Environmental Crime Convergence

Launching an Environmental Crime Convergence Paradigm Through Investigation of Transnational Organized Crime Operations

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Research Report

PREPARED BY

EARTH LEAGUE INTERNATIONAL

JOHN JAY COLLEGE OF CRIMINAL JUSTICE

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ACNKOWLEDGEMENTS

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ABOUT THE PARTNER ORGANIZATIONS

Earth League International (ELI) is a pioneer in using professional intelligence and analysis to illuminate and fill the intelligence gap related to transnational environmental/wildlife criminal networks and environmental crime convergence. Our operational work focuses on intelligence-gathering through an evidence-based approach that involves the acquisition of videos, audio, documents, and other forms of data. Following investigations, ELI processes and analyzes the data and evidence regarding environmental crimes and illegal wildlife product supply chains, including identifying high-level traffickers and various Persons of Interest (PoIs). We also identify patterns among our findings, seeking to address the information gap related to crime convergence's degree and scope. We then disseminate this knowledge to relevant law enforcement and government authorities, providing them with usable intelligence and evidence to investigate and possibly charge these criminal networks for various serious crimes. Environmental crime's cross-cutting nature yields important opportunities for law enforcement and government authorities to strategically fight organized crime at large. It is referred to as the "soft underbelly" of transnational criminal networks, serving as a gateway into investigating these networks and their involvement in other serious crimes. ELI further collaborates with these authorities, engaging in capacity-building sessions and training to provide a nuanced understanding of how convergence presents itself in the field. This approach has been implemented by ELI across all continents. The following report utilizes a selection of case studies from ELI's work to illustrate this process and contribute to the knowledge base of environmental crime convergence.

John Jay College of Criminal Justice is one of the world's leading institutions in criminal justice education and forensic research. In the past five years, John Jay has implemented police reform, violence prevention, and capacity-building programs across Latin America and the Caribbean. These projects have had national (e.g., Brazil, El Salvador, Mexico, Uruguay, etc.), regional (e.g., the Northern Triangle), and even hemispheric reach. John Jay has developed solid police and forensic training capabilities from its long-standing collaborations with police forces at federal, state, and local levels. Its Master's Program in Police Leadership for the New York City Police Department (NYPD) has nurtured a cohort of leading police managers. These experiences have evolved into transnational technical assistance projects assisting law enforcement agencies such as the National Police of Uruguay, the National Civil Police of El Salvador, the National Police of Colombia, and the Mexican Federal Police.

EXECUTIVE SUMMARY

Environmental crime is one of the world's most destructive, fast-growing, and lucrative transnational organized crimes. These crimes encompass a broad spectrum of activities, including illegal logging, fishing, wildlife trafficking, and the dumping of hazardous waste. With an annual increase of 5-7%, which was up to three times the growth rate of the global economy, environmental crime now earns between $US 110 and 281 billion each year (FATF, 2021). Transnational environmental crime makes up nearly two-thirds of the world's illicit crime finance (RHIPTO et al., 2018).

What fuels this astonishing growth? This report greatly advances the recently emerging research and dialogue on environmental crime by shedding light on its key dimensions: the characteristics of the actors involved; the well-connected, highly sophisticated syndicates they form; and the convergence of this crime with other serious transnational crimes, such as narco-trafficking, human smuggling [1], money laundering, and corruption. Despite these crimes' devastating impacts on the environment and socioeconomic stability, they have long been relegated to low-priority management among state officials and law enforcement agencies across the globe.

Drawing on Earth League International's (ELI) years of fieldwork, which has allowed for the collection of first-hand information from the Americas, Europe, Africa, and Asia during its investigations, this report develops and presents ELI's path-breaking convergence paradigm to show exactly how convergence has integrated wildlife and environmental crime into the heart of global economic and political structures. Over two dozen case studies emerged from ELI's work as primary sources of data. This report highlights five of those cases that together illustrate the convergence of environmental and wildlife crime with other serious crimes and transnational crime networks. Each case demonstrates how environmental crime networks quickly adapt, diversify, and grow in ways that maximize their power and profit. ELI has defined, instituted, and analyzed a 4-Type Convergence Classification:
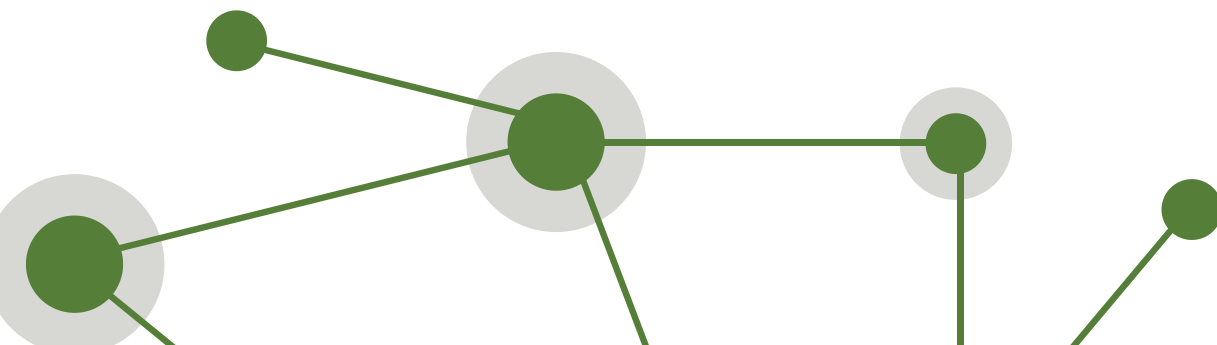
4 -Type Convergence Classification

01 **Multiple Species Convergence**

refers to the trafficking of multiple species at the same time, such as rhino horn, ivory, pangolin, jaguar, shark fin, and seafood.

02 **Multiple Environmental Crime Convergence**

involves the same traffickers or networks engaging in wildlife crime, plus other environmental crimes, such as illegal logging, illegal fishing, and illegal mining.

03 **Serious Crime Convergence**

refers to the same traffickers or networks engaging in other serious crimes, such as money laundering, human smuggling, and narco-trafficking.

04 **Transnational Network Convergence**

describes the overlap of transnational organized criminal networks and their activities. Network convergence is multileveled, as these criminal networks have intentionally created a variety of regional, interregional, and transnational points of connection to strengthen their criminal activities.

This paradigm requires a holistic re-evaluation of transnational organized crime and of the policies to combat it. In particular, the convergence of criminality upends established views of the structure of organized crime, requiring a new understanding of the increasingly flexible, adaptive operations of criminal networks at all levels. This new perspective also exposes the multiple gaps in the enforcement chain, starting with how intelligence is gathered in areas of high criminality to how environmental laws are adjudicated in court. Based on these findings, the report proposes a set of practical and effective responses. Given the longstanding challenges of prosecuting environmental crimes, particularly since such crimes are almost always carried out alongside other serious crimes, this report recommends that prosecutorial efforts be shifted to the more serious crimes converging with environmental crimes, which will enable prosecution and punishment of criminal leaders. Such an approach must be supported by stepped-up investigation, intelligence gathering, and systematic analysis of the data necessary to identify and disrupt criminal networks. To institutionalize this approach, concerted and joint efforts must be made by multiple international actors to bring the issue of environmental crime and its convergence with other serious crimes to the fore of global dialogue and policy.

PART I: INTRODUCTION

Environmental crime is currently recognized as one of the most lucrative and fastest-growing areas of transnational organized crime (TOC) (OECD, 2016). Environmental crimes are broadly defined as illegal acts which directly harm the environment, and include such crimes as wildlife trafficking, illegal logging, and illegal fishing. [2] Despite being widely recognized as one of the largest TOC industries worldwide, environmental crime has not been properly contextualized within a broader framework of crime convergence (Anagnostou, 2021), defined as the merging and blending of an ever-expanding array of illicit actors and criminal networks (Miklaucic and Brewer, 2013).

Traditionally, the concept of convergence has been utilized by law enforcement and government authorities within the context of TOC to understand how self-perpetuating associations of individuals operate transnationally to obtain power, influence, and monetary gains, wholly or in part by illegal means (Wheatley, 2021). Convergence is recognized as a critical feature of TOC groups, which have expanded their criminal activities due to globalization, transnational commerce systems, advancements in technology, and the development of online money transfer systems (Interpol, 2016). TOCs have become increasingly interconnected, and they comprise multiple networks with diversified criminal activities, such as narco-trafficking, human trafficking, firearms trafficking, and money laundering (Luna, 2013; Moreto and Van Uhm, 2021; Van Uhm and Nijman, 2020). Yet, while the concept of crime convergence within "traditional" organized crime activities has long been established, there remains a persistent and extensive gap regarding environmental crime and its convergence with other serious crimes (Nellemann et al., 2018).

Environmental crimes have historically been treated as environmental management issues and are often treated as low priority for law enforcement and government authorities. However, in recent years, environmental crimes have garnered increased attention among researchers, government authorities, law enforcement, and the media, and are recognized as a critical and escalating threat to national and human security (Wittig, 2017), as well as an encompassing ecological threat (Schoonover et al., 2021). As TOC networks have diversified their enterprises beyond 'traditional' organized crime activities into the extremely lucrative criminal exploitation of nature (Nelleman et al., 2016), environmental crime is reported to 'converge,' or overlap, with counterfeiting, narco-trafficking, cybercrime, human trafficking, financial crime, corruption, arms trafficking, and terrorism. [3]

At present, the knowledge on the convergence of various serious crimes with environmental crime is relatively limited, and there is a significant lack of empirical evidence regarding the scope and degree to which these crimes align with other organized criminal activities. [4] Most wildlife and environmental conservation approaches focus almost exclusively on local criminals, anti-poaching activities, and awareness campaigns, which are ultimately undermined by the impacts of high-level environmental criminals and their international trafficking networks. Furthermore, governmental and law enforcement agencies face multiple barriers when addressing environmental crime. First, many lack the understanding that environmental crime converges with other serious crimes, as information regarding its existence and workings is extremely limited. Second, these authorities engage in an asymmetrical war against these international criminal networks. Transnational environmental crime networks are extremely resourceful and adaptable, capable of moving their money, illegal goods, and people across borders and continents as they please. In contrast, government and law enforcement authorities are frequently unable to effectively coordinate and respond when environmental crime convergence is detected, as they are typically structured by region, type of crime, security topic, or a specific mission domain. This organizational structure prevents these agencies from conducting and coordinating long-term intelligence-gathering operations along these international supply chains. This gap in inter-agency collaboration often renders environmental criminal networks and their leaders invisible, resulting in ineffective enforcement attempts to interdict criminal networks. Without an evidence-based understanding of convergence, these TOC groups continue to operate unknown and unhinged, destroying Earth's natural resources and species s at unprecedented rates.

This report draws on five case studies that serve as primary sources of information to draw an evidence base and build a framework through which environmental crime convergence can be identified, understood, and addressed. The examples discussed in this report are a small selection from this body of cases drawn to detail ELI intelligence-gathering activities in the Americas, Europe, Africa, and Asia. In each case, evidence of environmental crime convergence gathered directly from TOC networks and their associates is presented. [5] These findings are examined through the lens of the convergence typologies developed by ELI. These typologies were developed and refined based on first-hand empirical data from our operations.

This report conceptualizes four convergence research classifications: 1) Multiple Species Convergence, 2) Multiple Environmental Crime Convergence, 3) Serious Crime Convergence, and 4) Transnational Network Convergence. We utilize these convergence typologies as a framework to discuss themes and commonalities among the case studies, which demonstrate patterns of convergence across international environmental crime activities. Further, these convergence types are used to provide recommendations to government and law enforcement authorities, creating an integrated, interactive, and dynamic analytic framework through which environmental crimes can be proactively addressed.

We conclude this report by presenting our key findings and subsequent recommendations in the "Discussions and Recommendations" section.

PART II: THE FOUNDATION OF CONVERGENCE

Overview

This section focuses on the concept of convergence, explaining how it has placed environmental crime at the center of transnational organized crime (TOC). Convergence is a term that has been used by governmental and law enforcement agencies in recent decades to describe the overlapping transnational organized criminal networks and the merging of their illicit activities. TOC organizations capitalize on developments in technology, communication, infrastructure, finances, and transportation that characterize it to evolve, as well as expand and diversify their operations. These advancements are the foundation for convergence, facilitating an increased interconnectedness that continually breaks past physical, geographical, and cultural boundaries.

Transnational criminal networks take advantage of globalization's unprecedented openness to continually expand the size, scope, alliances, and diversity of their illicit activities. The adaptable and innovative nature of their work allows them to advance their illicit activities and mechanisms in unparalleled ways, and they have the financial and human resources to do so. Specialists such as Nils Gilman, Jesse Goldhammer, and Steven Weber label this phenomenon deviant globalization, asserting that the process of convergence that characterizes illicit networks is an inherently economic phenomenon that is directly connected to the broader process of globalization. They define deviant globalization as "that portion of the global economy that meets the demand for goods and services that are illegal or considered repugnant in one place by using a supply from some other part of the world where morals are different, or law enforcement is less effective." [6] Deviant globalization describes the transnational economic networks that engage in illicit services and industries in conjunction with the formalized, licit economy. Thus, TOC networks are not specialized, but rather are malleable and adaptable, seizing targets of opportunity and using existing trade routes to maximum advantage, and this characteristic makes them most successful in the activities they undertake.

Often these criminal networks utilize the same pipeline for both illegal and legal products, as well as sell these products to the same vendors. Thus, convergence within criminal networks exploits the transnational integration of both the illicit and licit economies, as well as challenges traditional ideas of wealth, development, and power.

The case studies presented In this report illustrate the ways in which convergence is rooted in modern globalization and technological advancements. In each example, evidence and first-hand information are provided regarding the ways TOC networks take advantage of globalization and its accompanying technological advancements to coordinate converging criminal activities and connect with other criminals and networks. It is important to note that TOC networks' convergence paradigms operate in dynamic and ever-expanding processes, innovatively taking advantage of globalization and modern advancements. However, before we discuss these case studies and ELI's convergence typologies that derive from the years of experience engaging with TOC groups, we will first briefly introduce the scientific literature on environmental crime convergence. The purpose of this is twofold: (a) to situate this report within the larger body of criminological research on this topic, and (b) to highlight ELI's unique convergence typology that derives from primary-source data and years of experience with TOC groups and actors.

Review of the Literature on Convergence of Crime and Emerging Typologies

Scholars have made significant strides, given the inherent data limitations, to extrapolate convergence typologies in the past. Literature in this direction is relatively new, and studies have only emerged in the past several years to begin shedding light on the phenomenon of the convergence of wildlife and environmental crimes with other forms of serious crimes. With the aim to situate ELI's convergence typologies within the broader discourses of convergence in academic literature, this section will briefly identify the contributions made to the convergence literature (as they pertain to environmental crimes) by scholars in the past.

Several theoretical crime typologies have been developed to aid in making sense of environmental crime by assessing, organizing, and classifying relevant criminal characteristics. These typologies have been conceived to examine environmental crime (INTERPOL, 2015), wildlife trafficking and drugs (Anagnostou and Doberstein, 2022; Van Uhm et al., 2021), wildlife trafficking and other forms of organized crime (Spevack, 2021; Van Uhm and Nijman, 2020; WJC, 2021).

These typologies are often complex and rarely classify environmental crime characteristics. The most useful typologies of crime need to be clear, parsimonious, comprehensive and contain mutually exclusive categories (Gibbons, 1975). This report proposes four useful, simplified, and coherent typologies that classify criminal characteristics of wildlife trafficking.

Multiple species convergence refers to the trafficking of multiple wildlife species at the same time. This report conceptualizes this typology of convergence to include existing typologies such as species diversification (Anagnostou & Doberstein, 2022; WJC, 2021) and barter trade (Anagnostou & Doberstein, 2022; Van Uhm et al., 2021).

Multiple environmental crime convergence refers to the involvement of the same networks or traffickers engaging in wildlife trafficking in addition to other forms of environmental crime, such as illegal logging, illegal fishing, and illegal mining. This report conceptualizes this typology of convergence to include existing typologies such as shipment level convergence (Spevack, 2021), and crime diversification (Anagnostou & Doberstein, 2022; WJC, 2021).

Serious crime convergence refers to when environmental crime networks and criminals engage in other serious crimes, such as money laundering, human smuggling, and narco-trafficking. This report conceptualizes this typology of convergence to include existing typologies such as threat finance, shared smuggling, parallel trafficking, enabling crimes (Anagnostou & Doberstein, 2022), multi–crime convergence (INTERPOL, 2015), green organized crime, green opportunistic crime, green camouflaged crime (Van Uhm & Nijman, 2020), combined contraband, multiple trade lines, shared smuggling routes, camouflage, drug money laundering (Van Uhm et al., 2021) and embedded convergence (WJC, 2021).

Transnational network convergence refers to the overlap of transnational organized criminal networks and their criminal activities. This report conceptualizes this typology of convergence to include existing typologies such as geographic convergence, taxation, and high-profile consumer (Anagnostou & Doberstein, 2022), transactional convergence (WJC, 2021) organizational level convergence, route, hub, and jurisdiction level convergence (Spevack, 2021).

CONVERGENCE TYPOLOGIES DERIVED FROM EMPIRICAL LITERATURE AND THEIR ALIGNMENT WITH THOSE DERIVED BY ELI

Serious Crime Convergence

Anagnostou & Dobertein (2022)
- Threat finance
- Diversifications
- Enabling crimes
- Shared smuggling
- Parallel trafficking

Van Uhm & Nijman (2020)
- Green organized crime
- Green opportunistic crime
- Green camouflaged crime

Van Uhm et al. (2021)
- Combined contraband
- Shared smuggling routes and transport methods
- Multiple trade lines
- Drug laundering money

INTERPOL (2015)
- Multi-crime convergence

WJC (2022)
- Embedded convergence

Multiple Species Convergence

Anagnostou & Dobertein (2022)
- Barter trade and common fixers
- Diversifications

Van Uhm et al. (2021)
- Barter trade

WJC (2022) — Diversification of illicit commodities
- Opportunistic convergenge
- Transactional convergenge
- Embedded convergenge

Transnational Network Convergence

Anagnostou & Dobertein (2022)
- Geographic convergence
- High profile criminal consumer
- Taxation

Spevack (2021)
- Organization level convergence

Multiple Environmental Crime Convergence

Anagnostou & Dobertein (2022)
- Diversifications

Spevack (2021)
- Shipment level convergence

WJC (2022) — Diversification of illicit commodities
- Opportunistic convergence
- Transactional convergence
- Embedded convergence

PART III: CASE STUDIES OF ENVIRONMENTAL CRIME CONVERGENCE AND TRAFFICKING NETWORKS

Intelligence and Analysis to Affect Change

At its core, Earth League International (ELI) applies professional intelligence expertise to disrupt the proliferation of environmental/wildlife crime around the world. ELI identifies and investigates the most important environmental criminals and wildlife traffickers in the world, researching their networks and links to Transnational Organized Crime (TOC). This includes research on the convergence of environmental crime with other serious crimes, such as money laundering, human smuggling, and narco-trafficking

ELI's team believes that Intelligence is the knowledge – ideally the foreknowledge – that leads to an understanding of criminal network systems. Intelligence addresses critical knowledge gaps and provides evidence of environmental/wildlife crime that has been previously unknown or impossible to prove. Transnational environmental crime networks operate in a complex web of legal and illegal activities and movements of money. They also have enormous corruption power, and employ a variety of methods to remain invisible to authorities, operating without consequence and exploiting the current information gaps related to their activities. Thus, intelligence is vitally important for law enforcement authorities, governmental organizations, and stakeholders to identify points of interdiction, operationally disrupt criminal systems, and safeguard nature and communities.

