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Crime script analysis of elephant ivory trafficking in East Africa

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Abstract

Purpose Ivory trafficking remains a persistent transnational crime globally, and especially, in East Africa, driven by organized networks that exploit regulatory loopholes, corruption, and porous borders. Crime science perspectives have largely been ignored in examining ivory trafficking and this study addresses this gap in knowledge.

Methods This study employs crime script analysis to systematically deconstruct the modus operandi of ivory traffickers, outlining and detailing the steps taken to prepare, transport and smuggle ivory from source to demand countries. To achieve this goal, this research focuses on the most culpable actors in trafficking and in the period of the highest recorded trafficking activities. This study uses data from twenty (20) prosecuted criminal cases drawn from three countries in East African and relating to at least forty-one (41) tons of illegal ivory.

Results Traffickers prepare by obtaining ivory from poachers and storing them in storage facilities passing off as legitimate businesses; falsify export documents, bribe customs officials, disguise ivory as legitimate export or obfuscate it in hidden or modified cargo compartments to secure successful exportation. The findings indicate that traffickers are highly organized with a wide range of actors enabling their criminality and their actions often converges with a variety of other major and serious crimes.

Conclusions This study identifies critical intervention points where law enforcement and policy measures can disrupt trafficking networks and proposes various recommendations for policy and practice.

Keywords Crime convergence, Prosecuted cases, Offender decision-making

Introduction

Revered for their majestic presence, intelligence, and deep social bonds, elephants hold a special place in the hearts and minds of people around the world. Their intricate behaviors and complex social structures have made them a focal point of scientific study, offering profound insights into the animal kingdom (Douglas-Hamilton, 2009; Poole & Granli, 2009; Sheldrick, 2012). Loved for their gentle nature and remarkable memory, elephants inspire awe and admiration, prompting numerous conservation efforts to protect them from threats like poaching and habitat loss (Chase et al., 2016). However, this charismatic megafauna is under a serious threat.

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The elephant has come under immense pressure from poaching and trafficking. Africa may have held over 20 million elephants before colonization and a million as recent as 1970 (Nishihara, 2003; Chase et al., 2016). By 2024, these numbers dwindled to an estimated population of 450,000 (Ritchie, 2024). Relentless ivory market demand was to blame with the peak recorded in 2011 where over 40,000 elephants were poached for their tusks (Bielert et al., 2018; Wittemyer et al., 2014).

Every year, seizures of illegal ivory are increasingly being made in different ports and entry points worldwide (Underwood et al., 2013). The underworld of ivory trafficking seems to defy law enforcement responses (Naylor, 2005). More strikingly, current research efforts and scant grey literature have not fully embraced the use of criminological frameworks to unpack the problem of ivory trafficking, which would aid in devising policy-relevant and empirically driven prevention strategies. In this study, we aim to fill this gap and contribute knowledge that furthers our understanding of how ivory trafficking is perpetrated and what can be done to prevent it.

By focusing on the most culpable actors in ivory trafficking cases in East Africa, we set out to use primary data and apply the theoretical propositions offered by crime script analysis to explore the stages and the actors involved in the process of ivory trafficking. The trade in ivory, regulated by Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), has faced a global ban on international commercial trade since 1989, except for two one-time government-sanctioned sales in 1997 and 2008 (UNEP et al. 2013; Ripple et al., 2015; Halliday et al., 2022). Despite this, illegal ivory trade persists, driven by demand for ornamental and luxury products in Asia (Haines et al., 2021; Campbell-Staton et al., 2021). Organized crime networks have exploited this demand, significantly impacting elephant populations, particularly in Eastern and Central Africa (Lemieux and Clarke, 2009). The Monitoring of Illegal Killing of Elephants (MIKE) program has documented ongoing declines in elephant populations due to poaching, while Elephant Trade Information System (ETIS) data shows that seizure volumes were modest and typically under 500 kg every year between 1997 and 2005 and spiked to 6000 kg every year between 2009 and 2013 (Milliken et al., 2004; CITES 2013).

This trade is fueled by transnational crime syndicates that consolidate ivory from poachers, utilizing structured networks and established smuggling routes (UNEP, 2016). Research by Wasser et al. (2022) provided direct evidence linking recent poaching and recorded wildlife trafficking, revealing that most confiscated ivory came from elephants killed within three years of ivory interception and seizure. These findings highlight the central

role of organized crime in the ivory trade, with only a few major cartels dominating the supply chain.

