildlife Trade"].
81. Danish Manzoor Bhat, 'India's Vantara Zoo Project Upheld as Compliant', Newsweek, 15 September 2025, <https://www.newsweek.com/indias-vantara-zoo-project-upheld-compliant-2130193>, accessed 21 September 2025.

Figure 3: The Confiscated Wildlife Conundrum



Source: The authors.

Aquatic Wildlife

Both Colombia and Mexico have introduced fisheries legislation and regulations – such as mandated gear requirements, vessel-specific fishing zones, seasonal closures and licensing – to prevent over-exploitation of both CITES-listed and non-CITES species.[82] While designed to promote sustainable practices, parallel legal and illegal markets create grey areas that can be exploited by criminal actors, including regulatory asymmetries – whereby an illegal practice in one jurisdiction may be permitted in a neighbouring one, creating opportunities for laundering – or regulatory loopholes, which can be exploited through document fraud. Concealment techniques, such as mixing illegally harvested fish with legally caught catch, are also used, taking advantage of enforcement constraints and poor traceability of fish supply.[83] In both countries, high levels of informality in fisheries, combined with increasing

82. Government of Mexico, 'Ley 13 de 1990 Estatuto General de Pesca' ['Law 13 of 1990 General Fisheries Statute'], <https://www.funcionpublica.gov.co/eva/gestornormativo/norma_pdf.php?i=66783?, accessed 28 August 2025; Government of Mexico, 'Ley General de Pesca y Acuacultura Sustentables' ['General Law of Fisheries and Sustainable Aquaculture'], <https://www.gob.mx/conapesca/documentos/ley-general-de-pesca-y-acuacultura-sustentables>, accessed 28 August 2025.
83. Author interview with subject matter expert, online, 15 April 2025.

involvement of organised criminal groups (OCGs) in the sector, has created a 'perfect storm' for laundering activities.[84]

Informality and Organised Crime in Fisheries

In Mexico, more than 40% of fish caught are reportedly illegally sourced, but sold in legal supply chains through documentation fraud occurring at the landing stage.[85] *Avisos de arribo* (notices of arrival) or containing information on species and volumes must be presented to authorities upon landing, to demonstrate compliance with fishing regulations and the type of fishing permit held – although these can easily be falsified.[86] Fishing permits can be recycled, so that two fishers can use the same permit, effectively doubling the amount of catch allowed.[87] A study by the NGO Oceana found that 22% of the output of 10 fisheries in Mexico was illegally caught and laundered between 2000 and 2020, using fraudulent notices of arrival, with the most laundered species cited as snails (40%), crabs (35%), sea cucumbers (20%), lobsters (17%), and shrimp and northern red snappers (10%).[88]

Once the fish is landed, sales invoices serve as proof of legal origin for transport and sale, but these can also be manipulated. In sea cucumber fisheries, buyers can reportedly purchase invoices from fishing cooperatives and other permit holders to 'legitimise' out-of-season harvests, which are stored and then sold during on-season.[89] Foreign buyers have also manipulated paperwork to facilitate imports: in 2018, the US-based seafood company Blessing Seafood Inc. was found guilty of purchasing more than $13 million in illegally harvested sea cucumbers from Yucatán.[90] It was found to have bribed Mexican officials and submitted fraudulent invoices to US Customs, undervaluing product values by 90% to facilitate their import into the US and onward export to Asian markets for $17.5 million. These examples and other forms of document fraud are commonly reported in sea cucumber fisheries.[91]

84. Author interview with subject matter expert, online, 24 April 2025.
85. CONAPESCA, 'Programa Nacional de Pesca y Acuacultura 2020-24' ['National Fisheries and Aquaculture Program 2020–24'], p. 23, <https://www.gob.mx/cms/uploads/attachment/file/616554/programa_Nacional_de_Pesca_y_Acuacultura_2020-2024baja.pdf>, accessed 24 August 2025.
86. Author interviews with subject matter experts and US law enforcement official, online, 15 April, 24 April and 27 August 2025.
87. Author interview with US law enforcement official, online, 27 August 2025.
88. Oceana, 'Pesca Ilegal en México: Soluciones desde la Política Pesquera' ['Illegal Fishing in Mexico: Solutions from Fisheries Policy'], 2024, p. 18, <https://mx.oceana.org/wp-content/uploads/sites/17/2024/10/06-pesca-ilegal-en-mexico-soluciones-desde-la-politica-pesquera.pdf>, accessed 22 August 2025.
89. Teale N Phelps Bondaroff et al., 'Characterising Changes in a Decade of Mexican Sea Cucumber Crime (2011–2021) Using Media Reports', Beche-de-Mer Information Bulletin No. 42, March 2022.
90. US Attorney's Office, Southern District of California, 'Three Charged with Illegal Trafficking of $17 Million Worth of Sea Cucumbers', press release, 26 May 2017, <https://www.justice.gov/usao-sdca/pr/three-charged-illegal-trafficking-17-million-worth-sea-cucumbers>, accessed 15 September 2025; Department of Justice, 'Environmental Crimes Section Monthly Bulletin', May 2018, <https://www.justice.gov/d9/pages/attachments/2018/06/11/env_crimes-467743-v1-public_bulletin_may_2018.pdf>, accessed 15 September 2025.
91. Bondaroff et al., 'Characterising Changes in a Decade of Mexican Sea Cucumber Crime (2011–2021) Using Media Reports'.

Risks of the laundering of fishery products are heightened in coastal areas where OCGs are active. For example, the Sinaloa Cartel and Jalisco New Generation Cartel are active across fishing hubs in the Gulf of California on the Pacific coast. On the Atlantic coast, the Gulf Cartel exercises control in Tamaulipas.[92] Following their expansion into strategic coastal nodes for drug trafficking, such actors have diversified their activities into extortion of fishers – forcing them to sell their catch at a fixed price, and coercing businesses, such as processing plants, seafood restaurants and retailers, to buy from them.[93] This reportedly extends beyond high-value CITES-listed species such as totoaba, shark fin, sea cucumber and seahorse, which are destined for Asian markets, to include other commercial seafood products such as shrimp, which is reportedly laundered into legal US markets.[94] In many cases, however, OCG involvement can be difficult to prove.[95]

The example in Box 3 illustrates how parallel legal and illegal trades can create legal loopholes that can be exploited. Notably, Mexican law permits shark fin trade – including in critically endangered CITES-listed species[96] – if fins are harvested from sharks caught as accidental bycatch and landed with the corresponding carcasses. However, the fins do not have to be attached to the carcasses when landed.[97] This loophole creates opportunities for wildlife laundering. In theory, Mexico's Comisión Nacional de Acuacultura y Pesca (CONAPESCA, National Aquaculture and Fishing Commission) is required to check the notices of arrival of vessels to ensure that the weight of landed fins is proportionate to the carcasses, but this reportedly rarely happens in practice.[98] Instead, vessels may use permits for other species to purposefully catch CITES-listed sharks and land an amount of fins that exceeds the number of carcasses, or without any carcasses at all. They can then be labelled as accidental bycatch and exported in large quantities to buyers.