It is essential to integrate an intelligence-led approach with the traditional "reactive" conservation models. Millions of dollars have been spent by NGOs and government authorities with a focus on anti-poaching activities, local communities, and public awareness campaigns. However, these efforts fail to properly contextualize environmental stresses within a broader understanding of environmental crimes, the nexus with other serious crimes, and the complexities of the associated global TOC networks that orchestrate and carry out these crimes.

Currently, very limited resources are allocated to intelligence, investigative, and research activities and there exists a lack of awareness regarding the necessity of these efforts in environmental conservation. Furthermore, although governments and law enforcement authorities have attempted to address environmental/wildlife crime through policies and regulations, there is little evidence to show that such efforts have succeeded in curtailing the criminal exploitation of nature, which is often linked to TOC.

ELI's team and network of collaborators have worked in intelligence and investigative fields for decades, including for top governmental agencies, such as the Federal Bureau of Investigations (FBI). As with the fight against other global threats, such as terrorism, narco-trafficking or organized crime, intelligence should be at the center of efforts to fight environmental crime. It is and should be used as a strategic resource to focus investigation and law enforcement activities, policy changes, and funding.

ELI's Operational, Analytical, and Dissemination Approaches

ELI is comprised of experienced analysts and highly-skilled, retired professionals from various law enforcement and intelligence agencies who have a long history executing projects in Latin America, North America, Africa, Asia, Europe, and Mainland China. Through ELI's research, information-gathering, and analysis of environmental crimes, they have successfully identified and exposed top environmental traffickers, international crime networks, and the converging criminal activities that underlie and perpetuate the destruction of Earth's environment, resources, wildlife, and communities.

First-Hand Information Gathering (Fieldwork).
ELI has been executing discrete information-gathering and research operations around the world for the past decade. ELI employs several internationally-recognized experts who have decades of experience in conducting high-level research and investigative operations around the world. As a first step of ELI's process, the investigators and research team carefully design evidence-based, context-specific investigative field operations. When in the field, ELI's team collects large amounts of unstructured data, including hundreds of hours of recorded conversations, videos, photos, audio, and a variety of documents (e.g. forged customs documents, fake passports, and messages from various messaging apps), financial and shipping information.
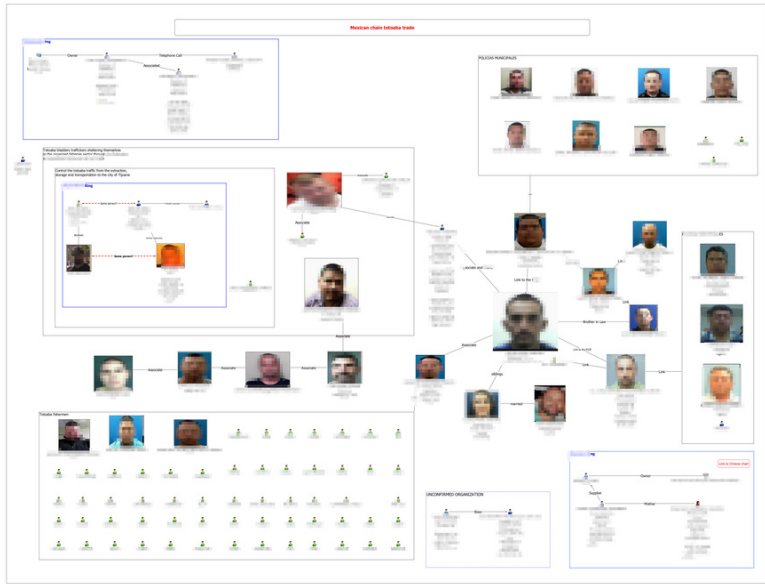
In addition to generating data and providing evidence, these operations offer important opportunities to strengthen working relationships with skilled local assets and cultivate local collaborators and informants that are well-positioned to provide information on the main Persons of Interest (PoIs) and their networks. ELI's field operations also include official and unofficial meetings with local institutions, policymakers, and law enforcement officers to establish key relationships and gather further information.

Criminal Network, Cyber, and Geospatial Intelligence (GEOINT) Analysis.
All data gathered from the field and the primary sources are passed on to the analytical team to be converted from unstructured data to a structured and usable data composition. Analysis occurs in real-time alongside the work of the investigative team, and it continues indefinitely. This process involves the manual extraction and understanding of raw information that is translated, transcribed, and evaluated for reliability. The data are then integrated and analyzed to capture and visualize variables related to environmental crime, converging criminal activities, and associated international criminal networks.
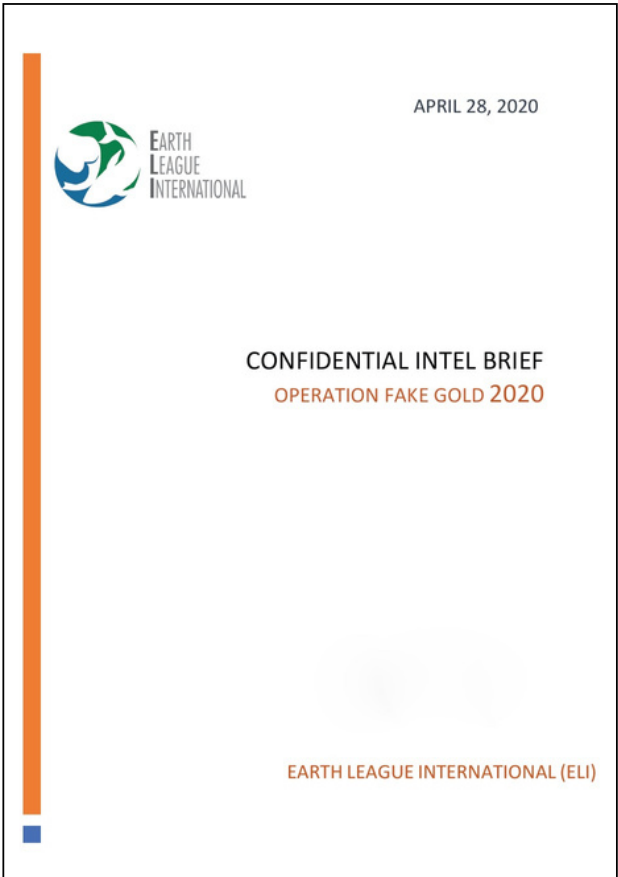
ELI's team utilizes various analytical methods, including social network analysis, criminal network analysis, geospatial analysis, and cross-referencing. Social network analysis investigates the relationships and structures within a network and can be represented by graphs or maps. Criminal groups are social structures, therefore social network analysis can be applied to them in the form of Criminal Network Analysis (CNA). CNA is used to identify the relations among individuals based on information regarding the activities, events, and places derived from various investigative activities. CNA enables ELI to identify the key players and nodes, predict the success of key players, and provide the actionable intelligence needed for law enforcement authorities to develop a targeted and effective response to transnational environmental crime networks.

When needed, ELI's team also utilizes Geospatial-Intelligence (GEOINT) analysis to effectively integrate and interpret multiple data sources and enhance the contextual knowledge within a location, space, and time environment. GEOINT begins with a base map of key features and domains that describe the team's operational landscape, such as wildlife habitats, key transit ports, wildlife trafficking routes, criminal hotspots, and areas of criminal convergence determined from ELI field operations and open-source analysis. The incorporation of the link analysis integrates the criminal network analysis within a geographic context. ELI's geospatial intelligence analysis is often shared with law enforcement authorities to assist in strategically addressing the issues of environmental crime and its convergence with other serious crimes.

Pictured: An analysis of an African-Vietnamese trafficking network.

Production and Dissemination of Actionable Intelligence.

Upon the conclusion of ELI's research and data analysis activities, ELI's team produces and shares a variety of analytic reports, as well as Confidential Intelligence Briefs (CIBs), which are then disseminated to the law enforcement authorities, governmental organizations and stakeholders best positioned to act upon the provided information. CIBs are one of the most critical outputs of ELI's research activities, addressing information gaps, serving as important "knowledge transfer tools," and providing the tactical evidence needed for authorities to take action. They assist authorities in engaging in arrests and possibly prosecuting Tier-1 traffickers and middlemen, improving policy and enforcement activities, and enhancing cooperation among governmental agencies.

It is important to note that all data and information presented in this report are a result of over five years of field missions and intelligence-gathering by ELI's team. During this time, ELI collected over 300 hours of recorded conversations with key Persons of Interest (PoIs), informants, and sources in various languages. Additionally, hundreds of photos, videos, documents, financial information, fake and real certifications, social media accounts, phone numbers, addresses, emails, and other materials were collected to identify, assess, and target these top-tier environmental criminals and their networks. All raw data from the field was then meticulously translated, transcribed, and processed by our team of analysts and researchers to produce actionable intelligence that could be utilized by authorities to take action or continue their investigative activities.

Pictured: A crime map of the Mexican organized groups behind the illegal fishing of totoaba (Operation Fake Gold-2019).

Pictured: International rhino horn trafficking network with social media analysis.

APRIL 28, 2020

EARTH LEAGUE INTERNATIONAL

CONFIDENTIAL INTEL BRIEF
OPERATION FAKE GOLD 2020

EARTH LEAGUE INTERNATIONAL (ELI)

Pictured: A Confidential Intelligence Brief from ELI's Operation Fake Gold.
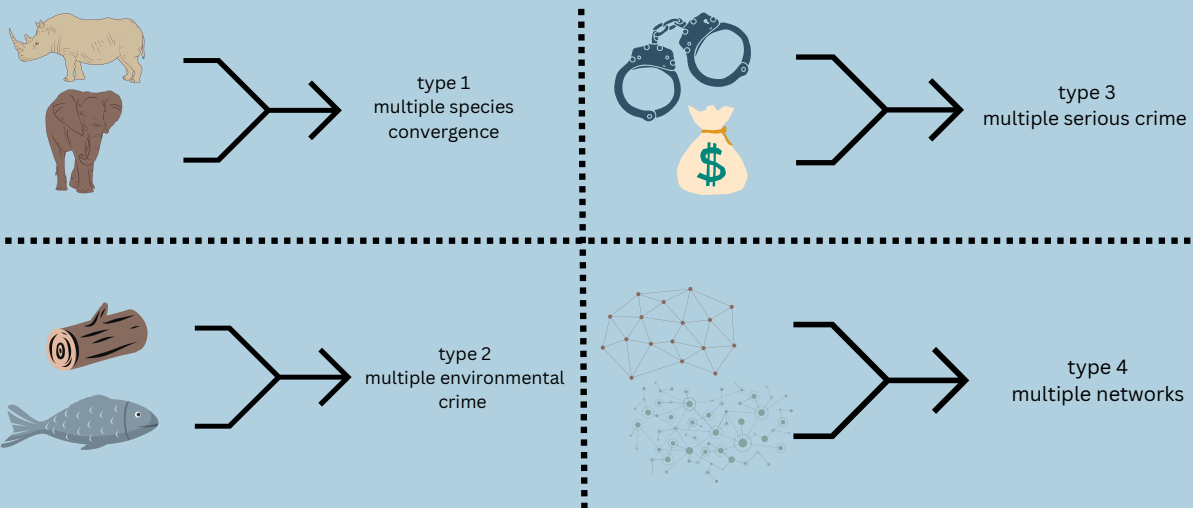
Case Studies of Criminal Networks

The following section presents five case studies of environmental/wildlife crime and its convergence with other serious crimes and demonstrates the links to transnational organized crime networks identified during ELI's investigative operations over the last five years. Although ELI has identified more than 40 criminal networks worldwide through its intelligence-gathering activities, these case studies were carefully selected to provide concrete evidence of the convergence of environmental crime with a multiplicity of serious crimes in different regions in Latin America. The examples of crime convergence presented in each case demonstrate how environmental crime networks can diversify and adapt their activities to ensure their continued survival, enhance their influence, and maximize profits.

Each case study is first contextualized with a brief overview of ELI's relevant intelligence-gathering operations. Case studies are grouped by geographic region. The networks presented in each example originate from ELI's investigative fieldwork and analytical work, which aims to build a comprehensive understanding of how environmental criminal networks operate.

From here, detailed evidence and first-hand information regarding environmental crime and its convergence with other illicit activities are presented. We discuss these findings through ELI's convergence paradigm, in which we have defined, instituted, and analyzed a suite of four (4) Convergence Types based on the first-hand empirical data from our field operations and systematic analyses. These include: 1) Multiple Species Convergence, 2) Multiple Environmental Crime Convergence, 3) Serious Crime Convergence, and 4) Transnational Network Convergence. Below is a summary of the five case studies and the convergence types they engage in.

Environmental Crime Convergence Typologies

type 1
multiple species convergence

type 3
multiple serious crime

type 2
multiple environmental crime

type 4
multiple networks

Case Studies: 1 & 2

Geographic Regions: Mexico > USA > China	**Convergence Types:** Species Convergence, Environmental Crime Convergence, Serious Crime Convergence, Transnational Network Convergence

Since 2017, ELI has been conducting intelligence-gathering operations focused on Mexico's totoaba maw (swim bladder) and other marine products trafficking networks. These criminal networks operate primarily between Mexico and China, but they extend their criminal activities to other countries, including the United States. ELI refers to our initial investigation in this area as *Operation Fake Gold*, since the retail price of totoaba maw on the Chinese black market is often higher than the price of gold.

Our operations originated to address the destruction of marine life in the Sea of Cortez, which is a consequence of this extremely lucrative illegal trade. ELI's operations initially focused on helping to protect the endangered vaquita, the world's most endangered mammal, which is killed as by-catch during the fishing of totoabas. Furthermore, illegal totoaba fishing threatens not only the vaquita but also the entire marine ecosystem of the Upper Gulf of California.

While other approaches focused on conservation awareness campaigns, illegal fishermen, and low-level criminals, they struggled to address the international environmental crime networks that underlay and perpetuated the exploitation of nature in this region. Through our operations, ELI works to intervene at the highest level of environmental crime, targeting top-level traffickers and their international networks.

Primary findings from our operations:
- **Mexican organized crime comprises the bottom half of the Totoaba Cartels and the supply chain, specializing in the illegal fishing and initial movement of totoaba swim bladders inside Mexico.**
- **Organized crime groups run by Mexican criminals collaborate with local fishing cooperatives and fund the activities of illegal fishermen, including the purchase of illegal gillnets.**
- **Mexican criminals sell the swim bladders to various groups of well-connected Chinese traders and businessmen residing in Mexico.**
- **Chinese traders operate at the top of the supply chain, facilitating the smuggling of totoaba maws to the U.S. and China.**

Over the past six years, ELI has gathered the intelligence needed by authorities to successfully disrupt the totoaba illegal supply chains that threaten the marine life in the Sea of Cortez and fuel other serious crimes. The intelligence includes detailed information on fourteen (14) of the most important international totoaba and marine products trafficking networks operating in Mexico, the U.S., and China, and on dozens of Tier-1 international traffickers and their facilitators. ELI calls these groups Totoaba Cartels. Through ELI's investigative activities and criminal network analyses, we discovered that Chinese nationals, residing in Baja California, and central Mexico, are leading the totoaba illegal trade and have been progressively expanding their activities to other crimes. These groups also collaborate with other criminal networks, in particular, the Mexican cartels and the Fujian mafia.

ELI has also produced various Confidential Intelligence Briefs (CIBs), analytical reports, and real-time updates, which have been prepared and submitted to law enforcement authorities in Mexico and the United States. The CIBs contained all the non-redacted data gathered regarding the key players, their networks, and enablers, the illegal supply chains, how they move the money, and the modus operandi of these traffickers. Furthermore, ELI's CIBs provided concrete evidence and increased awareness regarding the existence of crime convergence within totoaba and marine products trafficking networks.

ELI continues to engage in multiple operations within this region, gathering further evidence regarding these environmental crime networks and converging criminal activities. In this section, we present two of the networks identified by our operations, which we refer to as M2 and M3. Both networks are particularly relevant case studies to illustrate the concept of environmental crime convergence.

Pictured: A dead vaquita which was killed as by-catch during the fishing of totoaba.

Pictured: Totoaba swim bladders seized in Mexicali, Mexico.

Case Study 1: Network M2

The criminal network M2 is composed of Chinese nationals residing both in China and Mexico, with operations also in the U.S. The network´s members frequently travel between those countries. Our team collected detailed information on M2´s members and built a trusted network of informants and sources [7] who helped us identify the heads of these networks, several Persons of Interest (PoIs), and key players, as well as provided critical details regarding how the network operates.

M2's base is in Baja California, where they serve as a key supplier of fish maws - including totoaba, butterfly, and Corvina maws, as well as seahorses, sea cucumber, abalone, and shark fins. The ring owns warehouses in Mexico, where they process, stock, and package illegal seafood. According to our sources, these products are mainly smuggled into the U.S., which serves as both a transit and destination country.

Based on the information collected and analyzed in the past six years, ELI can confidently confirm that M2 is indictable for committing environmental crimes, human smuggling, immigration document counterfeiting, and money laundering. Furthermore, M2 maintains stable links and works in collaboration with Fujian Mafia, Mexican organized criminals, and narcotraffickers to achieve its aims.