While international policies, such as domestic ivory market bans in China, have reduced demand in some regions, they have also displaced the trade to neighboring countries with weaker enforcement (Hsiang and Sekar, 2016). This shift has compounded challenges for conservation efforts and highlighted the trade's nexus with other crimes like drug trafficking, arms smuggling, and money laundering. Grey literature often simplifies the ivory trafficking chain, portraying it as a linear process from poacher to middleman to consumer (Halliday et al., 2022; Karanja & Matsui, 2018). However, this overlooks the complexity of decision-making processes, nexus with other crimes, the roles of accomplices and criminal networks (Morris, 2024). To address this gap, current research focuses on analyzing court cases in Kenya, Uganda, and Tanzania through a crime science lens. We relied on court cases from concluded criminal cases related to major ivory trafficking cases registered between 2009 and 2023 since this period also accounts for the highest recorded poaching of elephants and trafficking of ivory in these three countries. This approach seeks to build a deeper understanding of large-scale ivory trafficking, providing insights into criminal operations and decision-making processes, with the goal of informing more effective interventions.

Theoretical framework—crime script analysis

Crime script analysis is a methodological approach in criminology that aims to understand criminal acts by breaking them down into a sequence of steps or stages. This technique assumes the offender's rational decision-making to commit a crime drawn from Cornish and Clarke's Rational Choice Perspective (Cornish & Clarke, 1986a, 1986b; Leclerc & Wortley, 2013). It emphasizes offenders' decision-making process shaped by available opportunities at every stage of crime to minimize the risk and maximize the rewards.

The crime 'event' or the specific act that is criminalized, is just one of several 'events' within the broader process that occurs before and after that act. The commission of a crime can be expressed in a set of steps and procedures involved in constructing the crime from the point of preparation to its completion (Cornish, 1994). Analyzing the successive steps involved in criminal activity through this lens allows not only for the identification of specific anchor points of intervention at each phase of the crime continuum, but also the design of tailored crime prevention efforts that can be implemented at each phase.

The originally proposed crime script emphasized 'factors' and conditions influencing choices necessary for the completion of a criminal act. It involved seven successive stages of preparation, entry, pre-condition, initiation,

actualization, doing post-condition, and exit (Cornish, 1994). Later, Tompson and Chainey (2011) proposed a new approach that built on Cornish's original crime script, making it more direct and practical, and involved four main stages, including preparation, pre-activity, activity, and post-activity. The commission of a crime can be outlined as a series of steps and procedures, from preparation to completion.

Building on the new approach, this research customized the script into five stages; (1) *Preparation*—Offenders gather tools, information, and resources necessary to facilitate the crime, (2) *Entry*—Offenders identify and gain access to potential targets or locations. Although these steps may not be illegal, they can be decisive for the crime's success. (3) *Precondition (Pre-activity)*- Offenders set up favorable conditions essential for committing the act. Next, (4) *Commission (Doing)*- The central criminal act, i.e., the act committed by the offender to complete the criminal goal. It is followed by (5) *exit & aftermath*-these stages involve steps taken to complete the crime, extract oneself from the crime and minimizing the risk of apprehension.

Crime script analysis has been proven useful across various form of environmental crimes such as cyber enabled illegal wildlife trade (Gondhali et al., 2024), Illegal waste dumping (Sahramäki & Kankaanranta, 2017), illegal extraction of natural resources (Pires & Solans, 2023), wildlife poaching (Viollaz et al., 2021), Process of removal and transshipment and landing of illegal, unreported and unregulated (IUU) fishing (Petrossian & Pezzella, 2018), seafood fraud (Lawrence et al., 2024), and Rhino poaching (Doormaal et al., 2018). By applying a similar lens to ivory trafficking, this research aims to illuminate the modus operandi of offenders and the tactics and opportunities they exploit while trafficking ivory out of Africa to the destination countries.

Methods

Sources of data

This study relies on over 1000 transcripts of indictments, charges, rulings, and judgments of courtroom trials where ivory trafficking was the subject matter. Descriptions from court proceedings show first-hand accounts of witness statements relating to major ivory trafficking. Official court proceedings contain the official records, investigation diaries, witness statements, supporting documents and testimonials, and details of suspects and associates. The courtroom trial cases come from five (5) different sources, all of which are discussed below.

Source 1: Uganda Legal Information Institute (ULII)

ULII is a free legal information service provided by the Law Reporting Unit of the Uganda Judiciary and a member of the global Free Access to Law community. ULII

publishes legal information, such as legally significant decisions of courts, legislation, treaties, and some publicly available secondary legal material created by the Judiciary for purposes of public access.