92. US Immigration and Customs Enforcement, 'Treasury Targets Cartel-Enabled Illegal Fishing Operations Following HSI RGV Investigation', 27 November 2024, <https://www.ice.gov/news/releases/treasury-targets-cartel-enabled-illegal-fishing-operations-following-hsi-rgv>, accessed 25 September 2025; Maria Verza, 'Mexico's Playa Bagdad Mixes Sun, Sand and Drug Trafficking', *AP News*, 27 August 2019.
93. Author interview with subject matter expert, online, 9 April 2025; Vanda Felbab-Brown, 'Something Fishy: Wildlife Trafficking from Mexico to China', Brookings Institute, 8 March 2022, <https://www.brookings.edu/articles/something-fishy-wildlife-trafficking-from-mexico-to-china/>, accessed 7 July 2025.
94. Author interviews with subject matter expert and US law enforcement official, online, 24 April and 27 August 2025.
95. Author interview with subject matter expert, online, 24 April 2025.
96. Trade is allowed except for whale shark (*Rhincodon typus*), basking shark (*Cetorhinus maximus*), great white shark (*Carcharodon carcharias*), sawfish (*Pristis perotteti, P. pectinata* and *P. microdon*) and giant manta ray (*Manta birostris, Mobula japanica, M. thurstoni, M. munkiana, M. hypostomata* and *Mobula tarapacana*), any of these specimens caught incidentally must be returned to the water.
97. Norma Oficial Mexicana, 'Pesca responsable de tiburones y rayas. Especificaciones para su aprovechamiento' ['Responsible Fishing of Sharks and Rays. Specifications for their Utilisation'], Article 4.2.1.
98. Author interview with subject matter expert, online, 24 April 2025; comments provided by subject matter experts in validation workshop, online, 22 August 2025.

Box 3. Mislabelling and Other Inconsistencies in Shark-Fin Exports

In Mexico, the fins of CITES Appendix II shark species may be laundered into 'legal' exports, including scalloped hammerhead (*Sphyrna lewini*), great hammerhead (*Sphyrna mokarran*), smooth hammerhead (*Sphyrna zygaena*), silky shark (*Carcharhinus falciformis*), oceanic whitetip (*Carcharhinus longimanus*) and spinner shark (*Carcharhinus brevipinna*). The following strategies tend to be used:

- **Co-mingling and mislabelling**: Recent large-scale seizures have revealed CITES-listed shark fins co-mingled with or mislabelled as commercial marine products, such as fins of non-CITES listed shark species or other non-shark products, such as corvina fish bladder or shrimp.[99] Exports of commercial marine products are overseen by CONAPESCA, with the CITES authorities not required to issue supporting paperwork, such as export permits and NDFs.[100]
- **Inconsistencies in documentation**: Interviewees suggested that the quantities of shark fins requested for export under CITES permits sometimes differ from the volumes that can be supported by the legal catch data documented in the corresponding landing reports or notices of arrival.[101] However, there is limited evidence of the prevalence of this approach. One former government official mentioned that export requests have at times exceeded the quantities that could reasonably be derived from the declared legal catch, but this practice reduced significantly after the authorities scrutinised catch volumes documented in paperwork more thoroughly against the vessel capacity and fishing effort information provided.[102]

99. Author interview with subject matter expert, online, 20 June 2025; Fanny Miranda, 'Aseguran cargamento de miles kilos de aletas de tiburón' ['Shipment of Thousands of Kilos of Shark Fins Seized'], *Milenio*, 11 June 2025, <https://amp.milenio.com/estados/aseguran-cargamento-miles-kilos-aletas-tiburon>, accessed 2 November 2025.
100. Author interview with subject matter experts, online, 13 and 20 June 2025.
101. Author interview with subject matter expert and US government official, online, 24 April 2025; comments provided by subject matter experts in validation workshop, online, 22 August 2025; Emilio Godoy, 'Sharks, Victims of Mexican Authorities' Neglect', Earth Journalism Network, 31 August 2021, <https://earthjournalism.net/stories/sharks-victims-of-mexican-authorities-neglect>, accessed 8 July 2025.
102. Author interview with former government official, online, 5 June 2025.

In terms of associated illicit finance, the second strategy means the exporting company has no need to conceal illicit proceeds, as company transactions will align with business operations. Co-mingling shipments and mislabelling are more likely to require the use of over-invoicing and other techniques to account for the actual value of the concealed goods. Payments will often be made via the regulated financial system. For example, a Hong Kong-based company reportedly transferred $5 million over one month to the bank accounts of Sinaloa Cartel-linked individuals and shell companies as payment for shark fins, as a complex series of transactions.[103]

In 2020, the US-led multiagency Operation Apex exposed a similar loophole being exploited by a California-based transnational shark-fin trafficking network using a front company registered in Florida (where shark-fin trade was permitted) as a cover, so that the group could sell shark fins of Mexican origin, circumventing a ban on shark-fin trade in California. This legal loophole allowed the US to serve as a transit hub for Mexican shark fins bound for Asian markets.[104] In 2023, trade in the fins of all shark species was banned at the federal level in the US to address criminal exploitation of regulatory asymmetries between states.[105]

The shark-fin trade presents another set of challenges in Colombia. There have been no reported exports of fins of CITES-listed shark species from the country due to national restrictions on commercial shark-fin trade.[106] While shark fins are reported to be harvested illegally in Colombian waters, the absence of a parallel legal market means that fins are smuggled out of the country, rather than being laundered into legal supplies. For example, in 2021, the Colombian authorities detected 3,493 kg of dried and peeled CITES Appendix II-listed shark fins, including silky shark (*C. falciformis*), scalloped hammerhead (*S. lewini*), pelagic thresher (*Alopias pelagicus*), bull shark (*Carcharhinus leucas*) and tiger shark (*Galeocerdo cuvier*), concealed in a shipment of fish bladders departing from El Dorado International Airport for Hong Kong.[107] As such,

103. Author interview with compliance officer in a bank, online, 9 June 2025.
104. US Department of Justice, 'International Money Laundering, Drug Trafficking and Illegal Wildlife Trade Operation Dismantled', press release, 3 September 2020, <https://www.justice.gov/usao-sdga/pr/international-money-laundering-drug-trafficking-and-illegal-wildlife-trade-operation>, accessed 5 November 2025.
105. US Congress, 'S.1106 – Shark Fin Sales Elimination Act of 2021', <https://www.congress.gov/bill/117th-congress/senate-bill/1106>, accessed 6 October 2025.
106. CITES Trade Database 2005. Compiled by UNEP-WCMC for the CITES Secretariat, <trade.cites.org>, accessed 25 October 2025.
107. Organised Crime and Corruption Reporting Project, *Mongabay* and Armando.info, 'Illegal Shark Fin Bust Leads to Company Owned by Colombian Drug Lord's Son', 9 November 2023, <https://www.occrp. org/en/project/narcofiles-the-new-criminal-order/illegal-shark-fin-bust-leads-to-company-owned-by-colombian-drug-lords-son>, accessed 24 August 2025.

any laundering of shark fins sourced in Colombia into legal markets is likely to occur later in the supply chain.