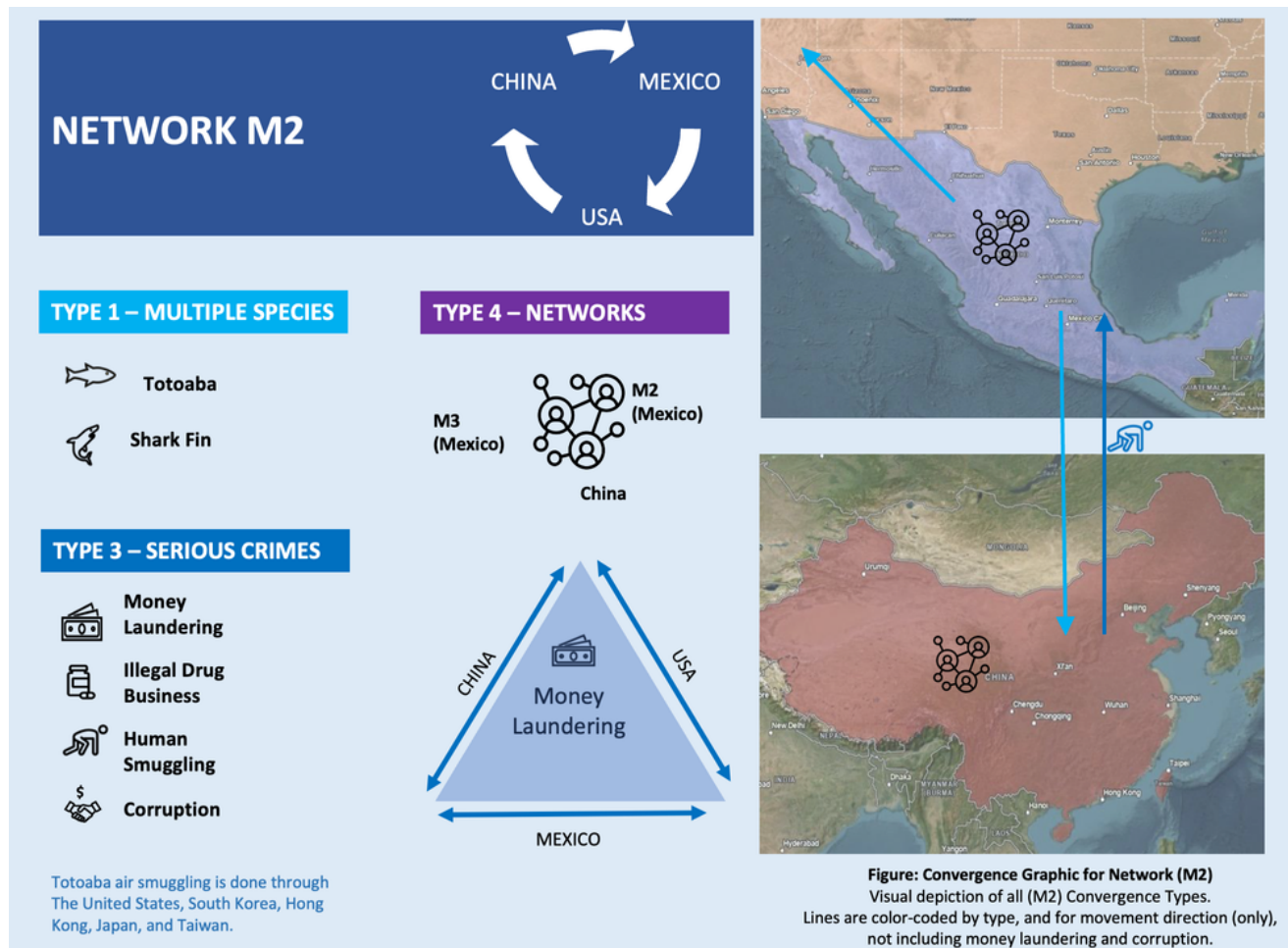**Transcript of a conversation with a source:**

Source: "I have some friends in San Diego who can sell you products like sea cucumbers in the US. (…) Mr. ___ is specialized in Mexican seafood in the US, and he has the products s in the US. The other, ___, is a big player here in Tijuana, and he is also very aggressive and risky. I bought a lot of fish maws and abalone from him and sent them to China. ___ has a lot of sources and he has a lot to sell. He uses Mexicans to smuggle the stuff into San Diego, as he has no export permits for the products. It's all smuggled into the US and their warehouses are also near the border. . .

I also help people to get a residential card and then send them to the US. These resident cards are real and legal….Yes, the elderly took the lead on the fish maw (referring to totoaba) business in the old time. Now they are less involved in the fish maw business. They are now focused on smuggling Fujian, illegal immigrants. (…) They are only interested in fast money."

Pictured: The word clouds generated in the report reflect the most frequently occurring words in the transcripts they are placed next to.

Crime Convergence Types Within M2

NETWORK M2

CHINA → MEXICO → USA

TYPE 1 – MULTIPLE SPECIES
- Totoaba
- Shark Fin

TYPE 3 – SERIOUS CRIMES
- Money Laundering
- Illegal Drug Business
- Human Smuggling
- Corruption

Totoaba air smuggling is done through The United States, South Korea, Hong Kong, Japan, and Taiwan.

TYPE 4 – NETWORKS

M3 (Mexico) — M2 (Mexico) — China

Money Laundering
CHINA / USA / MEXICO

Figure: Convergence Graphic for Network (M2)
Visual depiction of all (M2) Convergence Types.
Lines are color-coded by type, and for movement direction (only), not including money laundering and corruption.

## Type 1: Multiple Species Convergence

M2 is responsible for the trafficking of various illegal marine products, including totoaba swim bladders, seahorses, sea cucumber, abalone, and shark fins. Below is a summary of their activities related to Multiple Species Convergence, with a focus on the trafficking of totoaba and shark fins.

Totoaba swim bladders. Evidence gathered in the field revealed that M2 is a leading smuggling network of totoaba swim bladders and has successfully engaged in this criminal enterprise for at least 12 years. M2 began by selling totoaba maws to Chinese clients residing in the U.S. and China, and in recent years expanded to include high-level clients throughout the world. M2 is responsible for smuggling hundreds of kilos of totoaba maws every year. The totoaba maws are directly processed by M2 and are stocked in secret warehouses in Mexico. They are then sold to Chinese middlemen residing in Mexico and the U.S.

The smuggling of totoaba swim bladders occurs through two methods depending on the destination, by air or ground transportation. By air, totoaba maw is smuggled from Mexico via direct air shipments to China, using international courier services (small packages). M2 has a contract with a well-known international courier who ensures the goods are properly packaged so that they do not undergo routine inspection. Generally, the label placed on the package indicates an alternative food product that will avoid being flagged or checked by customs officials.

Similarly, transit country shipments [8] utilize human mules to transport illegal products inside their checked luggage. The mules take a variety of routes and carry different sizes of products to avoid being detected by customs authorities at the airport. Furthermore, the mules avoid flying directly to their destination, instead, they make multiple stops along the way. ELI discovered that the most utilized transit destinations are currently Hong Kong, South Korea, Japan, Taiwan, and the United States.

Via ground transportation, totoaba maw is smuggled from Mexico to the U.S. by car or van. M2 utilizes several ways to hide totoaba maws among other transported goods, depending on whether the bladders are dry or fresh (e.g., hidden among roof tiles or into fresh fish). M2 uses vehicles with California plates, generally driven by Mexican drivers who are paid by the network. Payments are done through M2´s bank account in China (RMB), in cash (USD), or through WeChat Pay.
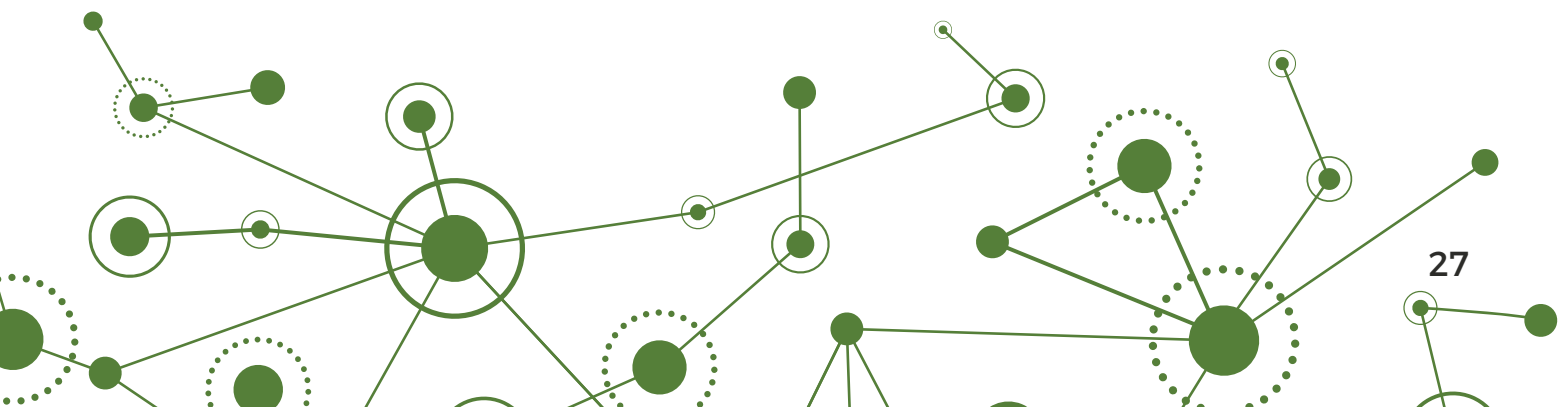
Shark fins. While collecting evidence regarding M2's involvement in the trafficking of totoaba maws, ELI also collected information regarding M2´s shark fin trafficking business. Members of M2, collaborators, and sources outside the network confirmed that M2 has an enormous availability of shark fins to sell to buyers. In 2020, ELI´s operatives found 2.5 tons of dried shark fins at the house of one of M2's key members.

Type 3: Serious Crime Convergence

ELI's investigative activities also revealed that M2 is extensively involved in other serious crimes. There is significant evidence regarding the criminal group's involvement in money laundering, the illegal drug business, human smuggling, and corruption for many years.

Money laundering. According to ELI´s informants, some of the members of M2 are actively involved with money laundering. Our investigators and analysts worked in tandem to develop an understanding of this process. First, individuals in M2 assist Chinese clients residing in Mexico or the U.S. in registering their local companies in Mexico to launder money. Using a 'flying' money system, like the Muslim Hawala, the Chinese clients will wire transfer money (RMB) to M2's Chinese bank accounts. M2 will then return the money to the Chinese clients in a different currency (e.g. USD or Pesos) so that the clients can re-invest this money without detection. M2 receives a service fee for their help. Typically, M2 invests the profits in real estate, buying entire buildings in Mexico to serve as offices or façade businesses. For example, one of M2's members owns a "currency exchange" business, which he uses as a front organization to transfer money illegally without registering transactions.

Illegal drug business. According to several sources, some members of the M2 network are also involved in the illegal drug business. Members are reported to oversee drug houses in the U.S., where illegal Chinese immigrants (smuggled by M2) illegally grow marijuana. The Chinese are generally used as "gardeners," taking care of the marijuana in these so-called "garden houses." According to the traffickers, the Vietnamese mafia in California collaborates with the Chinese mafia to profit from the marijuana business trade in the U.S. These mafias primarily sell marijuana to the U.S. market.

Human smuggling. ELI has also gathered evidence regarding M2 members' involvement in human smuggling. By circumventing some of the regulations provided by the U.S. border system, the ring smuggles Chinese workers to the U.S., with an extremely high success rate of 95%. M2 helps Chinese immigrants move from China to the U.S. and from Mexico to the U.S.

Many Chinese enter Mexico utilizing a Japanese or European visa first, and M2 bribes government officials in Mexico to acquire work permits for illegal Chinese immigrants. M2 allegedly bribes officials at the Mexican immigration department to provide immigrants with a Mexican residential card (either temporary or permanent). Temporary cards costing $6,000 are valid legal documents. Permanent cards cost $8,000 and are counterfeited, as the procedure requires a Mexican child to sponsor the applicant. The criminal ring specializes in creating counterfeit birth certificates.

M2 also assists Chinese immigrants in entering the U.S. without a visa. Immigrants are smuggled into the U.S. hidden in the back of cars. The cost is over $20,000 per person. Multiple drivers are involved in each smuggling trip. Personal belongings, such as passports, IDs, and luggage, are transported in a separate car from the immigrants and are delivered at a later stage directly to the safe house

Corruption. M2 bribes Mexican government officials to get work permits for illegal Chinese immigrants. Once Chinese immigrants holding Mexican visas arrive, the network arranges a special entry, which is assisted by bribed government agents and police. Before Covid-19, a direct flight from China to Mexico existed, carrying at least 50 immigrants each time.

Type 4: Transnational Network Convergence

M2's success is also deeply rooted in its collaboration with other criminal networks in Latin America and other countries outside Latin America.

Convergence with other international traffickers and networks. Through some of its members, M2 is involved in marine products trafficking, human smuggling, and money laundering all across Latin America. A member of M2 is the head of a criminal network in China and travels regularly to other countries, including Mexico and Myanmar. He collaborates with other wildlife trafficking networks and criminal groups, and middlemen.

Convergence with drug cartels. According to sources close to the network, M2 works in collusion with the Mexican cartels to engage in human smuggling and drug trafficking. M2 often arranges for the Mexican cartels to take Chinese immigrants from Mexico to the U.S. on foot. This is risky, yet often the cheapest option for immigrants. Cartels assist in human smuggling by transporting the immigrants in the back trunks of private cars (around 3 people per car). The cartels also further benefit from this arrangement by asking Chinese immigrants to carry drugs while crossing the border.

Transcript of a conversation with a source:

Source: "They smuggle totoaba into San Diego as the stuff has no export permit at all. It's all smuggled into the U.S. and their warehouses are also near the border. They normally call their clients to pick up the stuff near ___ near the border". "They can also smuggle people to the U.S. from Mexico. For those without a U.S. visa we have some people to smuggle them into the U.S. They are very good. The Chinese can come back to Mexico normally half a year to renew I-94 and it's a perfect loophole. . .

As long as the Chinese are not caught in the U.S. while working illegally, they are fine. For people without visas we can also arrange to hide them at the back of the car or climb the mountains to cross to the U.S. We use the Century Line [9] to smuggle them out in the car back. The price of smuggling also varies depending on the channels of smuggling."

Case Study 2: Network M3

Since 2017, ELI has been gathering information on the activities of the Chinese community members gravitating around certain restaurants and other seafood providers in Central Mexico. This led to the identification of one of the most powerful networks in the country referred to as M3. M3 is based in Central Mexico and run by Cantonese Chinese nationals, who collaborate with Mexican individuals. They are a key player in the smuggling of totoaba maws from Mexico to Asia, with the primary destinations of Hong Kong and Vietnam. The leader of this network, Person of Interest (PoI) Mx01, has strong links to the Fujian mafia. Other members of M3 reside in China, offering logistical support for storing illegal products.

M3 also has strong links to the U.S. One member of the group is tasked with supervising financial matters, particularly the transactions involving the U.S. He oversees money laundering operations and shadow banking between China and the U.S. Over the past five years, ELI has continuously monitored M3´s activities and collects information from sources and informants close to the network. ELI's evidence reveals that M3 is indictable for committing wildlife crimes (totoaba bladders, shark fins, seahorses, tigers, and tiger parts trafficking), money laundering, human smuggling, and aiding in narco-trafficking. Furthermore, ELI's operations revealed M3's partnerships with Mexican organized crime/narcotraffickers and corrupt government officials.

Person of Interest Mx1
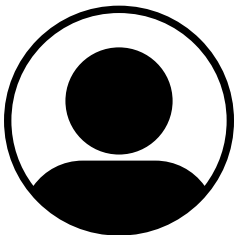
PoI Mx1 is the leader of M3.
He resides in Mexico and has tight links with the Fujian mafia.

Reckless and hasty, he is willing to take on every kind of risk for money revenue.

He has an easygoing and careless nature, which is reflected in his tendency not to respect previous agreements and his indecisiveness when making decisions.

With his collaborators, he likes to show generosity and loyalty.

PoI Mx1 is a vital bridge between the cartels and Chinese mafia, traders, and businessmen, because of his respected position and fluency In Spanish.

Crime Convergence Types Within M3

Figure: Convergence Graphic for Network (M3)
Visual depiction of all (M3) Convergence Types.
Lines are color-coded by type, and for movement direction (only),
not including money laundering and corruption.
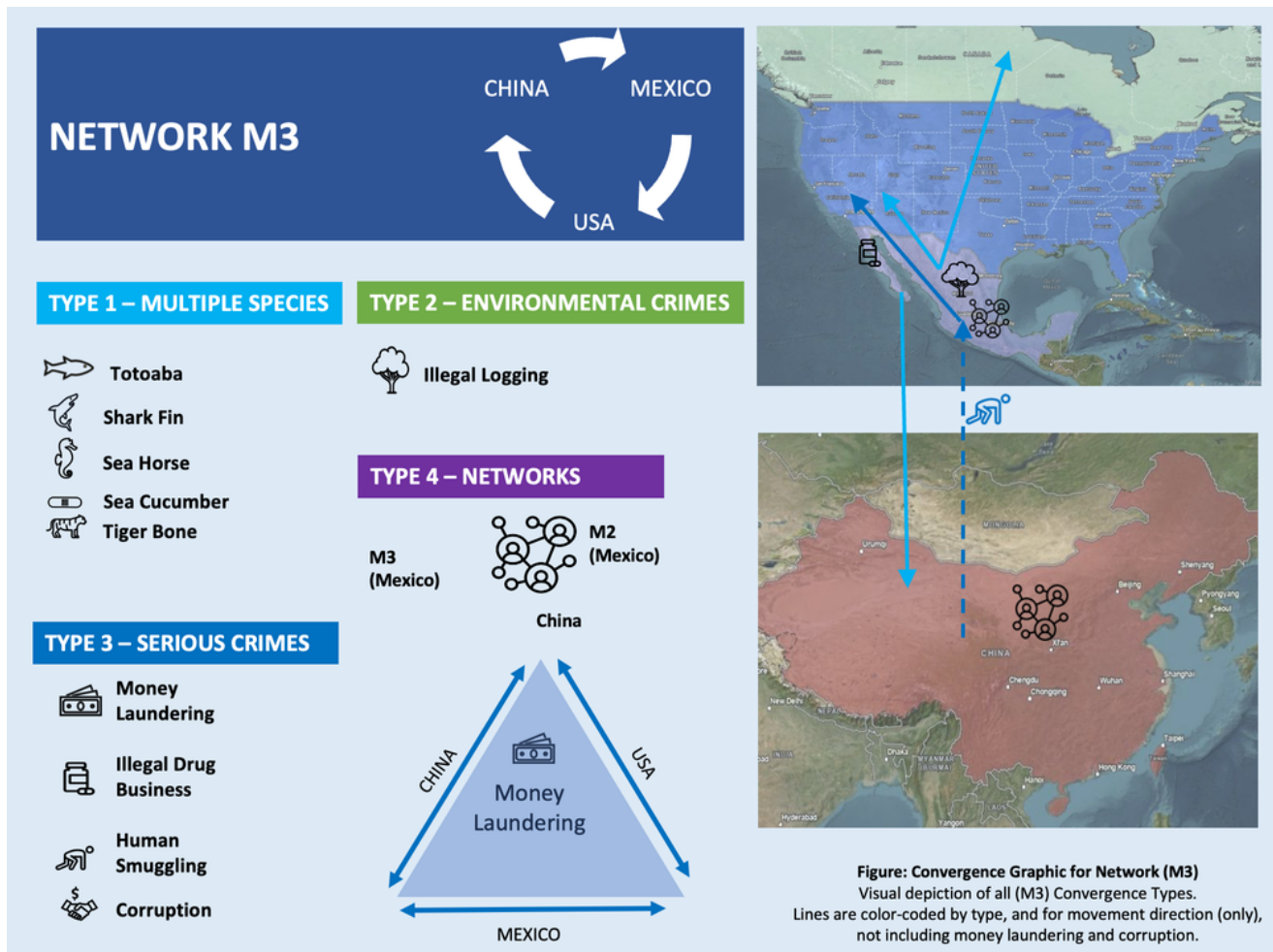
Type 1: Multiple Species Convergence