Source 2: Tanzania Legal Information Institute (TanzLII)

TanzLII is a free legal information service of the Court of Tanzania that publishes decisions, rules and regulations for free online. TanzLII allows free access to decisions from Judiciary of Tanzania and is a member of the African Association of LIIs.

Source 3: National Council for Law Reporting (NCLR)

The NCLR is a semi-autonomous state corporation under the Office of the Attorney General of Kenya established by the National Council for Law Reporting Act, No. 11 of 1994. Its primary role is to publish and disseminate the official law reports of Kenya, also known as "Kenya Law Reports" and free access to judgments, rulings and opinions delivered by courts in Kenya.

Source 4: Eyes in the Courtroom Project

Eyes in the Courtroom is a partnership between Wildlife-Direct and the Judiciary of Kenya to monitor and follow up on wildlife crime cases in courts in Kenya. This project provides access to judgments, court proceedings and rulings relating to major ivory-related criminal cases registered in courts in Kenya (Kahumbu et al., 2019).

Source 5: Public Access to Court Electronic Records (PACER)

PACER is an electronic public access service operated by the Administrative Office of the United States courts. It allows users to obtain case and docket information from federal appellate, district, courts via the internet.

Case selection

In this study, we only focused on major trafficking cases related to ivory in three East African countries—Kenya, Uganda, and Tanzania. These countries had been identified and implicated as source and transit countries for ivory by CITES. We relied on court cases from concluded criminal cases related to major ivory trafficking cases registered between 2009 and 2023 since this period also accounts for the highest recorded poaching of elephants and trafficking of ivory in recent history. We adopted the definition of a "major ivory trafficking case" provided by Wasser et al., (2015) who categorizes cases involving the impound and seizure of about five hundred (500) kilograms in ivory as "major". The cases selected had an East African country identified as a source country and ivory illegally being moved across at least one international border. Our search extracted twenty (20) criminal court cases from Uganda (3), Kenya (11), and Tanzania (6)

Table 1 Weight of Ivory (in kg) found in twenty court cases with country information

Case no	Amount of ivory found (kg)	Country of origin
1	1099	Kenya
2	10,000	Uganda
3	1900	Tanzania
4	3127	Kenya
5	500	Tanzania
6	1004	Kenya
7	1500	Kenya
8	3287	Kenya
9	1098	Uganda
10	1323	Kenya
11	1833	Kenya
12	3827	Kenya
13	1169	Kenya
14	3299	Uganda
15	2160	Kenya
16	784	Uganda
17	703	Tanzania
18	1889	Tanzania
19	451	Tanzania
20	307	Tanzania

Table 2 Countries involved by role in the transnational ivory trafficking network

Role involved	Countries	Notes
Source countries	Kenya, Tanzania, Uganda, Democratic Republic of Congo (DRC), Mozambique, Senegal, Guinea	Primarily involved in sourcing ivory or as points of initial extraction
Transit countries	Kenya, Ethiopia (Addis Ababa Airport), Singapore, Thailand, Hong Kong	Serve as intermediate locations or stopover points in the trafficking route
Destination countries	Vietnam, Thailand, Malaysia, Cambodia, United States of America	Intended final destinations for trafficked ivory
Overlapping roles	Kenya, Thailand, Hong Kong	Act as both source, transit and destination points, processing or redirecting shipments

relating to major ivory cases. Details on these cases and their outcomes examined are provided in Table 4.

Results and findings

Descriptive information

As shown in Table 1, the most substantial seizure occurred in Case 2, with approximately 10,000 kg, far exceeding the other cases. Moderate seizures, ranging between 2000 and 5000 kg, were observed in Cases 4, 8, 12, 14, and 15, while smaller seizures, below 1000 kg, occurred in cases such as 5, 16, 17, 19, and 20. The total weight of ivory seized across all cases amounts to approximately 41,259 kg, underscoring the vast scale of ivory

trafficking. Most elephant seizures were made in Kenya and Tanzania. Despite investigations spanning different countries the prosecutions in these cases were instigated only in the countries that seized the illegal ivory.

Table 2 and Fig. 1 illustrate the countries involved and their role in the transnational ivory trafficking network.