However, regional regulatory asymmetries enable laundering of other species in Colombia and neighbouring countries. These issues are particularly salient in Colombia's porous tri-border region with Brazil and Peru, where limited state resources and the presence of armed groups foster high levels of criminal convergence and illicit financing.

A prominent example of aquatic wildlife laundering involves the CITES Appendix II-listed pirarucu (*Arapaima gigas gigas*), a giant freshwater fish found in the Amazon basin, also known as *paiche* or *arapaima*. The fish is important locally as a source of nutrition, but is also in demand internationally for its meat and skin, which is being used by international fashion designers to make leather products.[108] This demand has created a range of local economic opportunities, yet questions have been raised about the unequal concentration of economic benefits across this supply chain, due to the disparity between the prices of luxury fashion garments and the revenues of indigenous fishers.[109]

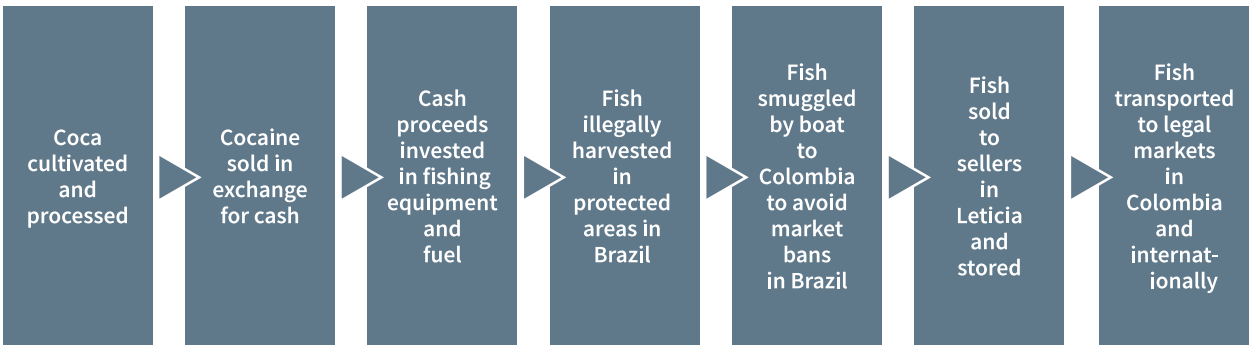
Notwithstanding the need to address the ethical challenges above, pirarucu supply chains in Colombia are also vulnerable to wildlife laundering. Dissident factions of the Fuerzas Armadas Revolucionarias de Colombia (FARC, Revolutionary Armed Forces of Colombia) active in the tri-border region reportedly launder drug trafficking proceeds by funding illegal pirarucu fishing in Brazil's protected indigenous areas, where the fish are more abundant (Figure 4). The fish are then smuggled to Colombia by boat – sometimes alongside cocaine[110] – to circumvent seasonal pirarucu fishing bans in Brazil.[111] Because of the limited capacity of Colombia's Autoridad Nacional de Acuicultura y Pesca (AUNAP, National Aquaculture and Fish Authority) to check consignments, officials reportedly accept sellers' claims of legal provenance at face value.[112] Similar laundering schemes also appear to target ornamental fish.[113]

As in Mexico, these dynamics show how wildlife laundering functions as a low-risk, high-reward crime in Colombia, enabling illegal armed groups to launder proceeds from other serious crimes and diversify their income streams, complicating enforcement efforts. Opportunities for illicit actors to engage in wildlife laundering are

108. Global Initiative Against Transnational Organized Crime (GI-TOC), 'Monitoring Online Illegal Wildlife Trade: Insights from Brazil and South Africa', October 2024, <https://globalinitiative.net/wp-content/uploads/2024/10/Monitoring-illegal-wildlife-trade-Brazil-and-South-Africa-GI-TOC-October-2024.pdf>, accessed 19 September 2025.
109. Lara Suskter Mosheyof, 'Luxury Bags, Tiny Paychecks: The Dark Side of Pirarucu Fashion,' *JFeed*, <https://www.jfeed.com/fashion/pirarucu-luxury-fashion-sustainability>, accessed 15 October 2025.
110. GI-TOC, 'Monitoring Online Illegal Wildlife Trade'.
111. Rodrigo Pedroso, Nelly Luna Amancio and Jonathan Hurtado, 'La triple frontera de la pesca ilegal: mafias e impunidad detrás del tráfico en la Amazonía' ['The Illegal Fishing Tri-Border: Mafias and Impunity Behind Trafficking in the Amazon'], *OjoPúblico*, June 2023, <https://ojo-publico.com/especiales/la-pesca-ilegal-triple-frontera-mafias-impunidad-en-la-amazonia/>, accessed 29 August 2025.
112. *Ibid*.
113. Author interviews with subject matter experts, online, 1 April and 12 May 2025.

facilitated by regulatory asymmetries, legal loopholes, informalities across the sector and limited enforcement of fishing regulations. Here, legitimate opportunities for green and blue economies to unlock ethical and sustainable trade for local communities face various challenges, inequities and supply chain risks.

Figure 4: Drug Trafficking and Aquatic Wildlife Laundering in the Tri-Border Area



Source: The authors.

Enabling Factors and Opportunities

The previous chapter illustrates how, despite strong indications of wildlife laundering, there have been a limited number of cases in Colombia and Mexico. This chapter explores the regulatory and resource constraints that make it difficult for authorities in source and destination countries to detect and prosecute wildlife laundering cases. It also explores opportunities for strengthening responses at the national and international levels.

Enabling Factors

Personnel and Resource Constraints

Research participants interviewed for this paper expressed the view that wildlife laundering in Colombia and Mexico is predominantly enabled by weak enforcement capacity and limited resources.[114] In both countries, wildlife crime is considered a relatively low priority compared with tackling the threat posed by non-state armed groups and other serious crimes, such as drug and human trafficking and extortion.[115]

Environmental authorities themselves have competing priorities. In Colombia, the Dirección de Carabineros y Protección Medio Ambiental (DICAR, Police Directorate of Carabineers and Environmental Protection) directs much of its resources to combatting illegal mining, because of the demonstrated role that this illicit activity plays as a money laundering mechanism and source of illicit revenue for armed groups. Wildlife crime receives comparatively fewer resources.[116]

These challenges result in constraints to addressing wildlife laundering, limiting the capacity of national authorities to conduct inspections of licensed wildlife businesses. In Mexico, PROFEPA has limited resources relative to the large number of UMAs and

114. Author interview with subject matter expert, online, 1 April 2025.
115. Author interviews with subject matter experts, online, 14 and 15 April 2025.
116. Author interview with Colombian law enforcement official, online, 7 May 2025.