M3 has been involved in the trafficking of totoaba swim bladders, seahorses, sea cucumbers, shark fins, and even tiger bones.
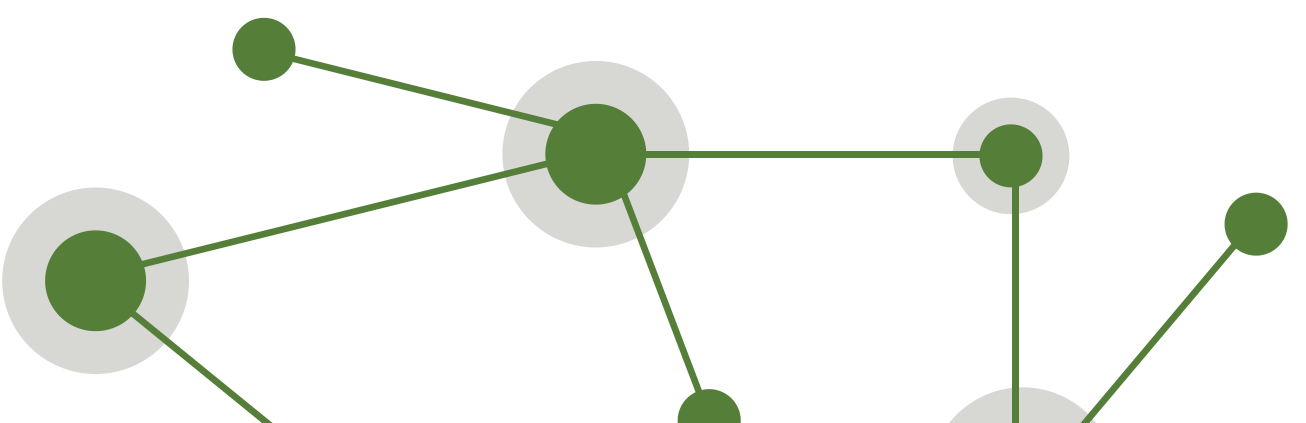
Totoaba swim bladders. The M3 network was identified by ELI in 2017 as a major player in the totoaba maw trade. M3 purchases fresh products from Baja California, processes them, and directly sells them to customers in Hong Kong, the U.S., and Canada, or to second-order vendors [10] in China. Intelligence gathered by ELI provides evidence that M3 collaborates with drug cartels in Baja California also for totoaba trafficking.

Since the onset of ELI's operations in 2017, M3 has demonstrated to have consistent availability of totoaba maws, procuring and smuggling hundreds of kilos of swim bladders, both frozen and dried. According to multiple sources close to the network, in 2020-2022, the majority of totoaba bladders were purchased by Chinese Americans and Canadian buyers residing in Mexico, who in turn sell the totoaba to affluent Chinese residing in the U.S. and Canada.

The network's activities have continued undisturbed throughout the COVID-19 pandemic, as M3 has the capability and resources to quickly adapt and change the supply chains. During the summer of 2020, the network processed more than 500 totoaba bladders, weighing between 500 grams to 1 kg. Additionally, ELI discovered that some of the 270 totoaba maws confiscated at the Hong Kong airport on June 4th, 2020, belonged to the network. The maws were shipped from the Los Angeles airport to the Hong Kong International Airport.

Shark fins. ELI collected intelligence regarding M3´s shark fin trafficking business. Informants close to the network informed ELI's team that a variety of shark species are trafficked by the network, including the tiger shark and the white shark. According to ELI's informants, the market price of shark fins remains stable, with the demand being much larger than the current supply.
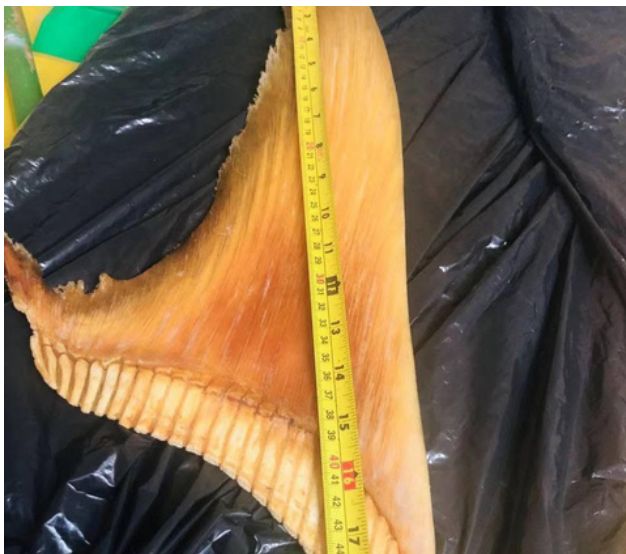
Pictured: Shark fin smuggling filmed by ELI's team.

Type 3: Serious Crime Convergence

Money laundering. Money laundering between the U.S., China, and Mexico is a complex mechanism, in which M3 (the Cantonese Mafia), the Fujian Mafia, and the Mexican cartels engage in extensive collaboration. Due to China's increasingly strict regulations regarding money transfers and exports, Chinese residing in Mexico have become involved in money laundering with the Mexican cartels and shadow banking with the Fujian Mafia. The money laundering mechanism is almost always based on the "flying money" system, like the Muslim's Hawala, and there is often an element of trade-based money laundering. The money doesn't go through the financial system, but it is "moved" between trusted entities and individuals within the same country, in Mexico, the U.S., and China. They often exchange the money in cash, rather than wiring internationally. M3 acts as a middleman in Mexico, representing the link between the rich Chinese, Mexican cartels, and the Fujian Mafia. The details of these money laundering schemes cannot be shared with the public in this report, but ELI has provided U.S. authorities with this information through its Confidential Intelligence Briefs (CIBs).

Narco-Trafficking. M3 also assists cartels in acquiring and transporting illegal drugs. A source close to the network confirmed that M3's members support the cartels in the distribution of drugs to Chinese groups residing in the U.S.

Human smuggling. According to various sources, M3 collaborates with the Chinese mafia and a specific drug cartel in human smuggling activities. M3 serves as the middleman taking care of the agreements and collaboration between the two groups. ELI discovered that, previously, M3 smuggled immigrants who were brought to Cuba and admitted without a visa. From there, M3 smuggled the immigrants via boats to Mexico. More recently, M3 assists illegal immigrants in flying directly to Mexico using extensive collaboration with corrupt officials to obtain forged travel documents and fake residence permits, as well as other criminal networks. From Mexico, illegal immigrants are smuggled to the U.S. using various methods, including via foot, car, or tunnel. Following their arrival in the U.S., the immigrants are required by the smugglers to stay in designated locations for two to four weeks to avoid being tracked and arrested by U.S. authorities. According to sources, before COVID-19, the average cost per person was $70,000. However, it is now between $40,000 to $50,000 per person. The details of these human smuggling schemes cannot be shared with the public in this report, however, ELI has provided the U.S. authorities with all relevant information through ELI's Confidential Intelligence Briefs (CIBs).

Tiger parts. M3 also produces and sells tiger bone wine, a traditional Chinese medicine remedy that is believed to help cure conditions like rheumatism and arthritis. ELI discovered that in the past three years, several hundred kilos of bones from live tigers were used by M3 to manufacture the wine. ELI procured video and photographic evidence of tiger teeth and a tiger head belonging to M3. Tigers are bred by the Sinaloa cartel in Mexico. M3 has links with members of the cartel who can provide tiger products to buyers.

Transcript of a conversation with a source:

Source: "In Mexico, we also work with cartels to raise baby tigers, which is impossible for normal people, but the cartels are not afraid. The cartels like to raise tigers because sometimes when they kill their enemies, they feed the tigers with enemies' dead bodies. They also have American jaguars. Here in Mexico, some Chinese friends ask me to buy tiger meat and bone for them from the cartel guys. The Chinese don't like live tigers, they only want dead ones. This is because the Chinese want to eat the meat and use the tiger bone to brew tiger bone wine."
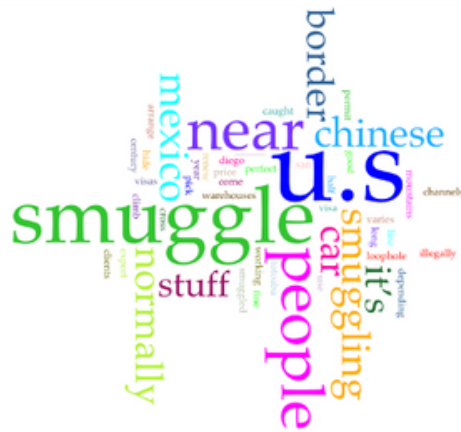
Type 2: Environmental Crime Convergence

Illegal logging. ELI has verified knowledge that M3 was involved in illegal logging activities years ago, providing services to Fujian mafia individuals. Recently, the network has shifted its criminal activities to other serious crimes, adapting to changing markets and available resources. Like many criminal networks, M3's ability to adjust and alter its activities affords them an advantage over law enforcement and government agencies.

Transcript of a conversation with a source:

ELI: Why is the Chinese human smuggling business dominated by the Fujian Mafia?

Source: "Because Fujian Mafia is the biggest in the USA. Also, Fujian people in the village like to chip in money to support the smuggling of other Fujian villagers into the U.S. These villagers make money with the help of the Fujian Mafia. Fujian people are smuggled into Mexico to cross the border to the US as their destination. That's why the Fujian Mafia must work with us (the Cantonese mafia in Mexico) to help them in this part of Mexico with their human smuggling operation...)"
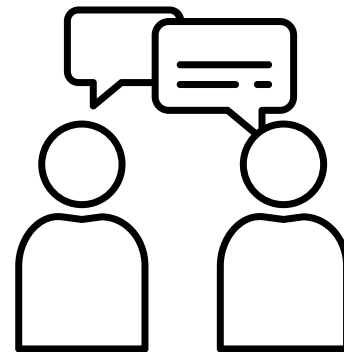
Transcript of a conversation with a source:

ELI: How can these people pass Mexican customs at the airport?

Source: "We know the customs in the airport, and we can tell our immigration department contacts to sneak the Chinese smugglers out of the airport from a secret door. The immigration officers are bribed in advance before they help the Chinese smugglers. Our immigration friends at the airport first pretend to arrest the Chinese smugglers and escort them into the office."

Corruption. M3 established a modus operandi to effectively control the smuggling of totoaba bladders. This is done through a network of corrupt Customs officers and individuals working in various government departments in Mexico to obtain all the export permits and to avoid checks at the airport.

Type 4: Transnational Network Convergence

The M3 network operates as a system of collaborators within Mexico, including the Fujian Mafia, Mexican cartels, and other criminals in the region.

Cartels and mafia. According to informants, M3 collaborates with Mexican cartels and other groups in the Latin American region. M3 has worked with the Sinaloa Cartel, which also assists in the sourcing of totoaba bladders. Furthermore, the cartel assists in protecting the products during transport. They also utilize their connection with the cartel to engage in human smuggling, as the cartel escorts Chinese immigrants on foot through the border. Typically, the cartels use the immigrants as mules, who must carry illegal drugs with them. Other criminal groups, such as the Fujian Mafia, sometimes collaborate with M3 for specific illicit activities, including human smuggling and money laundering. Despite being very powerful in the U.S., the Fujian mafia does not have many links in Mexico, so alliances are established with criminal groups such as M3 with more solid roots in the region.

Othe collaborations. According to reliable sources, M3 collaborates with one of the largest money launderers in Mexico. This individual, who supposedly manages his criminal network, offers support to M3 in several activities. M3 also previously worked with a powerful Chinese criminal, with whom they ran an illegal underground casino for Chinese individuals and engaged in human smuggling. This individual was later arrested for narco-trafficking.

Transcript of a conversation with a source:

Source: "Many people are ordering stuff from him, so his business is getting quite big now."

ELI: what's his product?

"Shark fin and fish maw etc...."

ELI: How much quantity can we get each month? What kind of sharks?

Source: "Great white shark is getting less and less, there is one kind of shark still very common, but the fin is very thin and small."

ELI: How many shark fins does he have in stock?

Source: "Over 10 tons, and he has more being processed. He can send you the photo. He was helping me to get totoaba, and the quality is very good."
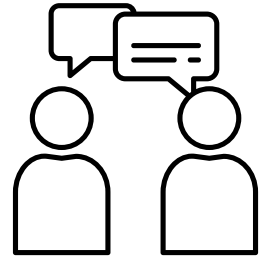
Transcript of a conversation with a source:

ELI: How do you do this money laundering from China to Mexico?

Source: "It's a triangle circle of three countries namely the US, China, and Mexico. It's all cash business. On the Chinese side, they send the money to our bank account in China first. It's a huge amount. This started in 2018 as China tried to stop the money from going outside. Many Chinese wanted to send a lot of money to US or Mexico to engage in the seafood business and so they come to us. Chinese money RMB is hot, and we can easily make at least 3 percent profit on top of regular profit to deal with Chinese RMB in our shadow banking in China. We work with organized crime as they have too much cash in USD in America. You give us RMB in China, you can have USD anywhere in US or Mexico."

Case Study 3: Network SA4

Geographic Regions:
Bolivia and Peru > China

Convergence Types:
Species Convergence, Environmental Crime Convergence, Serious Crime Convergence, Transnational Network Convergence
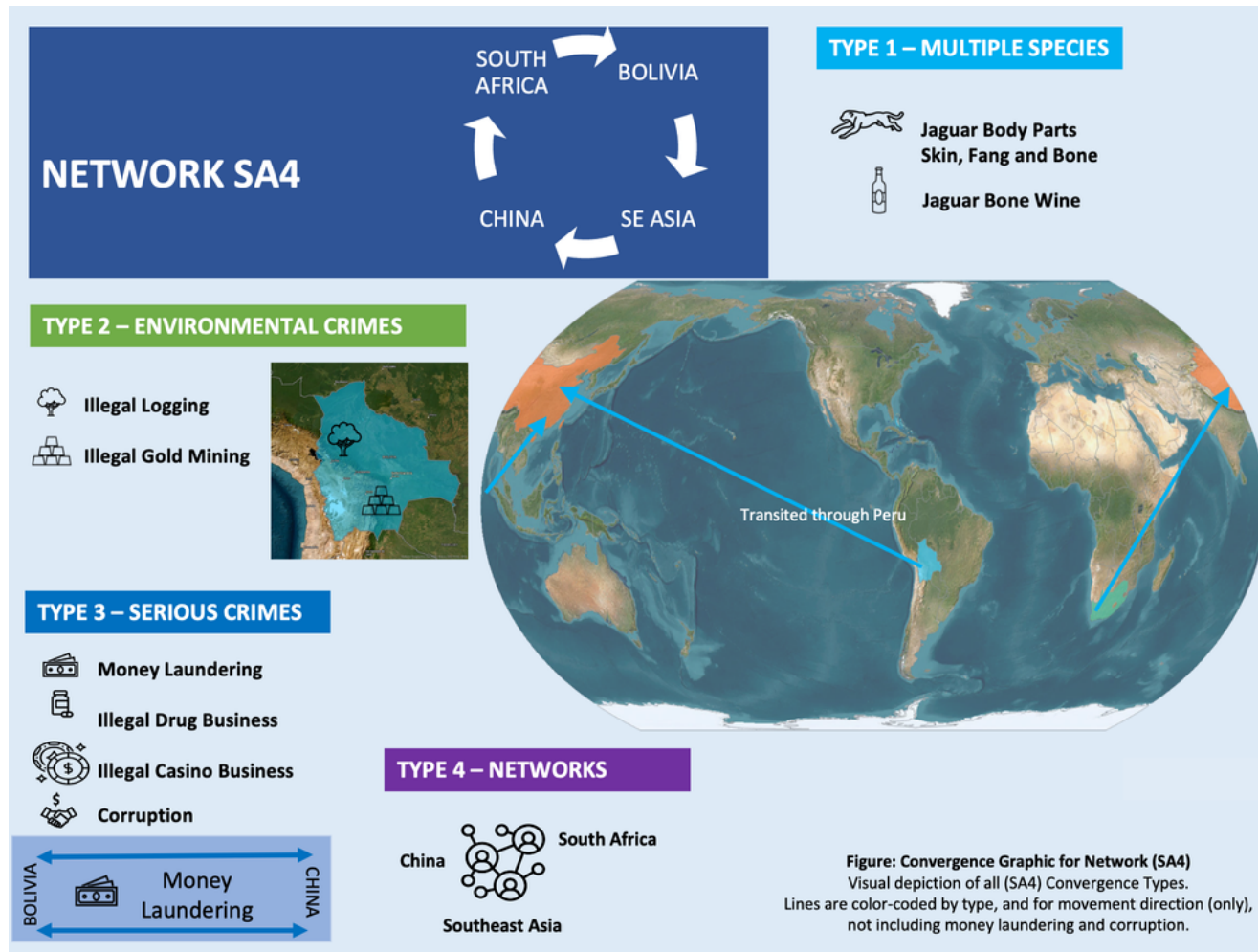
SA4 was initially identified as part of ELI's *Operation Jaguar* (in collaboration with IUCN Netherlands and IFAW, and funded by the Dutch Postcode Lottery), in which ELI's team built a comprehensive understanding of the illegal jaguar trade in Latin America. Since 2018, ELI has been collecting intelligence on SA4, discovering that this network plays a critical role in the illegal wildlife trade in this region, primarily in the trafficking of jaguar-related products, including fangs, jaguar bone wine, and skins. Furthermore, ELI gathered substantial evidence regarding SA4's involvement in a variety of criminal activities, including money laundering and illegal mining.