The crime script of ivory trafficking operations

The transnational network of ivory trafficking is characterized by a sophisticated series of actions, each carefully orchestrated to exploit weaknesses in customs and law enforcement procedures. Our crime script analysis, based on 20 documented court cases, unravels the stages involved in these illegal operations, exposing the elaborate strategies traffickers employ to evade detection and ensure their shipments reach global markets.

Results from our analysis detail the sequential stages of transnational ivory trafficking operations. The operations are divided into five key crime script analysis stages, including Preparation, Entry, Pre-Conditions, Doing, Exit & Aftermath, and a sixth additional stage that outlines Legal Proceedings/Outcomes of these cases. Each stage is examined in terms of the actions taken, the spaces utilized, the timing of these operations, and the people involved to uncover the strategies traffickers employ and the challenges law enforcement faces in disrupting these networks.

In the *Preparation* stage, we explore how traffickers plan their logistics, including obtaining ivory, concealing ivory, and finding storage facilities. During the *Entry* stage, we examine the tactics used to transport ivory across different domestic locations without detection by local law enforcement. The *Pre-Condition* stage investigates how traffickers set up favorable conditions for customs clearance, primarily involving the preparation of fake documentation and timing planning to evade detection. The *Doing* stage focuses on the actual transport to key exit points, like ports and airports, for transnational trafficking, assessing how traffickers attempt to pass inspection points, and the methods used to deceive the system. In the *Exit* and *Aftermath* stages, we look at law enforcement’s response after interceptions, covering arrests, evidence handling, and further investigations into trafficking networks. Table 3 shows a summarized crime script of transnational ivory trafficking.

Finally, in the *Legal Proceedings* stage, we examine the legal proceedings that follow arrests, analyzing the charges brought against traffickers, the evidence presented, and the outcomes of the prosecution.

Preparation stage

Ivory trafficking preparations begin long before tusks reach transit points like ports and airports. Traffickers meticulously coordinate each step to move ivory from