PIMVS it is responsible for inspecting, a situation reportedly exacerbated by successive budget cuts.[117] In 2023, Mexico had 14,546 licensed UMAs covering 20% of its territory.[118] Records maintained by an organisation consulted for this research indicate that the state of Oaxaca hosts 370 UMAs and 13 PIMVS but has only nine PROFEPA inspectors – roughly one per 11,000 km^2.[119] In Colombia, while the number of zoocriaderos is more manageable, the breadth of ANLA's mandate – which includes oversight of all resource-use activities, including large-scale industries, such as mining and hydrocarbons – can result in significant administrative delays, creating impediments for legitimate captive-breeding initiatives as well as limiting ANLA's capacity to prevent abuse.[120]

Authorities overseeing fishing face similar challenges. Mexico's approximately 2,200 industrial-scale vessels and 78,000 artisanal fishing vessels vastly exceed CONAPESCA's reported capacity to monitor fishing activity.[121] In Colombia, AUNAP reportedly has only has two inspectors stationed in Leticia, who are unable to verify the legal origin of all fish landed and stored.[122] Moreover, authorities are reportedly unable to keep detailed records of catch volumes in Leticia, although studies estimate this ranges between 6,000 and 10,000 tonnes each year.[123]

Technical Challenges

Wildlife laundering can be highly technical, posing challenges for non-specialists in enforcement agencies, judicial agencies and departments that oversee commercial trade, such as fisheries authorities. This can make wildlife laundering more difficult to tackle than overt illegal wildlife trade. Detecting clandestine shipments is perceived as simpler than determining whether seemingly legal trade violates regulations, which demands expertise in criminal and administrative law and specific species.[124] Furthermore, as observed earlier, it can be difficult to determine if irregularities are linked to illegal activity or are administrative errors.

In Colombia, investment in technology and specialist expertise has strengthened enforcement of wildlife laundering cases. DICAR has *peritos* (specialist experts) who accompany police to take samples, identify species and produce technical reports that

117. Salazar and Domínguez, 'Criminología Verde' ['Green Criminology'].
118. Biodiversidad Mexicana, 'UMAs y CITES' ['UMAs and CITES'], <https://www.biodiversidad.gob.mx/planeta/cites/umas-y-cites>, accessed 1 September 2025.
119. Author interview with subject matter expert, online, 13 June 2025.
120. Author interview with subject matter expert, online, 15 April 2025.
121. In 2013, CONAPESCA had 210 inspectors, six administrative staff and 65 vessels, and numbers are unlikely to have increased significantly since then. See Centro de Colaboración Cívica et al., 'La Pesca Ilegal e Irregular en Mexico: Una Barrera a la Competitividad' ['Illegal and Irregular Fishing in Mexico: A Barrier to Competitiveness'], 2013, <https://mexico.edf.org/sites/default/files/pescailegalfinal-07-06-17.pdf>, accessed 29 August 2025.
122. Author interview with subject matter expert, online, 10 April 2025; Pedroso, Amancio and Hurtado, 'La triple frontera de la pesca ilegal' ['The Illegal Fishing Tri-Border'].
123. Pedroso, Amancio and Hurtado, 'La triple frontera de la pesca ilegal' ['The Triple Frontier of Illegal Fishing'].
124. Author interview with subject matter expert, online, 28 May 2025.

can carry more weight in court than police testimony, leading to tougher sentences.[125] Furthermore, the Laboratorio de Identificación Genética Forense de Especies Silvestres (Forensic Genetic Identification Laboratory for Wild Species) of the National Police Dirección de Investigación Criminal e Interpol (DIJIN, Directorate of Criminal Investigation and Interpol), established in 2014 as the first of its kind in Latin America,[126] has a record of success in identifying protected species in seizures – such as jaguar claws and shark fins – and in distinguishing between lookalike species of matamata turtles, allowing mislabelled or co-mingled shipments to be detected.[127]

Mexico also benefits from expert input. In 2013, scientific experts helped expose a shipment of CITES-listed shark fins mislabelled as corvina fish bladder.[128] However, technical expertise is lacking at key procedural stages. For example, interviewees noted that the specialist experts and laboratories are not always stationed in port cities from where most marine exports depart, but are required to fly from Mexico City to take samples and return to test them, delaying species verification.[129] Since fish are perishable goods, companies can sue for damages caused by these delays and subject inspectors to legal threats, creating perverse incentives for authorities to avoid thorough inspections. As a result, most containers reportedly pass unchecked.[130]

Destination countries can face similar technical challenges in species identification at the point of import.[131] Some interviewees argued that authorities in destination countries were also more likely to be complacent about the need to conduct checks where paperwork is provided.[132] Another interviewee noted the difficulties of proving illegality. Without solid evidence, authorities run the risk of straining diplomatic relations, where challenges to the relevant documentation point to corruption in source countries.[133] As the Indian Supreme Court ruling mentioned earlier has recently highlighted, such allegations can be politically highly sensitive.

125. Author interviews with Colombian law enforcement official and subject matter experts, online, 7 May and 13 and 20 June 2025.
126. Policía Nacional de Colombia, 'Policía inaugura primer Laboratorio en Latinoamérica de Identificación Genética Forense de Especies Silvestres' ['Police Inaugurate First Laboratory in Latin America for Forensic Genetic Identification of Wild Species'], press release, 31 March 2014, <https://www.policia.gov.co/contenido/policia-inaugura-primer-laboratorio-en-latinoamerica-identificacion-genetica-forense>, accessed 29 August 2025.
127. Author interview with Colombian law enforcement official, online, 7 May 2025.
128. Alejandro Melgoza Rocha, 'China Inc. un Negocio Criminal de Aduanas' ['China Inc. a Criminal Customs Business'], N+ Focus, <https://investigaciones.nmas.com.mx/china-inc-un-negocio-criminal-de-aduanas/>, accessed 21 August 2025.
129. Author interview with subject matter expert, online, 20 June 2025.
130. *Ibid*.
131. Author interview with UK law enforcement official, online, 5 August 2025.
132. Author interview with subject matter expert, online, 9 April 2025.
133. Author interview with subject matter experts and UK law enforcement official, online, 9 April, 2 May and 5 August 2025.