SA4 is a powerful Fujian/Putian criminal network based in Bolivia. The majority of Chinese settled in Bolivia, an estimated 7,000 to 8,000 individuals, are originally from Fujian, a province on the southeastern coast of China. The Fujian mafia is extremely powerful in Bolivia and the region, owning numerous profitable illegal casinos and engaging in a variety of illicit activities, including laundering millions of dollars. Members of the Fujian mafia in Bolivia have relatives in Argentina, who collaborate in these unlawful activities and/or run casinos as well.

SA4 is led by one of ELI's most important targets (PoI Sa18) in this region. He is based in a remote region of Bolivia, where he has a well-established record of engaging in wildlife trafficking and other illegal activities in Latin America and even South East Asia. PoI Sa18 has direct contact with local poachers, suppliers, other wildlife traders, and customers.

Crime Convergence Types Within SA4

Figure: Convergence Graphic for Network (SA4)
Visual depiction of all (SA4) Convergence Types.
Lines are color-coded by type, and for movement direction (only),
not including money laundering and corruption.
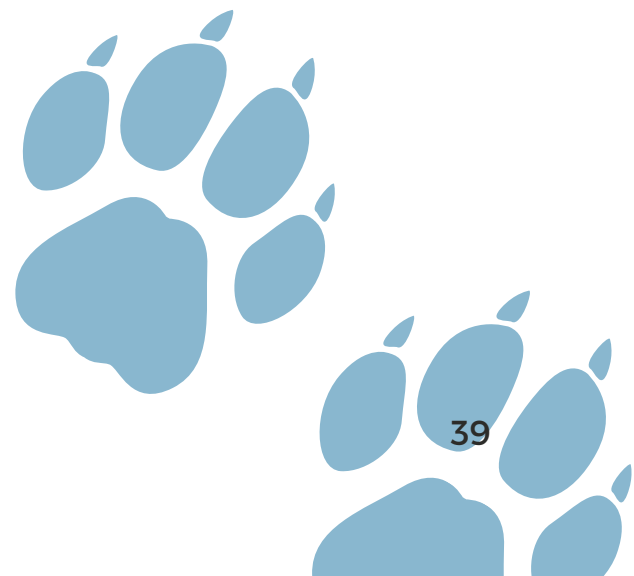
Type 1: Multiple Species Convergence

Over the years, SA4 has been heavily involved in trafficking jaguar parts. However, more recently it has adapted its activities to satisfy the higher demand for crocodile-skin products.

Jaguar fangs, bones, and bone wine. Following four years of intelligence-led operations, ELI confirms that SA4 is a crucial player in the continued jaguar trade in the Bolivian region. According to informants within the network, SA4´s trafficking networks previously incorporated two Bolivian individuals. These individuals sourced jaguar fangs from local poachers, provided photos of the available products for the network to choose from, and then bought the chosen fangs on behalf of SA4. ELI discovered that one of these individuals was a known local middleman operating in the city of Santa Cruz and surrounding areas. This intermediary was previously identified for scouting jaguar products in locals´ houses all around the country. His business was also advertised by local media. ELI also discovered that SA4 has a stable working collaboration with a jaguar bones wine brewer, who provides jaguar fangs both to the network and direct clients.

Transcript from a conversation with a source:

Source: "I have some teeth still at home…The price depends on the size- they can be from 6cm to 10cm. The average price before was USD 200, but even a small one can sell easily at USD 600 in China. I have a good friend in Cochabamba who stocks a lot of teeth for me, and I also have many in my place here near the mining site."

Pictured: Jaguar skins and jaguar fangs offered to ELI's investigative team.

ELI discovered that upon procurement of the jaguar products, SA4 uses a known shipping courier to ship the products without them being checked. SA4 can exploit its contacts within international shipping services to facilitate its trades. Two different categories of clients were identified by ELI depending on the jaguar product commercialized. Larger jaguar skins and bones are generally bought by Chinese managers and bosses. Jaguar fangs are typically bought by workers because they are easier to disguise inside checked pieces of luggage or skin belts. The workers then have these fangs gilded with gold in China to make jewelry or pendants.

In 2022, it became increasingly difficult to smuggle jaguars and other wildlife products outside of Bolivia, however, many traffickers have adapted, identifying new smuggling routes across the land border of Bolivia with Brazil. A jaguar fang in Sao Paulo, Brazil can be sold for over $500 ($800 for a large fang).

Type 2: Environmental Crime Convergence

Illegal gold mining. ELI's data reveals that SA4 engages in multiple forms of environmental crime, including illegal gold mining. SA4 conducts its illegal mining activities in the Amazonian regions of Bolivia. The area is very close to one branch of the Amazon River. Informants within the network shared that the unauthorized mining is conducted with Chinese associates. According to these individuals, many other Chinese illegally dig gold in those areas. They then sell the gold in a small town nearby, for Bs (Bolivian) 351/gram. ELI also discovered patterns of corruption with government officials, in which SA4 is helping Chinese state-owned companies, like (name REDACTED), to secure big procurement contracts for managing mining sites and roads on behalf of China Rail. SA4 also engages in illegal logging, serving as a key member in the timber trade in the Pando and Beni provinces.

Type 3: Serious Crime Convergence

For years, the criminal network SA4 has been committing other serious crimes alongside its involvement in environmental crime and wildlife trafficking. ELI's investigations revealed that this network engages in money laundering, narco-trafficking, corruption, and the illegal casino business operating in Santa Cruz.

Money laundering. ELI discovered that the leader of SA4 runs a company officially registered in Bolivia in collaboration with another PoI outside of the network. This company specializes in construction trading [11], money laundering, and gold mining. In 2018, the network began to use this company to operate across Bolivia. The largest amount that the company has managed to launder was $3 million in one month. Informants shared that the average profit is 8-9% of the total amount laundered.

Illegal drug business. Verified intelligence confirmed that the leader of SA4 was previously investigated by authorities for his involvement in the illegal tobacco industry and narco-trafficking. More recently, ELI learned that SA4 is associated with a Chinese cocaine trafficking group in the city of (name REDACTED). In 2021, Chinese members of this group were arrested at the airport while trying to ship a package containing drugs to the UK. SA4 would bribe authorities to allow for their release. According to a source, the bribe amounted to about $100,000 per person.

Corruption. ELI's intelligence also revealed that SA4 is assisting Chinese state-owned companies, like (name REDACTED), to secure big procurement contracts for managing mining sites and roads. Informants confirmed that SA4 and its associates, who co-run the company, bribed a local politician and the indigenous village chief to obtain permission to illegally dig gold mines in the smaller river area around Rio Suapi and Rio Alto Beni. Together, they also bribed the police vice chief to ensure that the illegal casino business in Santa Cruz runs smoothly.

ELI's investigators and analysts also worked in collaboration to discover an existing WeChat group with over 386 Chinese members. This chat is used by traders and collaborators to quickly exchange information on a variety of topics, such as trafficking routes and police activity.

Intersection with activities of illegal casinos. According to sources and informants, the leader of SA4 has close relationships with the Fujian mafia in Bolivia. SA4 is a long-term partner of the Fujian mafia with one of the most ancient members of SA4 working in one of the mafia's establishments. The Fujian mafia has great influence in Bolivia and runs illegal casinos in Santa Cruz. Illegal casinos are a very profitable business and are carefully managed by the leaders to only admit Chinese customers. For safety reasons, the location of the casinos is changed every 6-8 months. As per ELI´s sources, setting up an illegal casino needs an initial investment of about $200,000 and ensures a profit of more than Bs (Bolivian currency) half a million to 3 million every 10-12 months, which amounts to around $72,411 – $434,469.

Type 4: Transnational Network Convergence

According to various sources, SA4´s network of collaborators and other criminal groups extends to China, including customs officials and Chinese-based traders. For example, some members of the network also worked with Customs in Xiamen (China). ELI discovered that in the past the Customs director was SA4´s direct associate and was able to facilitate the products' shipments to China. Furthermore, one of SA4's closest associates in China is a major trader, with several shops in the Asian region. He is one of the biggest players in the illegal trade of tiger, jaguar fangs, timber, as well as ivory sourced directly from Africa.

Informants also revealed that SA4 works with individual partners who provide services for the network. For example, it entertains a collaboration with a jaguar bone wine brewer, whose jaguar bone wine is highly popular among Chinese state-owned company employees and construction company managers. This individual has a long history of producing jaguar bone wine and is SA4´s regular supplier. He primarily sells to SA4, who then sells to Chinese nationals living in Bolivia and around South America. Many customers then bring the wine back to China.
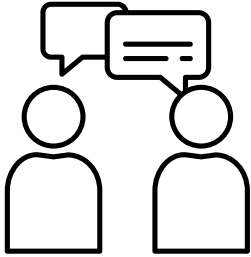
Transcript from ELI investigator and a source:

**ELI:** You were fine when you mailed over 100 teeth back last time? How come?

Source: "I knew the customs in Xiamen where I sent it."

ELI: So, you sent it directly to the director's office?

Source: "He was the one who picked it up. After he got it, my friend drove to Xiamen to pick it up."

ELI: So, you only send it to your friend. How about jaguar bones?

Source: "You can bring it back too. You can grind it to little ones like grain. You can bring it back. Like this much, a small bag."
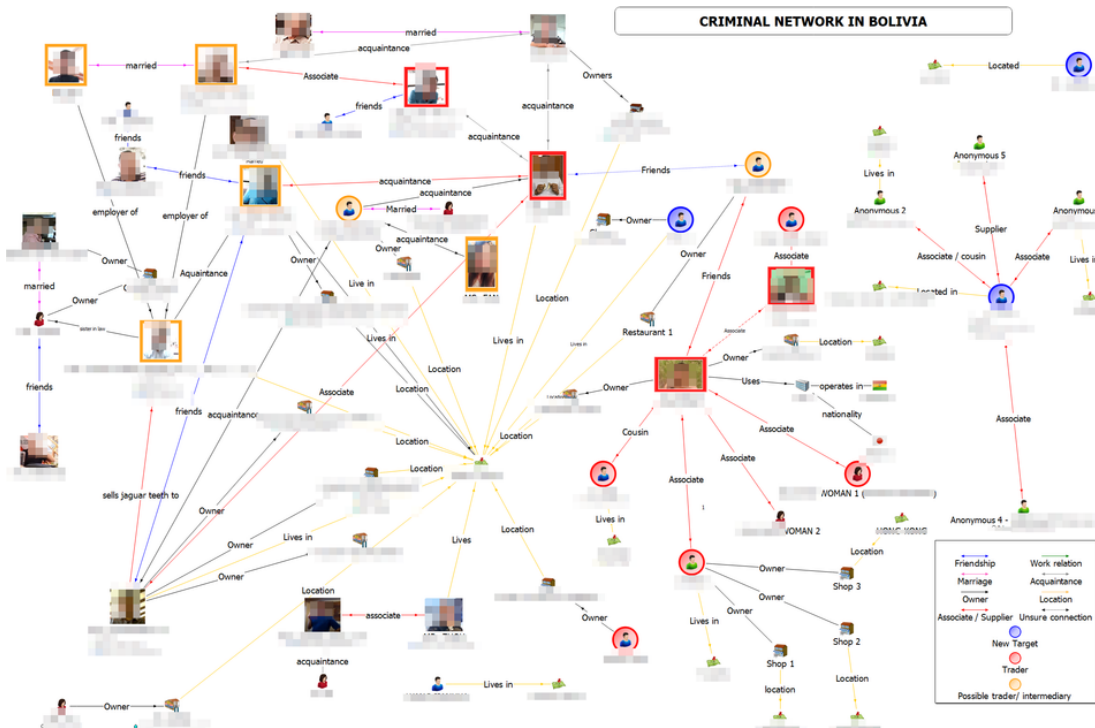
Pictured: Crime map of an international trafficking network based in Bolivia (Operation Jaguar).

Case Studies: 4 & 5

Geographic Regions: Suriname, Guyana, and Peru > China	Convergence Types: Species Convergence, Environmental Crime Convergence, Serious Crime Convergence, Transnational Network Convergence

Since 2017, ELI has been conducting intelligence-gathering activities in South America for various environmental and wildlife crime-related projects, including *Operation Jaguar,* a joint project with IUCN Netherlands and IFAW. With the financial support of the Dutch Postcode Lottery, *Operation Jaguar* is the most important intelligence-gathering operation on jaguar trafficking in Latin America.

The initial aim of *Operation Jaguar* was to identify and investigate jaguar trafficking networks in multiple South American countries, including Bolivia, Suriname, and Peru. ELI's intelligence-gathering activities were designed to investigate the illegal supply chain to unveil the dynamics underneath jaguar trafficking in the region, as well as to identify the main players, trafficking routes, and destinations. Furthermore, ELI aimed to engage in the capacity-building of local and international law enforcement agencies through the sharing of actionable intelligence regarding jaguar and wildlife trafficking.

Since the beginning of the activities, ELI has identified and unveiled over a dozen trafficking networks operating regionally and internationally in this region. ELI has shared Confidential Intelligence Briefs (CIBs) regarding these jaguar trafficking networks with several governmental and intergovernmental agencies.

As found in our other operations, ELI's species-oriented focus (in this case the jaguar) led to the discovery of a variety of converging criminal activities within these established and powerful transnational trafficking networks, often linked to transnational organized crime.
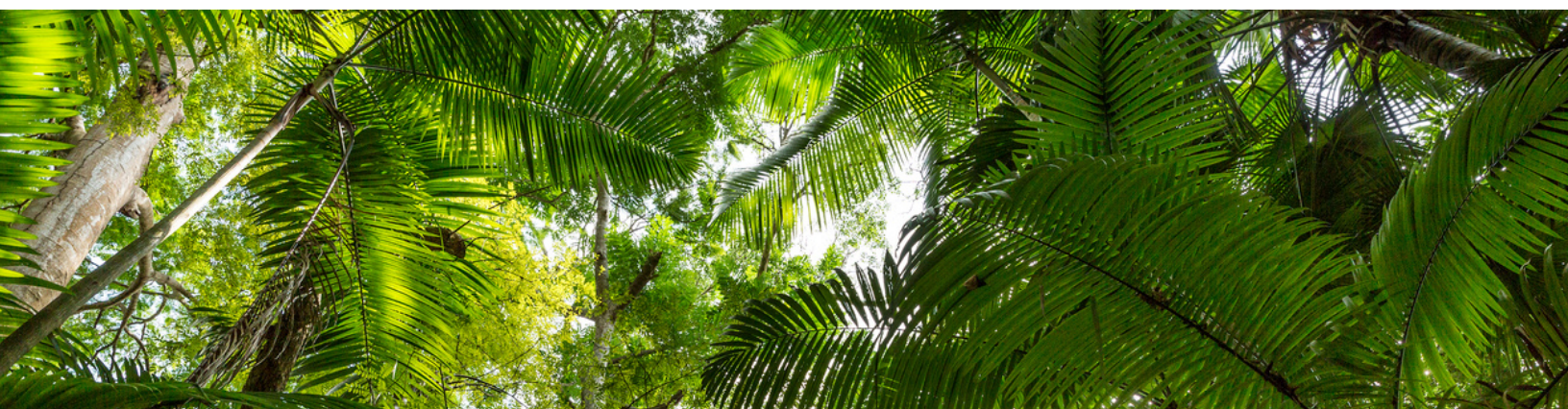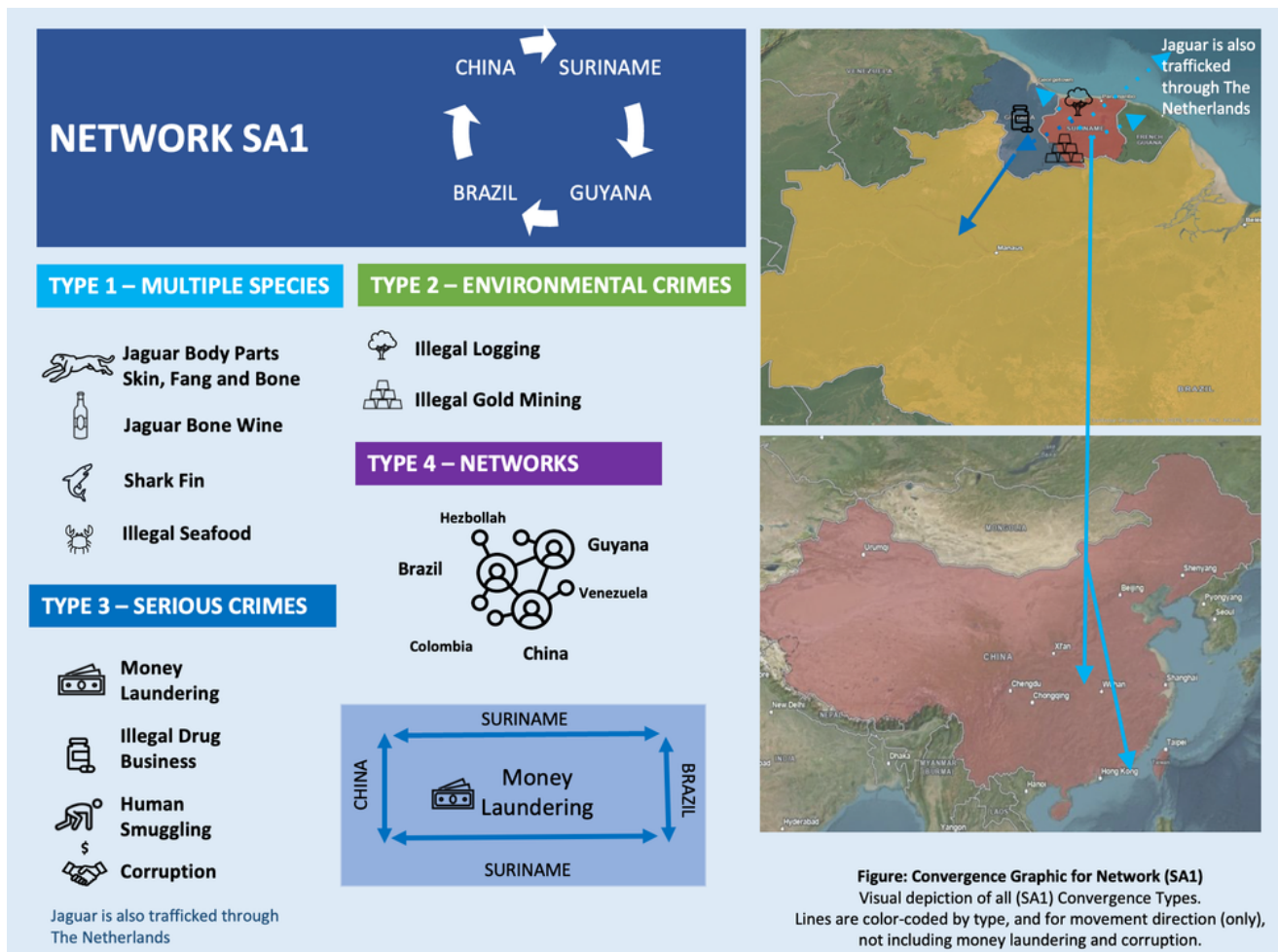
Case Study 4: Network SA1

The trafficking network SA1 is a multi-commodity criminal network composed of Chinese nationals operating from multiple countries in South America with its most important base in Suriname. ELI has been gathering information regarding SA1 for a few years, discovering that the network is more powerful and robust than initially expected. The network is deeply involved in wildlife crimes (jaguar parts, shark fins, and seafood trafficking), other environmental crimes such as illegal mining, and a variety of other serious crimes, such as money laundering and human smuggling. The network also has numerous connections with mafia groups and cartels.