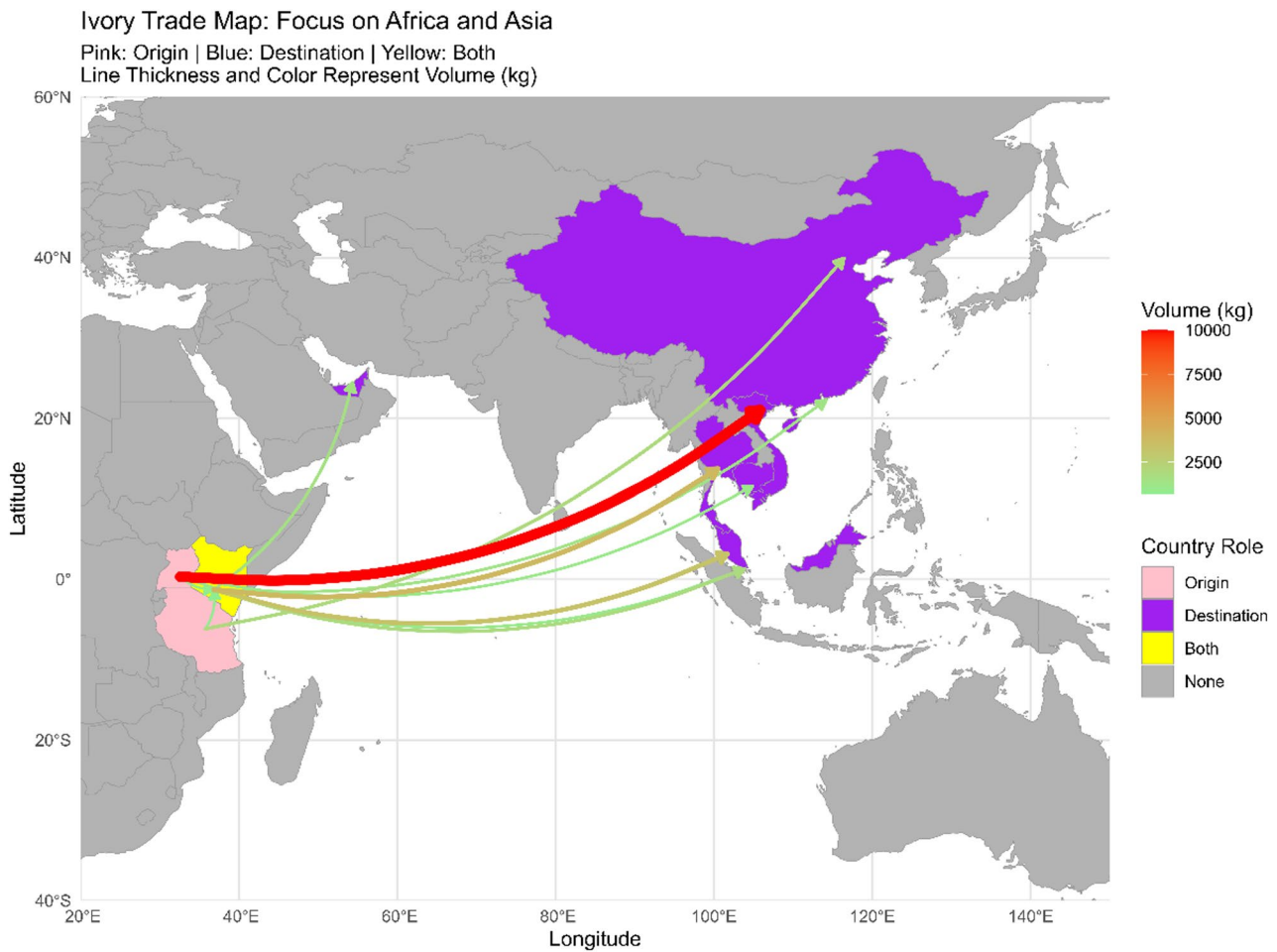


Fig. 1 World map of countries involved by role in transnational ivory trafficking network

poaching sites deep within national parks and reserves to storage and processing locations. Once acquired, the ivory is moved to secure storage sites, such as warehouses, car yards, or even residential properties, where it can be sorted, concealed, and prepared for further transport. Some networks go as far as registering false business entities, using legitimate-looking storage facilities to disguise their operations as standard commercial activities. These staging points provide a space to hide and package the ivory, as well as serve as logistical hubs where traffickers can coordinate with transporters and intermediaries, refining their plans to minimize detection risks as the ivory moves along its transit route. In one notable case, traffickers acquired ivory by stealing it from the custody of Kenya Revenue Authority, where elephant tusks were being held as court evidence. This shows how corruption involving government officials can play a role from the earliest stages of trafficking.

Entry stage

In the Entry Stage, traffickers employ a range of tactics to move ivory across multiple locations, skillfully avoiding

detection by local law enforcement. Some traffickers use legitimate business fronts, such as car dealerships or freight companies, to store and manage ivory in plain sight without raising suspicion. Others disguise local transportation in ways that appear entirely routine. In one case, traffickers modified vehicles with hidden compartments, allowing ivory to be concealed within everyday cargo loads. In another case, they used regular luxury vehicles to transport tusks between residences and business premises for storage. In yet another case, a water tanker parked in a leased car yard served as both a transport and storage solution.

Pre-conditions stage

In the Pre-Conditions Stage, traffickers carefully establish favorable conditions to ensure smooth customs clearance, with a strong focus on creating false documentation and concealing ivory. Many trafficking networks rely on forged permits and falsified customs entries that disguise ivory as common goods, such as timber, coffee beans, agricultural produce, or cultural artifacts. These are paired with diverse concealment tactics: ivory

Table 3 Crime script analysis of transnational ivory trafficking in East Africa

Stage	Script actions	Spatial	Temporal	People/Actors
Preparation	Traffickers plan logistics, including obtaining and concealing ivory, securing storage facilities, and registering false business entities to disguise operations as legitimate activities They also set storage facilities in warehouses, car yards, and residential properties in Kenya and Tanzania	Original Countries: Kenya, Tanzania, Uganda, Democratic Republic of Congo (DRC), Mozambique, Senegal, Guinea	Period between sourcing and transport for export	Key organizers, poachers, brokers, traffickers, intermediaries, transporters, corrupt officials
Entry	Traffickers move ivory across domestic locations, avoiding law enforcement by using legitimate business fronts and modified vehicles with hidden compartments	Residential properties or commercial and business fronts, such as car dealerships, freight and warehousing companies	Throughout the transport phase, before international export	Traffickers, local transporters and warehousing companies
Pre-Conditions	Traffickers establish favorable conditions for customs clearance with falsified documents and concealment methods Prepare false documents and disguises (e.g., labeling shipments as wooden benches, timber, architectural stones, African art pieces, export tea, groundnuts, or avocados) Establish collaboration with corrupt customs officials or transport agents to arrange export	Storage facilities and customs facilities	Before reaching customs and international transit points	Traffickers, customs officials, document forgers, cargo workers
Doing	Ivory transported through exit points like ports and airports; traffickers smuggle ivory in wood, mazer stones, export coffee and tea to pass inspection and verification points A high-stakes phase in which ivory is loaded onto ships or planes for international shipments, with success measured by secure departure and undetected arrival at the destination	Key exit points in Original Countries: Kenya (Mombasa; Nairobi), Tanzania (Dar es Salaam), Kenya (JKIA), Ethiopia (Addis Ababa) Intended Destination Countries: Singapore, Hong Kong, Vietnam, Thailand, Malaysia, Laos, Cambodia, United States	During final transport to international destinations	Traffickers, customs officials, port authorities, sometimes complicit inspectors International checkpoints: Singapore Customs, Hong Kong Customs, Vietnam Customs, etc
Exit & Aftermath	In the event of detection, law enforcement seizes shipments, catalogs ivory as evidence, and detains suspects for further investigation. In some cases, suspects flee and are arrested post-seizure. Authorities begin a broader investigation to identify and dismantle the trafficking network	Law enforcement storage, wildlife offices, ports of interception in original countries or destination countries	Post-interception, leading into legal proceedings	Law enforcement in Kenya (National Police Service, KRA, KWS), Tanzania (Tanzania Police, Wildlife Division), Singaporean Customs, Vietnam Customs, INTERPOL, customs officers, wildlife authorities