Gaps in International Cooperation

Interviewees described cooperation and information sharing between neighbouring countries in Latin America as 'limited' or 'absent' in the case of wildlife laundering. For example, cooperation was described as occurring infrequently between Colombia and neighbouring Brazil, Panama and Peru, despite the extent of cross-border flows of wildlife products. This hampers the ability of authorities to trace links between poachers and mules arrested during wildlife seizures in Colombia and corporate actors further along the supply chain.[134] Interviewees argued that greater regional coordination to reduce regulatory asymmetries – such as seasonal fishing bans – could reduce incentives for cross-border wildlife laundering of species such as pirarucu.[135]

US investigations into Mexican seafood imports, such as shark fins and sea cucumber,[136] illustrate the potential benefits of international cooperation in conducting financial investigations and identifying wildlife laundering practices, such as invoicing fraud. Support provided by the US Fish and Wildlife Service (USFWS) and Homeland Security Investigations, including in the use of undercover agents and controlled purchases, has strengthened the response to illegal wildlife flows between Colombia and the US.[137] Interviewees pointed to the value of the US Lacey Act,[138] which prohibits import and interstate trade of illegally sourced plants, fish or animals and their derivative products, irrespective of their place of origin, obligating US agencies such as USFWS to proactively investigate the legality of imports.

Other instances of bilateral cooperation reportedly occur on an ad-hoc basis. Interviewees stated that in Europe, checks are not systematic either, including contacting breeders to verify shipments.[139] Interviewees pointed to language barriers and a lack of direct contacts with counterpart authorities as presenting obstacles to cooperation.[140] They reported cases in which importing authorities could easily have verified export permits through routine communication with source country counterparts, but repeatedly failed to do so.[141]

134. Author interview with Colombian law enforcement official, online, 7 May 2025.
135. Author interview with subject matter experts, online, 11 April and 12 June 2025.
136. Such as Operation Apex, see United States of America v. Serendipity Business Solutions, LLC, et al., United States District Court Southern District of Georgia, Savannah Division, 8 July 2020, <https://www.courtlistener.com/docket/18594652/united-states-v-serendipity-business-solutions-llc/>, accessed 29 June 2025; US Attorney's Office, Southern District of California, 'Three Charged with Illegal Trafficking of $17 Million Worth of Sea Cucumbers'.
137. Author interview with Colombian law enforcement official, online, 7 May 2025.
138. US Customs and Border Protection, 'Lacey Act', 8 October 2008, <https://www.cbp.gov/trade/entry-summary/public-laws-impacting-trade/public-law-110-246/amended-lacey-act/lacey-act>, accessed 3 October 2025.
139. Author interview with subject matter expert, online, 15 April 2025.
140. Author interview with UK law enforcement official, online, 5 August 2025.
141. Author interview with subject matter expert, online, 9 April 2025.

Political Economy of the Legal Wildlife Trade

Interviewees observed an inherent tension between the importance of legal wildlife trade to national economic interests in Colombia and Mexico, and their efforts to combat wildlife laundering. In Mexico, this is exemplified by the shark-fin industry: between 2003 and 2020, the country was Latin America's fourth-largest exporter of shark fins, providing significant employment in coastal communities.[142] One interviewee noted that this tension has resulted in limited political will to close loopholes that facilitate the laundering of CITES-listed shark fins.[143]

However, the laundering of illegally harvested shark fins and other fishery resources into legal pathways deprives communities and governments of the full socioeconomic benefits of sustainable legal trade. For example, consistent under-reporting of values of shipments combining illegal and legal merchandise results in lost tax revenues, costing resource-rich developing countries billions of dollars annually.[144] Moreover, by bypassing seasonal fishing restrictions or fishing in protected areas, illegal fishers deplete fish stocks and undercut legal fishers with lower prices. This can fuel resource competition between legal and illegal fishers. In Mexico, this competition has sometimes escalated into kidnappings, property damage and shootings.[145]

States may also have limited options, in practice, in cases of CITES non-compliance. One interviewee remarked that CITES 'lacks teeth', since Article XIII compliance procedures are sometimes not triggered, despite persistent abuses.[146] Another interviewee agreed that such measures can be time-consuming, cumbersome and politically contentious, but noted that stronger responses have been observed.[147] For example, CITES has introduced processes to review potential misuse of source codes and identify solutions to be implemented by parties.[148] Failure to do so can lead CITES to suspend trade in that species. In 2023, CITES imposed a temporary ban on international commerce in all species from Mexico because of the country's failure to address illegal totoaba trade, putting significant pressure on the government to act.[149]

142. CITES, 'Meat on the Menu and Fins for Export: Latin America's Shark Trade with Asia', Thirty-Third Meeting of the Animals Committee, Geneva, 12–19 July 2024, <https://cites.org/sites/default/files/documents/AC33%20Inf.%2024.pdf>, accessed 30 July 2025.
143. Author interviews with subject matter experts, online, 13 and 20 June 2025.
144. Global Financial Integrity, 'Trade-Related Illicit Financial Flows in 134 Developing Countries 2009 – 2018', 2021, <https://gfintegrity.org/wp-content/uploads/2021/12/IFFs-Report-2021.pdf>, accessed 16 September 2025.
145. Author interviews with subject matter expert and law enforcement official, online, 20 June and 27 August 2025; GI-TOC, 'Monitoring Online Illegal Wildlife Trade'; Bondaroff et al., 'Characterising Changes in a Decade of Mexican Sea Cucumber Crime (2011–2021) Using Media Reports'.
146. Author interview with subject matter expert, online, 9 April 2025; CITES, 'CITES Compliance Procedures', <https://cites.org/eng/prog/compliance>, accessed 3 November 2025.
147. Author interview with former official of intergovernmental body, online, 13 May 2025.
148. CITES, 'Review of Trade in Animal Specimens Reported as Produced in Captivity', <https://cites.org/sites/default/files/documents/COP/19/resolution/E-Res-17-07-R19.pdf>, accessed 4 November 2025.
149. Author interview with former official of intergovernmental body, online, 13 May 2025; CITES, 'Compliance Action Plan of Mexico on Totoaba (*Totoaba macdonaldi*)', 27 March 2023, <https://cites.org/sites/default/files/notifications/E-Notif-2023-037.pdf>, accessed 20 October 2025.

However, considering the domestic economic importance of these sectors for local and indigenous populations, blunt enforcement measures are politically contentious and have ethical repercussions. Colombia's 2021 blanket ban on shark fishing to '[take] care of natural resources and ecosystem[s]' was repealed in 2024, after criticism emerged that it criminalised an important source of income for historically marginalised Afro-Colombian communities, who were dependent on sharks caught as accidental bycatch.[150] This speaks to the need to consider the way in which poorly considered responses can disproportionately target artisanal fishers, who are often the 'lowest hanging fruit' targeted in illegal fishing supply chains, while having a limited impact on disrupting large-scale offenders.