The leader of this network is originally from mainland China and was affiliated with the Chinese mafia. He has several officially registered businesses in Suriname, which he uses to successfully launder money.

Crime Convergence Types Within SA1

Figure: Convergence Graphic for Network (SA1)
Visual depiction of all (SA1) Convergence Types.
Lines are color-coded by type, and for movement direction (only), not including money laundering and corruption.

Type 1: Multiple Species Convergence

As confirmed by ELI´s network of sources and informants, SA1 has been involved in trafficking jaguar parts, jaguar bone wine, shark fins, and other illegal marine products

Jaguar parts. SA1 has been sourcing, processing, and selling jaguar parts, including fangs and bones, for years. ELI uncovered that the mechanisms utilized by SA1 are different from those of typical jaguar trafficking networks investigated in the region. It is common practice in South America for high-level traffickers to source jaguar parts from those working, often illegally, in remote areas or mines. However, members of SA1 are distinct in their activities, as they often personally hunt jaguars and process the carcasses to eat the meat. They later use the bones to make jaguar bone wine.

A source explained that SA1 produces jaguar bone wine through its close relationship with a famous Chinese jaguar wine brewer in the region. This Chinese brewer easily obtains entire jaguar skeletons that are later processed to prepare jaguar bone wine and jelly. Once dried, the fangs are removed, and the bones are used to make wine. The fangs are then brought to China to be sold or given to friends as gifts.

SA1 smoothly smuggles jaguar wine and products across different parts of South America, including Guyana, Suriname, and French Guyana, by using boats through unchecked riverways. According to sources, borders can also be easily crossed by bribing customs. SA1 has established links with the police and Surinamese Customs, whom the network bribes to assist with the smuggling or to simply disregard their illicit activities. As reported by ELI´s sources, the availability of products has remained stable throughout the COVID-19 pandemic, as the network continues to have stock of jaguar fangs (raw and embellished with gold) to be sold. According to the traffickers, the trade in jaguar parts (especially bones) continues irrespective of the increased controls by the police. However, Chinese traffickers have adopted an increasingly careful approach and choose to maintain a low profile. Jaguar fangs can be sold in South America or can be shipped to China or Hong Kong. The price in China for a fang 10cm long can be above $10,000.
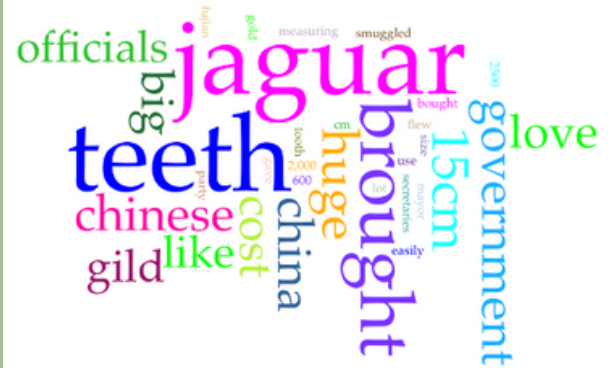
Shark fins. Intelligence regarding SA1 also revealed that the network is linked to other criminal networks and individual traders in the South American region who can provide a variety of products. By collaborating with a network based in Brazil (SA2), SA1 can provide 1-2 tons of shark fins per month, with the capacity to procure up to 37,600 sharks per year. [12] According to informants within the criminal network, the shark fins are sourced in Venezuela and the Caribbean. The fins are then smuggled from Suriname to Cambodia and then to China (via container).

Type 2: Environmental Crime Convergence

Illegal logging and illegal gold mining. ELI learned that SA1 is involved in illegal logging and illegal gold mining with the Chinese mafia, Venezuelan mafia, and Brazilian criminal groups. For example, SA1 collaborates with Brazilian groups to illegally log into the forest or work in the illegal gold mines in the mountains south of the Afobaka reservoir, near the Brazilian border. SA1 also has links with prominent entities that run the largest timber, gold, and stone businesses in Guyana.

Type 3: Serious Crime Convergence

ELI's intelligence confirms that SA1 has been involved in money laundering, narco-trafficking, drug cartel affiliation, human smuggling, and corruption for many years. ELI has also gathered evidence that one close collaborator of SA1 is involved in weapons trafficking.

Money laundering. ELI discovered that SA1 is one of the biggest money launderers in Suriname. The network can launder about half a million U.S. dollars per day. According to sources close to the network, SA1 can smuggle $8 million in cash by boat from Colombia to Suriname. According to members of SA1, another member of the network, who resides in Brazil, supervises the money laundering and bitcoin business, while also maintaining links with prominent individuals in China.

Narco-trafficking. SA1's connections to the Brazilian and Colombian cartels facilitate their involvement in narco-trafficking. The network also conducts this business with one of the main narco-trafficking bosses in Guyana. From ELI's findings, Suriname and Guyana are important transit points for cocaine smuggling to Europe and Brazil. According to the data we gathered from the sources, cocaine in Guyana and Suriname costs about $4,000/kg. The selling price in Hong Kong raises to $100,000/KG.

Corruption. ELI's findings indicate that corruption plays a critical role in facilitating SA1's activities. It was discovered that SA1 has established links with the Surinamese police and customs, whom the network bribes to assist in the smuggling process. All information suggests significant corruption within the governmental offices in Guyana and Suriname. Informants within the Chinese traders´ community confirmed the high level of corruption in Suriname. They can bribe customs officials to have the products shipped out of the country without any issues.

Human smuggling. ELI´s informants confirmed that the SA1 network hires Chinese workers (from China and South America) and smuggles them into the U.S. In the years 2020 and 2021, hundreds of Chinese from villages in Guangdong and the Fujian province were smuggled from China to the U.S. via Mexico. The smuggling fee per person is around RMB 13,000-14,000 ($20,500-$21,000). These individuals are forced to work in greenhouses growing marijuana.

Furthermore, establishing a garden house in the U.S. only requires about $300,000 in investments. Thus, SA1 can make back their money in as little as 3 months. Originating from the Fujian province in China, immigrants reach Suriname, where they are then directed to other Caribbean countries, and finally, reach their destination in the U.S. and Mexico. This costs around $55,000. Generally, the smugglers provide Malaysian passports to Chinese immigrants, who then insert their photos.

Type 4: Transnational Network Convergence

ELI discovered that the SA1 network is closely affiliated with mafia groups and drug cartels in Colombia and Brazil and has links to terrorist groups, including the Lebanese paramilitary group Hezbollah.

Mafia affiliation and nexus to terrorism. SA1's Brazilian partner is a mafia boss of Primeiro Comando da Capital (PCC), the biggest cartel in Brazil. This individual was very close to Suriname's former President's son, Dino Bouterse, (who is now serving 16 years in a U.S. prison for drugs and weapons trafficking, as well as for offering to help the Lebanese paramilitary group Hezbollah).

SA1 and the PCC Brazilian mafia boss work together to traffic weapons, smuggle drugs, and launder money. According to our informants, although this individual was arrested twice on the charges of possession of drugs and AK47s, he was released with the help of top government officials in Suriname. He is currently wanted by American and other authorities due to his involvement and influence in numerous criminal activities.

Collaboration with SA19 Network in Guyana and SA02 in Brazil. During its operations in and around Suriname, ELI discovered that SA1 is not the only established network operating in the region. ELI's team gathered first-hand evidence regarding the similarity and interconnectedness between the criminal dynamics of groups operating in Suriname and Guyana. This concept is highlighted through a discussion of a converging criminal ring called SA19.

SA19 is a complex network based in Guyana, involved in wildlife trafficking and money laundering. ELI's team is actively gathering intelligence regarding SA19, and for this reason, refrains from providing certain details of its members and methods. SA19 is involved in multiple environmental crimes (Convergence Type 2), acting as a facilitator in activities, such as illegal logging, mining, and land appropriation. SA19 is also involved in other serious crimes (Convergence Type 3), such as corruption, bribery, and narco-trafficking.

As a country, Guyana has increasingly attracted foreign investments, particularly from China. Chinese banks have loaned billions of dollars to the Guyanese government and entities to promote and fund infrastructure works managed by Chinese state-owned enterprises. Some of these infrastructure projects take place in indigenous territories, including portions of the rainforest and other lands rich in biodiversity. Many of these projects are threatening the livelihoods of local communities and destroying the natural world.

China's presence in the country also raises the issue of indigenous land appropriation and corruption within Guyanese governmental entities. Mining concessions have been granted by Guyanese authorities in territories that should have been considered legally protected. Through a source working in the SA19 network, the mechanism for concessions and foreign investments in the region was discovered. Furthermore, ELI's intelligence also revealed that Chinese enterprises wanting to invest in Suriname and Guyana utilize the services of professional money launderers who can circumvent China´s strict rules on money transfers outside the country. The method used is called "fei-chien" ("Flying money" in Chinese).


Pictured: A community area of the Yurayaco Indigenous land in Colombia taken during our team's fieldwork.

Pictured: A protected indigenous area in Colombia that is being encroached upon by illegal ranches.

The SA01 Network also collaborates with the SA02 network in Brazil, run by an individual who is from Hong Kong or Shenzhen. The operators based in Guyana are all Cantonese. They are based in Guyana as the shark fin trade is easier and there are fewer regulations. According to ELI's sources, sharks are fished in the waters close to Guyana and then transported to the mainland before being shipped to China. Traffickers normally use Panama as a transit point for their illegal goods.
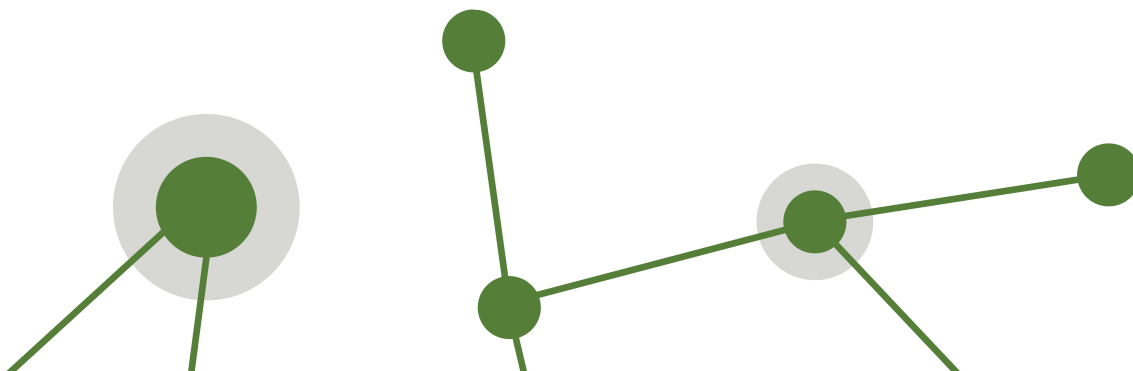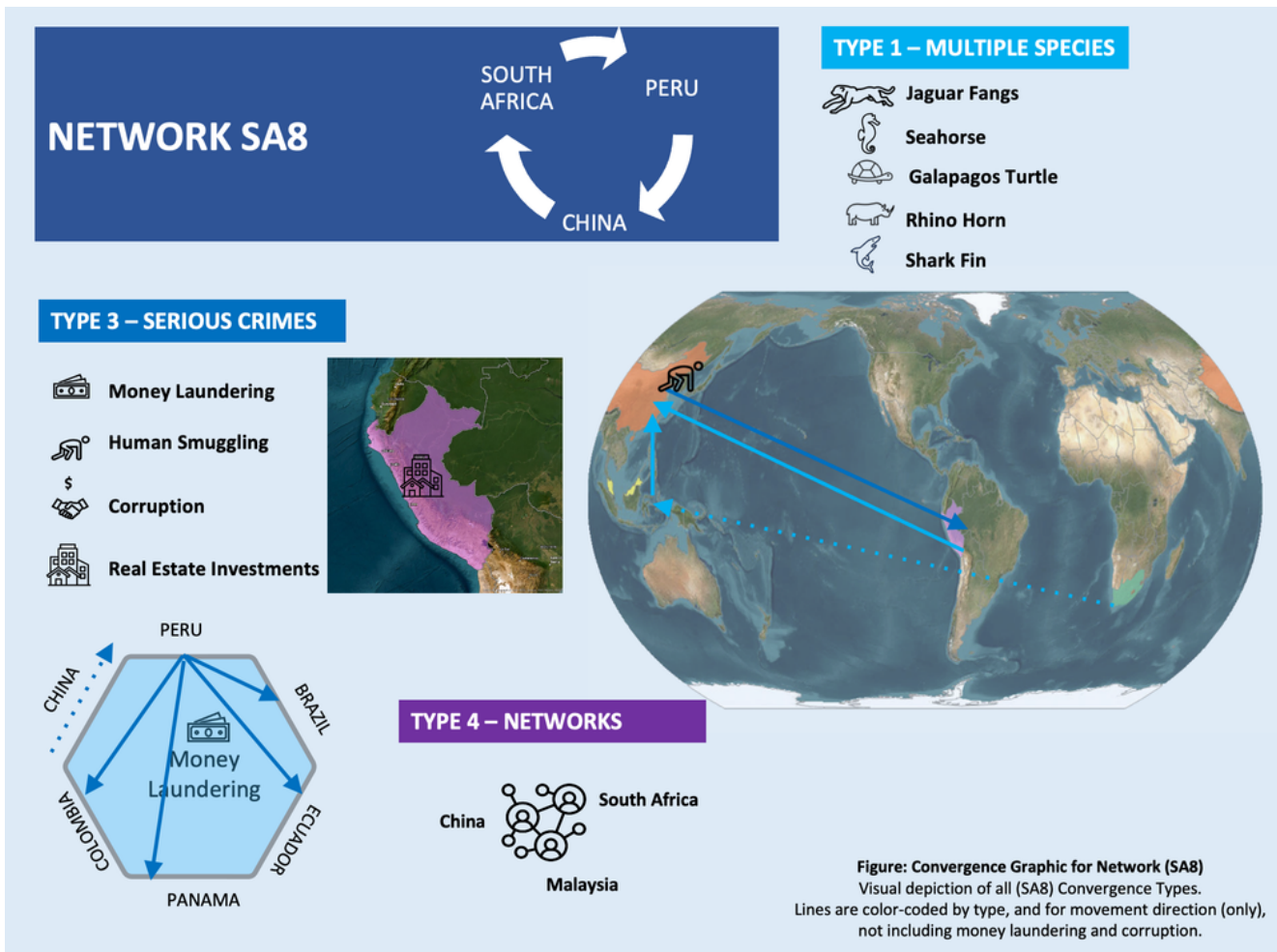
Case Study 5: Network SA8

SA8 is a multi-commodities and multi-crimes criminal network based in Peru and operating transnationally from South America to Asia. SA8 is composed of Chinese nationals and some South American members. It also has associates who work in South America and destination countries, including China and other Asian countries, such as Malaysia. Over the past four years, ELI's intelligence regarding SA8 shows that the activities conducted by this network span from wildlife and seafood trafficking to money laundering, corruption, and passport counterfeiting.

The leader of SA8 is a Chinese national who also has American and Ecuadorian visas. He is deemed an expert in the illegal wildlife trade. According to various sources, he comes from a very poor family in China, and his origins make him very determined to be successful. He is reported to be relentless in his quest for wealth.

Crime Convergence Types Within SA8

Figure: Convergence Graphic for Network (SA8)
Visual depiction of all (SA8) Convergence Types.
Lines are color-coded by type, and for movement direction (only),
not including money laundering and corruption.

Type 1: Multiple Species Convergence

SA8 has been involved in the illegal wildlife trade for many years, with a focus on jaguar parts, shark fins, seahorses, and live turtles from the Galapagos. SA8 network has the connections, links, and capabilities to ship every sort of illegal goods both by air and by sea.

Jaguar parts. SA8 is a very successful jaguar parts trafficking network, serving as one of the largest sources of jaguar fangs in Latin America. According to sources, the network partners with another criminal group operating in the region, which provides SA8 with fangs by sourcing directly from local communities living in remote regions. After receiving the jaguar fangs, SA8 acts as a second tier-seller, smuggling inside and outside South America, mostly towards China.

ELI discovered that SA8 has been rapidly increasing jaguar bone wine sales since the beginning of the COVID-19 pandemic. A particularly sought-after product is jaguar bone wine marinated with seahorses. This product is in high demand among Peruvian and South American Chinese nationals. This animal product is very profitable, as it can be sold locally in Latin America, without the risks associated with smuggling to Asia. SA8 typically smuggles jaguar fangs alongside other products using large fishing boats of 1,000 tons. However, when smuggled by air, the jaguar fangs are normally hidden in luggage. To avoid x-rays and scans, jaguar fangs are generally wrapped into many layers of plastic paper.

Galapagos turtles. ELI has video evidence that SA8 smuggles live Galapagos turtles. Collaborators in China keep the animals on designated premises until they are ready to be shipped to the final buyers.

Seahorses. SA8 is a major smuggler of seahorses in the region. According to ELI's sources, SA8 can ship large amounts of seahorses, together with other seafood products.

Pictured: Photographic evidence gathered by ELI's investigative team of dried seahorses.

Rhino horn. As a multi-commodity international trafficking network, SA8 is also able to traffic non-native illegal wildlife products such as rhino horns. They are in contact with other trafficking networks in South Africa, Malaysia, and other Asian countries. SA8 offers rhino horns, both whole and in pieces, to their clients in China and other Asian countries. According to a source, a collaborator based in South Africa has enormous quantities in supply, ready to be shipped upon request. Chinese and Malaysian associates oversee the transportation of the horns. According to the same source, the preferred smuggling route goes from Africa to Thailand to Myanmar (transit or destination), and mainland China.

Shark fins. SA8 has been smuggling shark fins for years. Several informants confirmed that SA8 stores large quantities of fins that are readily available upon request. The criminal network can ship at least one 40 ft long shipping container to Asia each month. According to biologists, this results in the fishing and trafficking of up to 490,000 sharks/year.