packed in timber containers labeled as logs, stuffed into hollowed-out statues or African masks, or hidden within bags of groundnuts. By combining deceptive paperwork with sophisticated concealment methods, traffickers create controlled conditions that facilitate the movement of ivory through customs with minimal risk of detection. At this stage, traffickers may also bribe customs officials or exploit connections with insiders who assist in fast-tracking the clearance process to facilitate the passage of these shipments. Corrupted officials and insiders may offer to expedite customs clearance, selectively overlook suspicious indicators, and share inspection schedules with traffickers, thus establishing favorable conditions at checkpoints.

Doing stage

In the Doing Stage, traffickers move ivory through critical exit points, such as ports and airports, using various methods to pass inspection points undetected for

international trafficking. To blend in with legitimate cargo, they often hide ivory within shipments labeled as ordinary goods, such as agricultural products or construction materials, making use of well-sealed containers that appear compliant with customs standards. In some instances, traffickers insert ivory into large crates filled with legal exports, ensuring the contraband is surrounded by legitimate goods for added concealment. When inspections occur, traffickers rely on meticulously falsified documentation and may even attempt to bribe officials to avoid thorough searches.

In this high-stakes phase, traffickers focus on moving concealed ivory through customs and inspection points, testing their ability to evade law enforcement. When successful, the ivory is loaded onto ships or planes destined for international markets. However, interceptions can happen at this stage: in some cases, documentation discrepancies or customs seal irregularities lead to further scrutiny and trigger complete inspections. In other

instances, intelligence reports or customs officers' suspicions prompt deeper investigations, resulting in seized shipments. When authorities intercept these shipments, the contraband is confiscated, and suspects may face immediate arrest. Law enforcement agencies, often acting on intelligence or identifying document inconsistencies, conduct targeted inspections to disrupt trafficking at this stage.

Exit & aftermath stage

Following interceptions, law enforcement manages the aftermath by seizing the ivory and documenting it for prosecution. Offenders are detained, and detailed investigations often lead to further arrests or reveal additional storage sites. This stage requires that the ivory be carefully cataloged, weighed, and recorded as evidence before being transferred to secure storage facilities, such as wildlife offices or police stations. Securing and managing the seized ivory is essential at this stage to ensure it remains intact as evidence throughout the legal process. Wildlife authorities and law enforcement agencies work together to safeguard the tusks until they are presented in court, which is often a task complicated by the volume and value of the contraband. At this stage, authorities begin a broader investigation to identify and dismantle the trafficking network. The gathered evidence, including testimonies from customs officials and forensic experts, forms the basis for the prosecution's case against the traffickers. Furthermore, in some cases, traffickers' communications through phone calls and electronic messaging applications indicated potential purchases, while bank transactions revealed financial links—both of which became crucial evidence. In one case, financial flows within Kenya even revealed transfers specifically between suspects and customs officials.