A study on illegality in sea cucumber fisheries in Mexico suggested regulatory approaches must instead target buyers and exporters, and calibrate effort further along the value chain.[151] Indeed, the number of exporters in Mexico's shark-fin trade is reportedly relatively small, which could make concentrating due diligence and enforcement efforts more manageable than monitoring each fishing vessel.[152] As shown in this paper, however, there is limited evidence outside the US of sanctions enacted against licensed businesses engaged in laundering Colombian and Mexican wildlife, which is likely due to persistent failures to recognise wildlife laundering as a serious issue that needs to be treated as a criminal offence.

Opportunities

Strengthen Regulatory Frameworks

To effectively address wildlife laundering, regulatory frameworks must be strengthened in key source and destination countries. Preventive measures are needed to close regulatory gaps and provide agencies with enforcement tools to help them tackle wildlife laundering more systematically by targeting corporate actors and buyers across the value chain.

Preventive reforms could target known loopholes, including those highlighted in this paper. For example, Mexico should strengthen preventive regulations with explicit definitions and traceability by amending LGVS and the Ley General de Pesca y Acuacultura Sustentables (General Law on Sustainable Fisheries and Aquaculture) (LGPAAS) to include a clear legal definition of shark finning and its prohibition.

150. Gustavo A Castellanos-Galindo et al., 'Shark Conservation and Blanket Bans in the Eastern Pacific Ocean', *Conservation Science and Practice* (Vol. 3, No. 7, April 2021); Iñigo Alexander, '"They Became Illegal Overnight": Colombia's Shark Fishing Ban Turns Locals into Criminals', *The Guardian*, 16 February 2023.
151. Pedroza-Gutiérrez and López-Rocha, 'Ungovernable Systems'.
152. Comments made during validation meeting with Mexican government officials, online, 13 October 2025.

Additionally, NOM-029-PESC-2006 regulation[153] could be updated to mandate that besides landing sharks with fins naturally attached, there is also an integral traceability system with control mechanisms.

CITES enforcement frameworks could also be strengthened to require enhanced due diligence on the use of certain purpose codes and source codes, for example, by ensuring that exports of CITES-listed species using source code 'I' are subject to stricter regulation and accompanied by sufficient documentation, to effectively safeguard against potential corruption within CITES authorities.[154]

Enforcement frameworks should also include an expanded focus on financial investigations, which remain underused in Colombia and Mexico, despite links between wildlife laundering and drug trafficking, tax evasion, fraud and bribery. Furthermore, the corporate structures involved, and the accountability frameworks affecting legitimate businesses, provide the opportunity for enhanced forensic analysis. If systematically applied, financial approaches could make wildlife laundering an accessible way of disrupting broader criminal networks. However, current AML frameworks in Colombia and Mexico are ill-suited:

- Colombia amended its Criminal Code in 2021 to widen the scope of environmental crime and introduce tougher penalties but stopped short of listing environmental crimes as predicate offences for money laundering. Authorities can only pursue wildlife laundering as a financial crime if the proceeds are linked to another predicate offence (for example, smuggling, illicit enrichment or conspiracy to commit a crime). which requires greater cross-agency coordination, raising costs and fragmenting investigative efforts.[155]
- Mexico's Federal Penal Code criminalises wildlife trafficking and environmental fraud, but does not classify these activities as serious crimes, nor as predicate offences for money laundering. The Federal Law Against Organised Crime allows for harsher penalties if three or more people are involved, but proving such networks at seizure points is difficult.[156]

By making wildlife trafficking a predicate offence for money laundering, key agencies would have more tools to investigate corporate actors engaged in wildlife laundering,

153. Government of Mexico, 'Norma Oficial Mexicana, NOM-029-PESC-2006' ['Official Mexican Standard, NOM-029-PESC-2006'], <https://www.gob.mx/profepa/documentos/norma-oficial-mexicana-nom-029-pesc-2006>, accessed 22 September 2025.
154. Author interview with former Mexican government official, online, 6 May 2025.
155. Government of Mexico, 'Ley 599 de 2000' ['Law 599 of 2000'], Articles 323 and 328, <https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=6388>, accessed 22 September 2025; information provided to the authors by Brigard & Urrutia Abogados S.A.S. as part of a legal review, May 2025.
156. Government of Mexico, 'Código Penal Federal (2002)' ['Federal Penal Code (2002)'], Article 420, Section IV; Government of Mexico, 'Código Nacional de Procedimientos Penales' ['National Code of Criminal Procedure'], 2020, <https://www.gob.mx/pff/documentos/codigo-nacional-de-procedimientos-penales-259843>, accessed 10 October 2025; Centro de Colaboración Cívica et al., 'La Pesca Ilegal e Irregular en Mexico' ['Illegal and Irregular Fishing in Mexico'].

and to pursue asset recovery and confiscation (in line with FATF recommendations).[157] As this paper shows, wildlife laundering frequently involves the integration of illicit proceeds into the legitimate economy via businesses such as breeding farms, seafood companies and real estate. By tracing and seizing the relevant assets, authorities could disrupt the financial infrastructure that sustains trafficking networks and use the recovered assets to finance much-needed operations.

At the international level, key frameworks should also be adapted to facilitate systematic international cooperation on wildlife laundering cases. At the multilateral level, for the November 2025 CITES Twentieth Meeting of the Conference of the Parties, Brazil and Ecuador have proposed that CITES should require destination country management authorities to conduct mandatory prior consultations with source country counterparts before issuing export, re-export or import permits or certificates for protected species from those countries (Box 1), to prevent laundering of a range of species.[158] This reflects increasing calls from source countries against extractive use of their wildlife resources abroad without permission or benefit-sharing. This was evidenced recently in a case of live ants smuggled out of Kenya and destined for the exotic pet trade, which Kenyan authorities prosecuted as biopiracy.[159]

Interviewees for this paper stressed that the enforcement burden currently falls disproportionately on source countries, even though it is consumer demand in destination countries that drives wildlife laundering and other forms of illegal trade.[160] More comprehensive due diligence in destination countries – such as systematically verifying exporter credentials with source-country officials – was widely supported by interviewees.[161] Two experts suggested that the enactment of Lacey Act-style legislation in other consumer countries could help drive such an approach,[162] enabling criminal justice outcomes that might similarly expose the scale, seriousness and transnational nature of wildlife laundering.