ELI´s informants revealed that at least three shipping companies in the region compete to control the smuggling/shipping business. Big companies do not take the risk of smuggling large amounts of illegal goods; therefore, smugglers use smaller companies, which manage no more than 10 ships. The same smuggling method is also used by wealthy Chinese traders and big businessmen residing in China, who make use of trusted subordinates in loco to organize the shipment from Peru. Once arrived at the destination, the illegal goods are rapidly moved to warehouses, waiting to be picked up by the networks' associates operating in mainland China.

Type 3: Serious Crime Convergence

The criminal network SA8 has been committing serious crimes alongside wildlife trafficking for years. According to the data collected by ELI from multiple sources, the group has been involved in money laundering, human smuggling (linked to counterfeiting documents), and corruption.

Money laundering. The intelligence gathered by ELI during the past four years confirms SA8´s involvement in money laundering. As a result of the increased difficulties in the transnational shipping of illegal wildlife products due to the COVID-19 pandemic, the network focused more on money laundering and the forgery of identity documents. This is a clear example of the adaptability of these criminal networks and the diversification of their illicit activities. As the global landscape changes, these networks can quickly shift from one commodity to another and from one crime type to another. Thus, the fluid nature of their criminal activities ensures their continued prosperity, while also making it difficult for law enforcement and government agencies to effectively target these networks.

Sources also confirmed that SA8 recently made some real estate investments with the plan to convert the properties to retail stores that will serve as fronts from which they can launder money. According to sources, SA8 can launder up to $1 million per day. In 2020, SA8 allegedly laundered over $78 million in Peru. ELI discovered that SA8, through a trusted network of collaborators, also provides shadow banking services for customers needing to send money from China to Ecuador, Colombia, Brazil, and Panama. According to sources, SA8 is exploring newer, faster, and safer methods to launder money, such as cryptocurrencies like USDT.

Human smuggling. SA8 is involved in human smuggling by allegedly providing authentic Ecuadorian passports, complete with a full name, to Chinese businessmen and officials who are on the run in Peru and South America. Sources explained that it is relatively easy to obtain these local passports, with SA8 being able to provide a new identity within four months. According to a source, the price is $30,000.

Corruption. According to sources, SA8 has relationships with corrupt members of the Chinese diplomatic corps in Peru, including individuals allegedly involved in wildlife trafficking and other illegal activities.

Type 4: Transnational Network Convergence

SA8 has powerful connections within South America and abroad. ELI discovered that SA8 collaborates with another established criminal ring (SA9) in South America, which serves as a supplier of jaguar parts. SA8 often offers SA9 assistance with money laundering issues, operating as a shadow bank to facilitate money transfers. SA8 also has a collaborator in Malaysia who oversees the wildlife trafficking to Southeast Asia and China and operates as a connector with Africa, procuring other illegal wildlife products such as rhino horn and ivory. He is a professional smuggler with activities all over the world. He specializes in providing a variety of wildlife from Asia and Africa to China, United Arab Emirates, and the Middle East. Through this individual, SA8 developed a connection to the Middle East, especially with rich buyers and traders in the region. Finally, SA8 naturally has many collaborators in mainland China, who help with the stocking and distribution of the products.

Discussion and Recommendations

Executive Summary and Recommendations

Environmental crime causes political and socio-economic damage far beyond the time and location of initial violations. The power and sophistication of the actors involved also pose serious security concerns for the international community. All of these harms are worsened by the inability of state agencies to address them. As this section discusses, officials do not prioritize environmental crime and law enforcement units lack needed training, personnel, and material support. The global deterioration of democracy, marked by decreasing accountability and judicial independence, aggravates this set of weaknesses.

Based on its description of these deep-rooted conditions, this section proposes specific and feasible ways to tackle them. In particular, we recommend that states augment their organized crime agencies; empower independent prosecutors to engage in proactive and systematic intelligence gathering and analysis; mandate far broader inter-agency data sharing; and train specialized police on the ground to identify local TOC networks and convergence hotspots. Together, such approaches will then enable officials to indict offenders for other crimes in which evidence is more easily acquired, such as forced labor and money laundering. Environmental crimes are extremely difficult to prosecute, as discussed below, and the small percent that are prosecuted rarely lead to punishments that are proportional to the harm, reflect the wider forms of criminality involved, or are strong enough to be deterrents. Activists in Peru, for example, argue that most illegal gold mining syndicates can be most easily prosecuted for labor abuses. These efforts can and should also draw on international, regional, and national legislation like the U.S. Lacey Act, which has been used to fight environmental crime in Brazil.

The diffusion of benefits from these strategies will further strengthen them. In particular, the recommendations outlined here will increase the likelihood of identifying and disrupting criminal networks, in part by strengthening citizen cooperation in identifying patterns of environmental crime.

They will also directly support the U.S. National Security Strategy and its implementation, such as the U.S. military's Operation Southern Cross deployment and the 2021 Tradewinds Operation, which addressed how convergence has spurred the proliferation of illegal supply lines in the Caribbean Basin, such as cocaine transport by ships engaged in IUU fishing. This report also boosts efforts by international organizations to develop a draft Protocol under UNTOC that proposes to criminalize the intentional illicit trafficking of wild fauna and flora specimens. Specifically, it provides support for this reform, which should (a) incorporate provisions on the convergence of wildlife crime and other serious crimes; (b) create the framework for mutual legal cooperation between international partners; and (c) offer definitional precision to key legal terms such as "trafficking", "wildlife organized crime", and "convergence." This approach also draws on the exponentially increasing potential of data mining and sharing, which also serves as one of the quickest and most effective ways to reverse fragmentation among national and international enforcement agencies.

In short, the paradigm of convergence opens up a wide realm of effective responses and benefits. To present them in a way that most directly leads to specific policies, this section focuses on three key areas: structure, movement, and enforcement.

I. Structure

The transnational nature of the criminal networks presented in this report's case studies is critical in understanding the significance of ELI's convergence approach. In particular, ELI's intelligence provides evidence that the Transnational Organized Criminal Groups (TOCGs) underlying environmental crime are indictable for committing international environmental and wildlife crimes, as well as a range of other serious crimes. TOCGs are self-perpetuating associations of individuals who operate by illegal means to obtain economic gain across geographical, cultural, social, and linguistic boundaries. Their ever-changing activities adapt to global markets, shift their modalities, and spawn new forms of crime. Those activities span across land, sea air, and cyberspace by strategically exploiting developments in technology, communication, transportation, infrastructure, human conflicts, and natural resource extraction (Luna, 2013; Miklaucic & Brewer, 2013; Stavridis, 2013). These conditions have stymied the United Nations Convention on Transnational Organized Crime (UNTOC) from establishing a formal definition of TOGCs, in turn preventing wider applicability to new crime types that are rapidly emerging. So far, only the following criteria have been established by UNTOC to assist in identifying TOCGs and their activities:

1. Existence of a structured group of three or more persons acting in concert to commit one or more serious crimes [...] to obtain a financial benefit." [13]
2. "Serious crime" shall mean conduct constituting an offense punishable by a maximum deprivation of liberty of at least four years or a more serious penalty." [14]
3. The individuals form a group that appears "structured", as per UNTOC definition: [15] they seem solidly established, non-random and members seem to have roles commonly attributes (albeit not "formally defined").
4. These criminals make use of collaborative links and bribery. Some have diverse business activities in which they use a cover or obtain additional income to invest in illegal activities.
5. The offense is transnational in nature, [16] because it entails multiple locations: a) the preparation and planning take place in a state and the criminal activity later continues in a different one; b) in some instances, international shipping services are used (such as DHL); and c) networks are made up of individuals engaging in criminal activities in more than one state.

Together, these attributes regard TOCGs as encompassing all profit-motivated serious criminal networks engaging in a variety of illicit activities with international implications. This transnational structure of these groups and their supply chains serve as the foundation for crime convergence, as illicit networks adapt to changing markets and circumvent the countermeasures of national governments and international organizations (Starvridis, 2013). Like TOC, environmental crime networks are quickly making their hierarchical and often closed structures more flexible and inclusive (for work on traditional structures, see Abedinsky, 2010; Albanese, 2014). Because it generally takes place in more expansive geographic areas with less state monitoring, environmental crime often spearheads this transition. One approach to speeding the process is convergence with the full spectrum of legal business. At one end, large companies routinely collaborate with organized crime (OC), such as by buying their products (directly or through middlemen) or paying them "fees" for access to specific regions or markets. In Central America, multinational transport companies account for extortion fees as a routine expense. On the other end, micro, small, and medium-sized enterprises are often forced into collaboration with OC as a result of debt, limited opportunities, and pressure from businesses that control local supply lines. A particularly lucrative business connection for OC is the burgeoning private security sector, which is up to five times larger than most countries' police forces. Poorly regulated, these businesses are well-positioned to store, sell, and traffic items, as well as nearly any kind of contraband. Such collaboration has led to particularly effective and destructive crimes, such as narco-ranching, which pulls in large and small firms at nearly every point of the production chain.

A parallel strategic convergence is with citizens. As with the business sector, expanding OC-citizen relations on multiple dimensions make operations both flexible and wide-ranging. On one level is the widening range of armed citizen-based enforcement entities that cooperate with OC, such as community policing groups, neighborhood watches, vigilante groups, and for-hire rural militias. Community policing groups, for example, earn kickbacks for allowing illegal construction or dumping in local streams. A second dimension is a labor pool being expanded as OC groups hire large numbers of itinerant workers with contracts for specialized services, from indigenous language proficiency to document forgery. These workers are temporary, replaceable, and expendable. This contract-based labor structure also helps to divide operations into discreet and geographically bound nodes, such as rural area recruiters and customs facility officers, which connect at limited points and thus maximize the flexibility to absorb disruptions like arrests or natural disasters (Fiorentini and Pelzman, 2020; Zhang, 2014). In an example of how different convergence patterns fuel each other, the combination of climate change and environmental destruction – along with the failure of the state to address both conditions – force marginalized groups into the hands of local OC networks. In Northwest Honduras, for example, rising oceans, hurricanes, and expulsion by state-baked landowners from the highlands to which they fled have left marginalized groups with few options for survival other than the area's TOCGs.

Politics provides many additional opportunities for convergence. When national, regional, and local officials are from different parties, already existing differences in priorities become even more politicized and create a bigger opening for OC. For example, Corpoamazonia, the regional body that oversees environmental policies over three of Colombia's Amazon departments (provinces), ordered the closing of over 100 kilometers of roads because they facilitated OC, land grabbing, and unauthorized access to national protected areas. Yet, nearly all local mayors, backed by voters, strongly protested this policy with the argument that the roads were the only way to maintain economic viability (Ortiz and Cabrera, 2020). Thus, OC perversely ended up on the popular side of environmental policy and sustainable development.

Together, this convergence with the private sector and civil society has enabled environmental TOC to connect traditionally separate spheres of criminality, further fueling convergence. For example, local crime groups engaged in predatory crimes that do not require much organization, such as carjacking, are increasingly collaborative with more elaborate transnational crimes such as narco-trafficking. Urban gangs recruit "supply" youth as lookouts on drug routes, for instance, while local loggers build forest airstrips for small narco-planes.

II. Enforcement

A second area of policy action revealed by convergence is the state's enforcement and criminal justice system. National and sub-national laws and regulations to detect, prevent, and punish environmental damages are extensive, ranging from controls of materials used by OC groups; defense of protected areas (e.g. nature reserves, areas for limited extraction); and transit regulations (e.g. permits for use of terrestrial, fluvial, and air routes). But they are poorly enforced at each stage of the enforcement chain: policing, prosecution, and adjudication.

The first stage is identifying potential environmental crimes from information gathered through local policing and alerts of possible illegal activity. But most of the information remains unreported because of a lack of citizen trust in enforcement officers, reliable communication channels, and awareness of the law itself. Activists lack physical protection from chronic threats, and many landowners and indigenous groups do not report incursions on their land because they may be arrested for complicity. Lacking the presence needed to overcome these deficiencies, local enforcement officers struggle to identify the initial catalysts of criminal activity. For organized illegal logging, those catalysts include ranching, mining, extraction, agriculture, and road building – each divided into a range of activities and responsive to different sets of laws. If there is uncertainty over the legal status of the land on which those activities take place, officers are even less able to detect and report possible violations.

Pictured: Through capacity building, training events, and collaboration, ELI supports law enforcement and governmental authorities around the world in addressing environmental crime convergence.

(left) ELI's Executive Director, Andrea Crosta, with former Head of the Mexican Navy, Admiral Vidal Francisco Soberón.

(right) Capacity building at a U.S. Homeland Security event.

These limits on policing have led to the increasing use of military operations against OC. While effective at short-term goals like dismantling illegal settlements, this approach inflames local tensions and displaces crime to more elusive areas, as discussed below (Duffy et al., 2019), and is seen in cases such as Perú's 2019 military operation against gold mining in Madre de Dios. Such outcomes then widen community-state distrust and lead citizens to turn to TOC groups, who can provide the security and income they need. Such patterns then worsen violent crime, armed conflict, refugee flows, and politicization of security agencies (see Buhaug 2008, Downey 2010). On the flip side are the advantages to military action against environmental crime, such as strong administrative capacity, specialized officers, and integration with national security policy. [17] Brazil's military, for example, trains officials from around the region at the Center for Integration and Improvement in Environmental Police (CIAPA: Centro de Integração e Aperfeiçoamento em Policia Ambiental). Even more promising are Colombia's Burbujas Ambientales. Under the auspices of the military, the Burbujas bring together military units with the police, prosecutors, NGOs, and indigenous federations. They have 32 control posts to facilitate on-the-ground investigation and meet biweekly to report on their different efforts. When such efforts lead to specific crime data, it can boost further institutional support. For example, through its enforcement efforts Colombia was able to report the specific numbers of birds, mammals, reptiles, and plant specimens seized from offenders in 2021. As a response, at the end of the year, it launched a new program with 50 officers to probe environmental crimes and 50 to collect intelligence.

Such conditions mean that few cases reach the second stage of enforcement: investigating and prosecuting crimes through the prosecutor's office or other authorized agency. In most countries, prosecutors lack sufficient personnel trained in environmental crime, access to the remote areas where many environmentally harmful crimes occur, and laboratories (such as water and chemicals) to test the evidence they do collect. Like the police, prosecutors need to understand the relevant laws and regulations of the report they investigate. In addition, they also need to interpret a wide range of ever-changing regulations on land use, such as environmental impact studies, indigenous area permissions, limited forest production, and extraction in protected areas. Doubts over compliance with such regulations – such as bribes to speed up approval, outright falsification (such as by saying timber was extracted from a permitted area); intimidation of indigenous populations to approve environmental impact reports; and submission of outdated road mapping – further complicates investigation and prosecution.

At the third stage, adjudication, judges or other authorized officials lack the training, time, and jurisprudence needed to rule on environmental cases, much less understanding their connection to TOC. In particular, many statutes they cite are ambiguous, incomplete, or outdated. In the Amazon, for example, many types of alluvial forests are not explicitly covered by logging prohibitions, and regulations have not kept up with the increasing damage to the river and wetland hydrogeomorphology. Compounding this difficulty is the fact that environmental regulations are spread through at least 12 specialized categories of the law more than perhaps any other field. Many of those laws – such as for food sovereignty – are introduced or reformed without adequate attention to impacts on other laws. Most arrests, in addition, are for low-level and expendable workers in OC groups, often with quantities just under the limit needed for trial. When major environmental cases do get to trial, criminal law's high level of proof on evidence and culpability makes it more difficult than in other areas of law to demonstrate a connection between an offending action or substance, such as pollutants in a body of water, with the individual or entity on trial. Chronically unable to meet criminal law's standards, judges then usually hand down administrative and civil law sanctions in environmental cases – such as fines, confiscations, permit suspensions, or restoration of damaged areas – which can either be easily skirted by organized crime groups or come at a price cheaper than the benefits of their offenses.

Because of organized crime's complexity, as described above, even the rare convictions have limited impacts. In Brazil, Environment Minister Ricardo Salles quit in June 2021 under the cloud of a criminal investigation into involvement with illegal wood exports, which cut short investigations into the larger OC environmental networks involved. [18] Such conditions then come full circle back to the initial stage of the enforcement chain by making citizens and local officials at the first stage more reluctant to engage in the process.

Nearly every obstacle at each stage of the enforcement chain has been worsened amid a democratic deterioration in every world region. As agencies that uphold laws are weakened, such as constitutional courts and ombudsman, OC is emboldened. Along with the politicization of police agencies and courts, the sharpening political divergence among national and regional officials rob enforcement officials of the power, autonomy, and resources to fight local OC activity. They also aggravate criminogenic asymmetries, such as gaps in policy responses at different levels and time gaps between policy adaptation and implementation (see Passas, 1998; Jauhari and Meliala, 2021).

Addressing organized environmental crime must therefore pay close attention to the independence and functioning of national judiciaries. First, judges must be free from interference not only by executive officials but by any external entity, such as private actors, as well as internal units, such as national or higher-level courts. Second, judiciaries must have police, prosecutors, and judges with the capacity, training, and cooperative mechanisms to fully investigate and prosecute environmental and other crimes. Third, judiciaries must be empowered to address all the sub-fields in civil, commercial, and criminal law. Land disputes are a perennial judicial matter around the world, for example, and require a judiciary able to address regulatory areas ranging from titling to water. When rulings are made, third, they must be enforced and applied without unreasonable delays or unjustified actions such as expropriation of property. Finally, because no judiciary can cover the demands on it, judicial capacity also means being able to reach every sector of the population.

Each of those elements can be measured by specific metrics, as done most broadly by organizations such as Freedom House and Transparency International. Because of its importance, the rule of law paradigm is now being applied to the environment, often under the concept of an "environmental rule of law," which "holds all entities equally accountable to publicly promulgated, independently adjudicated laws that are consistent with international norms and standards for sustaining the planet. Environmental rule of law integrates critical environmental needs with the elements of rule of law, thus creating a foundation for environmental governance that protects rights and enforces fundamental obligations." (UNEP and ELI, 2016). In 2019, the UN published the first global report comparatively assessing the environmental rule of law in countries around the world (UNEP, 2019).

Two of many examples illustrate the importance of the rule of law to halt convergence. One is the destructive power of unaccountable executives. In 2016, the Venezuelan government established the Zona de Desarrollo Estratégico Nacional Arco Minero del Orinoco (AMO), an area covering 12.2% of the national territory with over 200 million tons of bauxite and 44 million tons of gold and diamonds within humid forests, savannah with fragile topsoil, critical water sources, and 36 protected areas. With no judicial oversight, the Decree authorized involving multi-million-dollar transnational contracts and state investments violating constitutional article 129 that "all activities with the potential to generate damage to ecosystems must be previously accompanied by studies of environmental and socio-cultural impact." The AMO's indigenous peoples were not consulted, and their ongoing objections have been ignored. And even though the project's large-scale open-sky mining triggered extensive deforestation and illegal mining, AMO continued to expand, such as through 2020's Resolution 0010 to widen fluvial extraction. As before, the resolution lacked public input (Observatorio de Ecología Política, 2020) and included exemptions from major environmental regulations. It also solidified collaboration between miners and the armed forces, which are responsible for environmental protection. In 2022, an NGO coalition reported how the area's gold business is dominated by military companies and irregular armed groups that cooperate with them. Although the AMO is an extreme example, it shows how a collapsing rule of law paves the way for executives to implement policies that spin-off additional environmental crimes.