Legal proceedings stage

Although not explicitly a crime scripting phase, our research related to criminal acts that led to arrest, prosecutions, and resulting in either a conviction or acquittal. We note that prosecuted charges vary but typically include unlawful possession of wildlife trophies, illegal trade in government trophies, engaging in organized crime, smuggling, and attempts to export wildlife products without permits. Prosecutions have relied on a combination of direct evidence (e.g., confiscated ivory, intercepted communications) and witness testimonies from customs officers, wildlife experts, and accomplices who have turned state witnesses. Only eight (8) of these cases returned a guilty conviction (Case 2, 3, 5, 11, 16, 17, 18 and 19) while nine (9) more cases were lost through acquittals (Case 1, 4, 7, 8, 9, 10, 12, 13 and 15), and three (3) cases were ongoing at the time of publishing (Case 6, 14, and 20) as shown in Table 4 below.

Convictions attracted a range of penalties with imprisonment terms ranging from two (2) to twenty (20) years. These cases mostly had single or two accused persons in cases ordinarily exhibiting high degrees of conspiracy and organization. For example, in most cases, low level enablers such as transporters or clearing and forwarding agents were arrested and prosecuted while the most culpable, this being, consignors, consignees and customs officials largely avoided prosecution because of limited and weak investigations.

The legal complexities of prosecuting international wildlife crime emerge in this stage. While almost all these cases related to felonies that result in substantial prison sentences and fines, procedural issues often complicate prosecution and conviction outcomes. Defendants may challenge charges by questioning evidence integrity, chain of custody or citing procedural irregularities. As a result, some sentences were reduced on appeal, while others lead to acquittals due to insufficient evidence or procedural flaws. In one case instance, a defendant was acquitted because physical ivory evidence was not presented in court by law enforcement—failure in chain of custody. In yet another case, the trial court initially sentenced defendants to 20 years; however, on appeal, defendants argued procedural irregularities—claiming they were not afforded proper opportunities to cross-examine witnesses or contest evidence—which led to the convictions being overturned. Similarly, in 2023, a case in Kenya resulted in acquittal due to insufficient evidence and a lack of cooperation from destination countries through mutual legal assistance agreements (Kenya and Thailand) authorities. These acquittals reflect how evidentiary weaknesses, and procedural inconsistencies impede efforts to secure justice in major trafficking cases.

Summary of core findings

The results of our crime script analysis paint a vivid picture of the hidden world of transnational ivory trafficking. Each stage of these operations, from the initial preparation to the final courtroom battles, reveals how traffickers outmaneuver law enforcement, weaving ivory into the global marketplace. The journey begins in remote forests, where traffickers strategize each step, plotting logistics and selecting storage sites as they set the stage for a complex operation. These findings align well with other research that applied crime script analysis to understand early-stage planning of poaching involving rhinos, lions, and African grey parrots (see the case studies provided in Lemieux, 2020). Consistent with findings from prior literature (World Bank, 2022), moving through urban landscapes and busy ports, ivory hides in plain sight, masked as everyday goods and tucked within containers disguised as normal products.

Table 4 Summary of legal outcomes in 20 court cases

Case #	Case citation and charge	Country	Legal consequences
1	Republic v. Feisal Ali Mohammed & 5 Others: Possession and dealing in wildlife trophies:	Kenya	Acquitted on appeal after being convicted and sentenced to an imprisonment term of 20 years, fined USD 250,000 and
2	United States v. Moazu Kromah: Wildlife trafficking and money laundering (Lacey Act Violations)	USA	Convicted and sentenced to an imprisonment term of 63 months
3	Organized crime, illegal trade United Republic of Tanzania v. Yang Feng Glan and 2 Others	Tanzania	Convicted and sentenced to an imprisonment term of 15 years
4	Republic v. Sheikh Mohamoud Abdulrahman & 5 Others: Wildlife trafficking	Kenya	Acquitted
5	United Republic of Tanzania v, Boniface Malyango and Lucas Malyango: Organized crime	Tanzania	Convicted and sentenced to an imprisonment term of 12 years
6	Republic of Kenya v. Falah Manzu and 5 Others: Wildlife trafficking	Kenya	Case ongoing
7	Republic of Kenya v. Sammy Ndirigi Maina: Wildlife trafficking	Kenya	Acquitted
8	Republic of Kenya v. Nicholas Maweu: Wildlife trafficking	Kenya	Acquitted
9	Republic of Kenya v. Ephantus Mbare: Customs violations	Kenya	Acquitted
10	Republic of Kenya v. Fredrick Sababu Mungule and 3 Others: Customs violations	Kenya	Acquitted
11	Republic of Kenya v. Fredrick Sababu Mungule & 2 others: Customs violations	Kenya	Convicted and sentenced to two years imprisonment
13	Republic of Kenya v. Charles Wamburi and Jeremiah Nzoka: Wildlife trafficking	Kenya	Acquitted
14	Uganda v. Nguyen Son Dong and 4 Others: Wildlife possession, aiding, conspiracy	Uganda	Case ongoing
15	Republic of Kenya v. Kenneth Kamau Maina: Possession and dealing in wildlife trophies	Kenya	Acquitted
16	Republic v. Kenneth Kamau Maina: Wildlife trafficking	Kenya	Convicted and sentenced to an imprisonment term of 5 years or fined USD 10,000
17	Republic v. Moses Leharo & Another	Kenya	Convicted
18	The United Republic of Tanzania v Huang Qin & Xi Fujie: Possession of government trophies	Tanzania	Convicted and sentenced to an imprisonment term of 20 years
19	Peter Kabi & Another v. The United Republic of Tanzania: Illegal possession of trophies	Tanzania	Convicted and sentenced to an imprisonment term of 20 years and a fine of USD 3,650,000 (representing ten times the value of wildlife trophies in the case)
20	Idd Nyembo & 7 Others v. The United Republic of Tanzania: Possession of government trophies	Tanzania	Case ongoing