It has been observed that, as a trade-related convention, CITES was not designed to address large-scale wildlife trafficking as a form of transnational organised crime. Consequently, meetings of a dedicated, open-ended intergovernmental expert group are underway to consider the possibility, feasibility and merits of a dedicated protocol (or protocols) on crimes that affect the environment under the UN Convention Against

157. FATF, 'Money Laundering and the Illegal Wildlife Trade'.
158. CITES, 'Trade in Threatened Endemic Species', Twentieth Meeting of the Conference of the Parties Samarkand, 24 November–5 December 2025, <https://cites.org/sites/default/files/documents/COP/20/agenda/E-CoP20-073.pdf>, accessed 20 September 2025.
159. Edwin Waita and Monicah Mwangi, 'Kenyan Agents Bust Plot to Smuggle Giant Ants for Sale to Foreign Insect Lovers', *Reuters*, 15 April 2025.
160. Author interview with former official of intergovernmental body, online, 13 May 2025.
161. Author interview with subject matter expert, online, 19 August 2025.
162. Author interviews with subject matter experts, online, 9 April and 2 May 2025.

Transnational Organized Crime (UNTOC).[163] Such a protocol (or protocols) could provide an agreed international definition of wildlife trafficking, establish appropriate penalties to ensure its treatment as a serious crime under UNTOC and create a framework for enhanced international cooperation. A push for criminalisation of imports involving illegally harvested wildlife or their derivatives could also see states develop Lacey Act-style measures to ensure compliance. [164]

Enhance Transparency

Greater transparency is essential to bolstering international cooperation against wildlife laundering. Currently, information on licensed wildlife businesses is available in many countries only where formal requests are issued, a process that can take months.[165] This opacity can be overcome through the establishment of digitised, publicly accessible registries of captive-breeding facilities and the species they are authorised to breed and export. Such systems, already piloted in Peru,[166] would enable authorities in destination countries to quickly and efficiently verify imports, cross-check exporter credentials and confirm whether facilities for a given species exist.[167]

Transparency is also lacking for confiscated wildlife specimens held in sanctuaries and private facilities. As Box 2 and Figure 3 show, this creates vulnerabilities that could be exploited by illicit actors, which interviewees stressed was also observed in transit and destination countries.[168] Publicly accessible databases tracking the status of confiscated specimens could reduce these risks.

Greater accessibility of information on CITES permits would strengthen oversight. CITES recommends that countries introduce open access electronic CITES (eCITES) systems to support law enforcement and civil society monitoring and make it easier for destination-country authorities to detect fraudulent paperwork. At the time of writing, 18 countries had implemented some form of eCITES system, and many more were in the process of developing one. However, uptake remains far from universal.[169]

163. UNODC, 'First Meeting of the Open-Ended Intergovernmental Expert Group on Crimes that Affect the Environment Falling Within the Scope of the United Nations Convention Against Transnational Organized Crime and Related Offences Covered by the Convention', 30 June–2 July 2025, <https://www.unodc.org/unodc/en/treaties/CTOC/CAE_IEG_2025.html>, accessed 10 October 2025.
164. UNTOC, Open-Ended Intergovernmental Expert Group, 'Submission from the Global Initiative to End Wildlife Crime, with the Support of the International Council of Environmental Law', June 2025, <https://endwildlifecrime.org/wp-content/uploads/2025/06/IEG_June_2025_JS_EWC-submission_FINAL_REV.pdf>, accessed 6 October 2025.
165. Author interviews with subject matter experts, online, 1 and 9 April 2025.
166. ZoObsérvatorio OSINFOR, 'Recomendaciones para el uso del ZoObsérvatorio OSINFOR' ['Recommendations for the Use of the ZoObsérvatorio OSINFOR'], <https://zoobservatorio.osinfor.gob.pe/>, accessed 22 September 2025.
167. Author interview with subject matter expert, online, 9 April 2025.
168. Author interviews with subject matter experts and a UK law enforcement official, online, 1 and 14 April, 16 June, and 5 and 7 August 2025.
169. CITES, 'eCITES', <https://cites.org/eng/prog/ecites>, accessed 11 August 2025.

Technological Innovations

Advances in technology offer the potential to address a number of traceability and species-identification challenges that facilitate wildlife laundering. Colombia's DIJIN-Interpol Forensic Genetic Identification Laboratory for Wild Species is an example, although it is currently only used in an ad hoc manner to analyse seizures. Experts interviewed suggested that such tools could be used more widely in verifying compliance, both on site at breeding facilities and along supply chains.[170]

Conventional traceability mechanisms (for example, microchips, tags and rings) are easily recycled, limiting their effectiveness.[171] A 'best-case' solution proposed by interviewees would be for captive-breeding facilities to register the unique genetic code of each parent breeding pair on a public database. This would allow inspectors to verify whether offspring are genuinely captive-bred or wild-caught, by sampling breeding stock to check that they match the genetic footprint of the original pair.[172] The approach could be scaled by expanding DNA-testing capabilities to strategic ports, enabling customs officials in source and destination countries to confirm authenticity or detect mislabelling.

While genetic traceability measures may currently be costly to implement, lower-cost innovations are emerging. Conservation scientists are developing AI and machine learning tools to identify CITES-listed snake skins, potentially providing customs with an accessible means of species verification.[173] Furthermore, certain characteristics of wild-caught species mentioned in this paper can become red flags – for example, poison dart frogs lose their venom if they are captive-bred.[174] This could be tested for at borders by designing and implementing tools to test venom.[175]

Technological solutions are also being piloted in fisheries. In Peru, the World Wildlife Fund, in partnership with government agencies and artisanal fishers, launched TrazApp in 2018, a mobile app that generates traceability reports for seafood products. The app aims to verify the origin of catch, which increases consumer confidence in the sustainability of fisheries' products.[176]

170. Author interviews with subject matter experts, online, 7 May, 13 June and 19 August 2025.
171. Author interviews with subject matter experts, online, 9 April and 13 June 2025.
172. Author interview with subject matter expert, online, 19 August 2025.
173. Zoological Society of London, 'SnAIke: an AI Tool for Snake Species ID', proof of concept shared with authors, October 2025.
174. Author interviews with subject matter experts, online, 15 April 2025.
175. Author interview with subject matter expert, online, 19 August 2025.
176. WWF, 'The Mobile Application That is Revolutionizing Technology in Peruvian Artisanal Fisheries', 13 December 2023, <https://www.wwf.org.pe/en/?385783/The-mobile-application-that-is-revolutionizing-technology-in-Peruvian-artisanal-fisheries>, accessed 20 September 2025.

Cross-Sector Collaboration

The financial sector is obligated to detect and report suspicious client and transaction activity to financial intelligence units (FIUs), which can help to support investigation and prosecution of higher-level actors in IWT value chains.[177] Numerous wildlife laundering methods documented in this paper rely on corporate structures and commercial transactions that operate in 'plain sight' within the regulated system.