Increased authorities for the military to fight environmental issues – from emergency rescues to long-term agriculture programs – also fuel convergence. One of the hallmarks of democratic deterioration is the growing tendency of national officials to give greater autonomy to local-level agencies in return for political loyalty and to track anti-regime activity among citizens. This usually means informal collaboration between individuals or groups of police officers with local criminal networks, altering police laws and hierarchies to create special units, facilitating mission creep, encouraging economic autonomy, and allying with informal armed groups. Nicaragua's police law (Law 872), for example, permits units to form their own "businesses," which are a way of coopting them into the Sandinista regime. In Honduras, special units like the Tigres or the military police (Policía Militar del Orden Público), became increasingly corrupt, powerful, and abusive as they acquire new authorities in investigation and repression.

A second example of the rule of law's critical role is the erosive power of corruption. Around the world, the deterioration of democracy has allowed corruption to spread to an expanding range of acts, actors, and sectors. The many forms of corruption – bribery, extortion, exchange of favors, nepotism, cronyism, fraud, embezzlement, theft, kleptocracy, influence peddling, and conflicts of interest (see Rose-Ackerman et al., 2016; World Bank, 1997) – involve actors ranging from citizens to Presidents, and sectors ranging from political parties and judiciaries to private business. [19] The impacts of this corruption on the environment are both profound and understudied. Studies using the comprehensive environmental quality indicator (EPI) and panel VAR analysis provide ways to detect and measure that relationship (Lisciandra and Migliardo, 2017). Most of those studies found statistically significant relationships between corruption and environmental violations. [20] Related studies show a connection between regulations and corruption. When regulations increase or become stricter, in particular, both public and private enterprises tend to shift activities into those controlled by TOCGs (see Balsalobre-Lorente et al., 2019; Huynh and Hoang, 2019; Chaudhuri and Mukhopadhyay, 2006; Baksi and Bose, 2010).
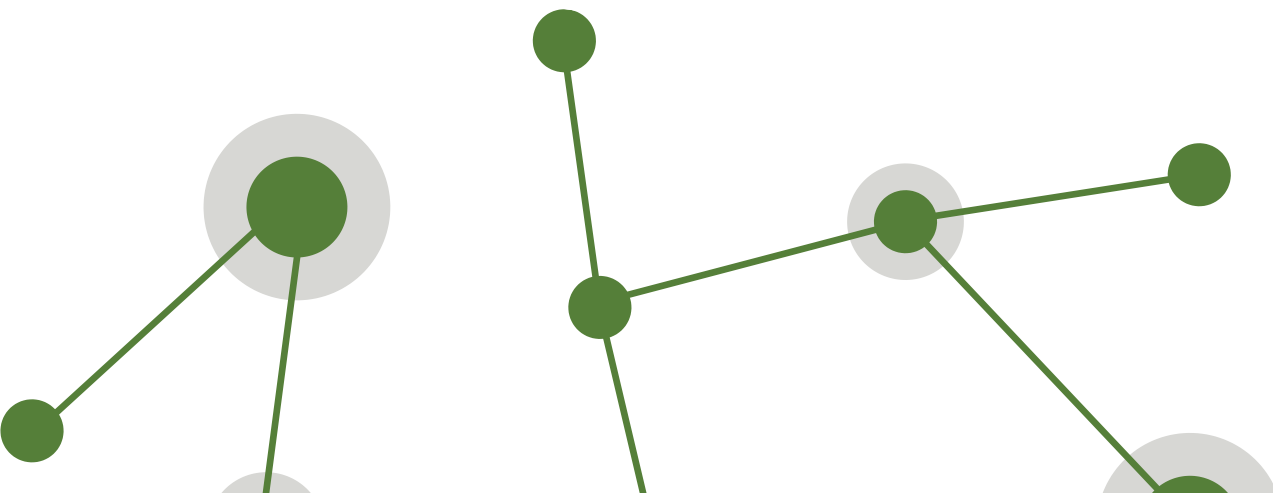
Pictured: Photos from our team's fieldwork of various types of enforcement agencies across Latin America involved In fighting environmental crime. (left) a Peruvian forestry control station; (middle) a placard to the military's Burbuj Ambiental in Colombia; (right) the entrance to the military's "Jungle Brigade" in Colombia

III. Movement

Another policy area for effective policy interventions is on the increasingly seamless movement of organized crime's instruments, from raw materials and heavy equipment to money and finished goods. The majority of these materials are subject to government controls. But their status of relative legality, in which they are legal under restricted circumstances or limited quantities, stymies effective enforcement. Mercury and chainsaws are used primarily for illegal activities, for example, but are easily moved in small amounts and through legitimate businesses as fronts. By revealing how criminal groups acquire, transport, and share these materials, this report's convergence paradigm helps develop effective interventions centered on tracking these items and cutting off criminal access to them.

The majority of materials used by organized crime, such as mercury and chainsaws, means that they are subject to government control. But their status of relative legality, in which they are legal under restricted circumstances, combined with the thin state presence in remote areas, prevents meaningful enforcement. In addition, OC groups purposely flood areas with outsiders who settle on or purchase lands with uncertain titling (see International Crisis Group 2021). Officials posted in key localities often lack the data, guidelines, and legal training to ascertain whether the types and quantity of material they find are permitted. On border areas, for example, officials are unable to determine whether a cache of suspect wood comes from protected species, is above the allotted harvest, extracted outside concession boundaries, originates in prohibited areas, or if permits have been doctored. In addition, materials that are not subject to control, such as gasoline, are often controlled and distributed by organized crime groups.

And when enforcement actions are taken – such as inspections and seizures – officials lack the capacity to trace the location, time, and size back to their source locations or transit networks. Similar weaknesses plague the movement of products out of environmental crime hotspots. For example, in the Amazon Basin's sawmill zones there is no monitoring of rules over the types and volume of timber that arrives, the conditions and practices in the sawmills, and the volume and size of finished planks they produce. Forestry product inspection stations along the highways are understaffed, and, many argue, function more to collect bribes than to conduct vehicular inspections. Each of those enforcement gaps is an opportunity for convergence.

Control over less tangible products, such as money, is even weaker. Though every country has laws to control money flows and investments in legal businesses, those laws are easily evaded or directly violated. On one level, regulations for monitoring cellular financial platforms (e.g. Tigomoney) have been overwhelmed by practices such as the ease of selling phone chips and resistance by cell phone companies to share consumer data. On another level, bank personnel are commonly intimidated into breaking rules on deposit limits and identification, such as requirements for additional scrutiny of large deposits by elected officials' family members. Other crimes are not tracked well. For example, although the crime of testaferrato (of using a name in a contract, loan, or other official document in the place of the actual contractor) is rampant, few countries have documented the extent of this practice. The difficulties of monitoring money reflect as well as undermine the broader measurement of OC activity. For example, the extent and value of illegal gold mining has been reliably tracked by monitoring of prices among traders in mining areas, but the expansion in options for financial and physical movement have made this measurement far less reliable. In cases involving quick distribution of monies, such as for health and climate crises, organized crime groups often siphon off millions of dollars in aid – as seen after destructive hurricanes in Central America in 2010 and 2021.

Pictured: Photo from our team's fieldwork of a line of tractors in the Amazon forest. Police informed the team that they were brought into the area through organized crime.

As with OC's structures, convergence in movement reverberates – and is thus fueled by – broader patterns. One is displacement. As with other crimes, a raid or other crackdowns will motivate OC groups and activities to quickly relocate to an adjacent area or similar type of crime. Because environmental crimes tend to be more extractive (e.g. logging and mining) and with a wider geographic span, displacement is probably more prevalent than with other crimes, as documented by the few studies that aim to measure it (Dezécache et al., 2017; Atmadja and Verchot 2012; Delacote et al., 2016). One study of 120 protected areas found that deforestation rates in 55 of them were higher in the 10-kilometer buffer zones surrounding them, suggesting high levels of displacement of illegal activities from protected areas into adjacent lands. In over 78% of cases, reduced deforestation in protected areas was not sufficient to offset deforestation in the buffer zones, and in over 90% of cases, the irreplaceability of species in the buffer zones was greater than that of the protected area (Ford et al., 2020). Together, such findings raise doubts over the effectiveness of protected areas in reducing regional and national levels of environmental crimes like logging and wildlife trafficking.

Scholars have further highlighted the critical role of technological advancement within the process of deviant globalization and the increase of convergence within TOC networks. Shelley describes the multiplicity of ways in which technology has altered the foundations of trade, "digitizing" both legitimate and illegal economies (Shelley, 2018). TOC networks exploit the technical infrastructure of globalization to conduct their activities beyond previous limitations and boundaries. They conduct their activities in both the physical and virtual worlds or in a mixture of the two. Technologies such as the internet, social media, encrypted telecommunications, messaging apps, mobile banking, and cryptocurrencies, facilitate novel forms and pipelines of trade, while also expanding pre-existing structures. As Shelley notes, "Billions use the internet and communicate through encrypted platforms; WhatsApp alone had 1.5 billion active users monthly at the end of 2017" (Shelley 2018, p. 2). Such technology furthers convergence by enhancing communication within and between TOC networks, enabling them to manage their activities at a global scale, diversify their criminal activities, organize with other illicit groups, and recruit individuals with needed skills. The use of technology also renders their interactions increasingly impersonal and anonymous, decreasing transparency and accountability for sellers, intermediaries, and buyers. The present world is one of technologically facilitated crime, in which TOC networks are increasingly expansive, pernicious, and powerful.

Only networks can effectively fight networks. Acknowledging the nested, complex, and convergent nature of environmental crime there is a need to galvanize and strengthen both national and international legal responses. The countries involved in these case studies have patently similar legal responses and implement various agreements relating to regulating wildlife trade, enforcing criminal law (national-level legislation criminalizing various aspects of illegal wildlife trade), and engaging in some form of mutual legal assistance (international-level exchange in information amongst countries).

International-level responses to suppress environmental crime may take the form of legal assistance through Mutual Legal Assistance Treaties (MLATs). These MLATs are agreements between countries that enable law enforcement authorities to exchange intelligence, expatriate suspected offenders, and obtain evidence for criminal prosecution and judicial proceedings. Unfortunately, not all countries involved in the case studies have MLATS; for example, the U.S. has MLATs with Mexico and China but doesn't have MLATs with Bolivia, Peru, and Suriname which would adversely impact law enforcement information exchange. These countries must sign MLATs to ensure law enforcement can legally coordinate responses and exchange admissible evidence (Nadelmann, 1985; Sharma, 2020). Best practices on effective mutual legal assistance may include the designation of effective central authorities, dissemination of timely confidential information, use of joint investigative teams, elimination of technical impediments to the execution of MLAT requests, and use of technology to expedite requests (UNODC, 2001).

At the international level, Bolivia, Peru, Mexico, China, the U.S., and Suriname are Party members of the Convention on International Trade in Endangered Species of Flora and Fauna (CITES) which regulates wildlife trade. It lists over 40,000 species of plants and animals considered at risk of over-exploitation by international trade and subjects their trade to controls through an authorized licensing system. CITES, under its National Legislation Project, considers Peru, the U.S., Mexico, China, and Bolivia to be Category One countries since they meet all the legal requirements for the implementation of CITES. Suriname, on the other hand, is considered a Category Two country since it does not meet all legal requirements for the implementation of CITES. Suriname must amend its national legislation governing wildlife trade and enhance its domestic measures to prohibit, penalize, and confiscate illegally traded CITES-listed species to comply with its international law obligations (CITES, 2022).

It is also necessary to strengthen the international criminal legal framework through the introduction of an anti-wildlife trafficking protocol to supplement the UN Convention Against Trans Organized Crime (UNTOC). A protocol under UNTOC would establish international standards that create similarities in national criminal responses to wildlife trafficking and support international cooperation in the investigation and prosecution of transnational wildlife traffickers. In addition, this protocol can clarify definitions of key terms, define coordination mandates between law enforcement of the State parties, and create evaluation mechanisms to guide enforcement cooperation. This protocol can provide important linkages between existing UN crime conventions; for example, the use of the UN Convention Against Corruption in facilitating law enforcement cooperation in relation to corruption-related crimes that converge with environmental crimes (Van Dinh, 2012).

At the national level, overall laws – such as the General Wildlife Law (Mexico), Forest and Wildlife Law (Perú), Endangered Species and Lacey Acts (USA), The Wildlife Protection Law (China), The Game Act (Suriname) and General Environmental Law (Bolivia) – regulate the wildlife trade by specifying offenses and penalties against the illegal taking and trafficking of wildlife products. More importantly, these laws vary widely in the definition of wildlife offenses, severity of penalties, and scope of protection of listed species. There are opportunities to strengthen the response to environmental crime through amending laws to enhance penalties targeting wildlife crime, use of ancillary laws in the prosecution of wildlife trafficking, such as the use of proceeds of crime and anti-money laundering legislation and tools to target, freeze, and recover illegal proceeds of environmental crime. These reform measures must also consider building formal collaboration in national enforcement networks between state and none state actors; for example, INTERPOL's National Environmental Security Taskforces (NEST) approach to environmental crimes combines government and NGO actors into robust multi-level and multiagency responses to crimes involving complex networks in Asia (White, 2016).

Through its structure and set of recommendations, in sum, this report breaks through long-established frameworks that are no longer capable of grasping and responding to the nature and rise of environmental crime. By exposing the actors and interactions that fuel these crimes, the report provides an immediately applicable and replicable model for tackling their sources. Together, these approaches add up to a powerful and urgently needed roadmap for enforcement and policy against the devastation of environmental crimes not only on the environment but also on the political and socio-economic future of countries around the world. By delving down into the precise points of convergence, this report unlocks the specific actions, strategies, and alliances through which environmental crime connects with TOC.

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FOOTNOTES

[1] Human smuggling refers to the voluntary movement of people and human trafficking to forced involuntary movement, though in many cases they overlap, such as when recruiters deceive and then threaten migrants.

[2] World Wildlife Crime Report 2020 Art 2 (a), UN General Assembly, United Nations Convention against Transnational Organized Crime: resolution, adopted by the General Assembly, 8 January 2001, A/RES/55/25, available at: https://www.unodc.org/documents/treaties/UNTOC/Publications/TOC%20Convention/TOCebook-e.pdfhttps://www.unodc.org/documents/treaties/UNTOC/Publications/TOC%20Convention/TOCebook-e.pdf

[3] INTERPOL and UN Environment (2016), Strategic Report: Environment, Peace and Security - A convergence of threats, https://wedocs.unep.org/handle/20.500.11822/17008.

[4] Wyatt, Tanya, Daan van Uhm, and Angus Nurse. "Differentiating criminal networks in the illegal wildlife trade: organized, corporate and disorganized crime." Trends in Organized Crime 23, no. 4 (2020): 350-366.

[5] Although we provide unredacted Confidential Intelligence Briefings (CIBs) to government and law enforcement authorities, the findings in the report are redacted to protect both current and future operations.

[6] National Defense University, Institute for National Strategic Studies (U. S.), and James G Stavridis. 2015. Convergence : Illicit Networks and National Security in the Age of Globalization. Pittsburgh: United States Dept. of Defense, page 16. Available at https://public.ebookcentral.proquest.com/choice/publicfullrecord.aspx?p=3571653

[7] The term "sources" refers to those who hold knowledge regarding a network/criminal activity but are not directly involved. The term "informant" describes those who are directly involved in illicit activities, for example, a member of a criminal network.

[8] Transit countries are countries in which goods are transported from the originating country to a final destination through a third country.

[9] Our analysts believe this refers to a special line at the border between Tijuana and San Diego

[10] Second-order vendors refer to those who purchase from the first buyers/sellers (like M3) and then re-sell to other clients.

FOOTNOTES

[11] Refers to any "trade or occupation involving construction, alteration, remodeling, repairing, wrecking or demolition, addition to, or improvement of any building, highway, road, railroad, dam, bridge, structure, excavation or other project, development, or improvement to other than personal property."

[12] Refers to any "trade or occupation involving construction, alteration, remodeling, repairing, wrecking or demolition, addition to, or improvement of any building, highway, road, railroad, dam, bridge, structure, excavation or other project, development, or improvement to other than personal property."

[13] Art 2 (a), UN General Assembly, United Nations Convention against Transnational Organized Crime: resolution adopted by the General Assembly, 8 January 2001, A/RES/55/25, available at: https://www.unodc.org/documents/treaties/UNTOC/Publications/TOC%20Convention/TOCebook-e.pdf

[14] Ibid., Art 2 (b)

[15] Ibid., Art 2 (b)

[16] Ibid., Art 3 (2)

[17] Lackenbauer and Farish 2007; Peluso and Vandergeest 2011. In some regions, the creation of training, buffer or "demilitarized" zones have eliminated organized crime activities.

[18] Author interviews, Franco Perazzoni and Alexandre Saraiva, Brazil's Environmental Federal Police directors; and Exceltíssimo Senhor Ministro Presidente Do Supremo Tribunal Federal, Alexandre Silva Saraiva, Delegado Policía Federal, Superintendente Regional da SR/PF/AM

[19] The UN Convention Against Corruption uses a typology with ten types of corruption

[20] Using the panel data of 22 countries, one study (Pellegrini and Gerlagh 2006) found that corruption has a bigger impact than economics on the strength of environmental regulations. Another found that polluting enterprises in countries with high levels of corruption underreported pollutant discharges (Ivanova 2011). Using the panel data of 87 countries and the Environmental Performance Index, Chang and Hao (2017) found that corruption weakens the positive relationship between economic growth and environmental performance.

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About Earth League International

ELI is a non-profit, non-governmental organization that is a pioneer in using professional intelligence and analysis to illuminate and fill the intelligence gap related to transnational environmental/wildlife criminal networks and environmental crime convergence. Established in 2013, ELI is a leader in environmental crime convergence and helps law enforcement and governmental authorities by providing them with usable intelligence and evidence to investigate and possibly charge the world's top environmental criminals and their networks for various serious crimes.

About John Jay College of Criminal Justice

JJCCJ is one of the world's leading institutions in criminal justice education and forensic research. In the past five years, John Jay has implemented police reform, violence prevention, and capacity-building programs across Latin America and the Caribbean.