A growing awareness of this gap has spurred greater private–private and public–private cooperation against financial crime linked to IWT. Key initiatives include the South African Money Laundering Integrated Taskforce,[178] Canada's Project Anton (which 'aims to improve the collective understanding of illegal wildlife trade and to improve the detection of the laundering of proceeds from this crime'),[179] and the UK's Royal Foundation's United for Wildlife (UfW) Financial Taskforce, as well as UfW regional chapters in Latin America and the Caribbean.[180] The private sector's role in these efforts is crucial,[181] while civil society plays an equally vital role by raising awareness of IWT trends to inform the private sector's transaction monitoring and client risk profiles.[182]

Such initiatives present opportunities for better-informed and more effective monitoring of suspicious client and transaction activity linked to wildlife laundering. The 2020 FATF report on IWT identified multiple relevant indicators – many of which align with wildlife laundering methods in this paper – underscoring their applicability.[183] At the national level, however, FIUs in Colombia and Mexico face competing priorities and, across the board, there is often a lack of depth in national risk assessments on these issues.[184]

177. FATF, 'Money Laundering and the Illegal Wildlife Trade', p. 49.
178. South African Money Laundering Integrated Taskforce, 'Public–Private Sector Collaboration Results in Successes in Unravelling Organised Wildlife Trafficking Networks', press release, 5 December 2023, <SAMLIT-Media-Release-Public-private-sector-collaboration-results-in-successes-in-unravelling-organised-wildlife-trafficking-networks.pdf>, accessed 6 October 2025.
179. Financial Transactions and Reports Analysis Centre of Canada, 'Operational Alert: Laundering the Proceeds of Crime from Illegal Wildlife Trade', <https://fintrac-canafe.canada.ca/intel/operation/oai-wildlife-eng.pdf>, accessed 6 October 2025.
180. United for Wildlife, 'Our Taskforces', <https://unitedforwildlife.org/our-taskforces/>, accessed 6 October 2025.
181. Cayle Lupton, 'Illegal Wildlife Trade: The Critical Role of the Banking Sector in Combating Money Laundering', *Journal of Money Laundering Control* (Vol. 26, No. 7, 2023), pp. 181–96.
182. Author interview with compliance officer in a bank, online, 9 June 2025.
183. FATF, 'Money Laundering and the Illegal Wildlife Trade', pp. 60–62.
184. Author interviews with former Mexican government official and compliance officer in a bank, online, 30 May and 9 June 2025.

Conclusion

This paper has sought to interrogate wildlife laundering methods, using Colombia and Mexico as case studies. It has demonstrated how corporate entities – such as breeding farms, wildlife sanctuaries, commercial traders and seafood companies – can be used as fronts by rogue traders and OCGs, sometimes in collusion with corrupt facilitators, to exploit regulatory and enforcement gaps to launder illegally sourced specimens. However, revealing the practice of wildlife laundering is a persistent challenge and documented cases – let alone follow-up criminal investigations – remain few and far between.

Structural challenges – such as personnel and resource constraints, lack of technical expertise, limited international cooperation and political sensitivities – frustrate enforcement efforts to detect and disrupt wildlife laundering. Instead, irregularities by licensed businesses tend to be treated as administrative offences rather than serious crimes, and a widespread understanding of the organised, transnational nature of wildlife laundering remains incomplete. Consequently, the multidimensional harms caused by wildlife laundering are overlooked. These include biodiversity loss and species depletion, damage to livelihoods, negative socioeconomic repercussions such as lost tax revenues, increased resource competition, and convergence with other serious crimes and conflict, with OCGs and armed groups diversifying their activities into wildlife trading.

To more effectively address these issues, a recalibrated regulatory and enforcement approach is required, targeting exporters, importers and buyers across the full value chain. This can be achieved by closing loopholes in regulatory frameworks, bolstering international cooperation, improving transparency and traceability throughout the chain of custody, and enhancing the application of financial investigation tools. These actions can better equip governments to combat wildlife laundering and ensure legal and sustainable wildlife activities contribute to income generation for local communities, without jeopardising conservation efforts.

Recommendations

National Policymakers and Legislators

- Close regulatory loopholes that potentially facilitate the laundering of key species, such as in Article 4.2.1. of Mexico's NOM-029-PESC-2006 regulation, LGVS and LGPAAS.
- Recognise wildlife trafficking as a predicate offence for money laundering, to allow financial investigations into wildlife laundering cases.
- Develop formal intelligence-sharing mechanisms between source, transit and destination countries, especially for permits, seizures and investigations into wildlife laundering.
- Introduce and implement Lacey Act-style legislation in consumer countries that criminalises the import and trade in illegally harvested or traded wildlife and promotes mandatory due diligence on wildlife imports.
- Balance enforcement with livelihood protection by targeting corporate structures (such as exporters and buyers) rather than subsistence harvesters.

Wildlife Management Authorities

- Create digitised, publicly accessible national registries of licensed breeding facilities, including lists of the species they are licensed to keep, breed and export.
- Develop national databases tracking confiscated wildlife to prevent re-entry of seized animals into commercial trade.
- Adopt open access eCITES, permitting systems to enable real-time verification of permits, thereby increasing transparency on exporters and reducing document fraud.
- Introduce genetic traceability tools to trace the origin of captive-bred specimens through the chain of custody to point of legal acquisition, such as through the genetic sampling of founder stock.
- Pilot digital traceability applications in fisheries to track catch provenance and promote transparency for compliant producers.

Enforcement and Justice Bodies

- Disclose case outcomes and sanctions against wildlife businesses to increase transparency of corporate non-compliance and public confidence and act as a deterrent.
- Integrate financial investigations into wildlife laundering cases to expose broader criminal networks and corporate beneficiaries.
- Coordinate with counterpart authorities and experts in source countries to validate the legality of wildlife imports across the chain of custody.

Intergovernmental Organisations

- The CITES Secretariat should evaluate the threat of wildlife laundering to sustainable trade and issue guidance on how and when competent authorities should question the validity of a CITES permit.
- Strengthen protocols around CITES source and purpose codes, particularly where existing categories facilitate laundering under the guise of breeding or rescue.
- Continue concerted efforts to explore the possibility, feasibility and merits of additional protocols to the UNTOC on crimes that affect the environment, ensuring wildlife laundering is explicitly addressed.

Donors and Development Partners

- Invest in technological innovation to enhance species identification and traceability, including genetic and AI-based tools.
- Channel funding towards under-resourced enforcement agencies, customs and fisheries authorities through investment in basic equipment and infrastructure, such as genetic laboratories, and through capacity-building for non-specialist agencies, such as customs and fishing authorities.

Private Sector and Civil Society

- Financial institutions should incorporate wildlife crime indicators into AML and KYC systems and report suspicious activity linked to licensed wildlife businesses to the relevant authorities.
- Civil society should continue to develop and disseminate information on emerging trends and wildlife laundering typologies to improve detection by banks and law enforcement.
- Foster regional cross-sector networks to exchange information, best practices and coordinated alerts on wildlife laundering activities.
- Support public awareness campaigns in destination countries, highlighting how wildlife laundering undermines conservation and livelihoods in source countries.

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