The findings revealed that ivory trafficking can be a highly organized activity that involves a sophisticated range of actors, including poachers, intermediaries, transporters, and corrupt officials, who work in accord to establish the necessary steps required to successfully traffic ivory from the continent. This finding mirrors a growing consensus in wildlife crime scholarship that frequently highlights the role of transnational organized criminal groups in wildlife trafficking (e.g. Anagnostou & Doberstein, 2022a, 2022b; Moreto & van Uhm, 2021; Wyatt et al., 2020). Such planning involves meticulous advanced logistical steps, such as securing the poached ivory in such locations as storage facilities, car yards, and residential properties before the ivory is moved domestically to international shipping locations. The movement of ivory is facilitated in various ways, such as disguising it as legitimate goods, which is often achieved with the complicity of corrupt officials, freight forwarders, and shipment clearing agents; hiding it within compartmentalized vehicles; or moving it through ‘legitimate’ business dealings (World Bank, 2022). A successful

‘pre-condition’ of the transport of ivory outside of East African seaports and airport often requires the manipulation of customs procedures by generating falsified documents and customs forms to label ivory as everyday goods, such as wooden benches, timber, architectural stones, African art pieces, tea, groundnuts, or avocados. Alternatively, customs officials are bribed to establish a smooth transfer of goods being shipped. In certain cases, large shipments of ivory are not directly shipped to destination countries but rather use detours through such transit countries as Ethiopia, Singapore, Thailand, and Hong Kong. It is likely that such tactics are used to further conceal the origin and destination of the countries, and the actors directly involved in trafficking. This finding highlights the important role transit countries play in facilitating the transnational movements of ivory (and other wildlife) from Africa into other parts of the world (Gangi et al., 2025; van Uhm, 2018).

The core destination countries where these large-scale ivory shipments were destined included Vietnam, Thailand, Malaysia, Cambodia, and the United States.

Interestingly, mainland China did not come up as a major destination country in these cases, despite traditionally being regarded as a major destination for ivory. China, in the study period, implemented robust comprehensive measures to combat illegal ivory trade, especially through a total ban in 2017. We speculate that traffickers may have adapted their routes and destinations to avoid apprehension and detection. Neighboring countries such as Laos, Vietnam, and Thailand offer more lenient customs controls and have traditionally served as intermediary points before ivory is transported to other final global destinations. In fact, this is not the first study to find that after China's ban, other countries in the region, especially those exhibiting similar weak security controls, have served as alternate routes through which illegal ivory and other wildlife shipments still potentially make their way into China. For instance, a Wildlife Justice Commission investigation (Operation Jeopardy) found that after China's ivory ban, Cambodia emerged as a key commercial hub for both smuggling and processing ivory potentially destined for China (Wildlife Justice Commission, 2020). This 'displacement' phenomenon is also consistent with illegal wildlife crime markets where law enforcement pressures in one region pivoted the illegal activities into another (UNODC, 2024).

Law enforcement responses related to ivory trafficking from these three countries have been mixed, even for the cases where the shipments have been successfully intercepted. Some of these interceptions led to successful arrest, detention, and securing of evidence. Some cases, however, failed to achieve convictions upon prosecution due to the lack of reliable procedural safeguards that ensured the proper preservation of the evidence for court proceedings. Therefore, evidentiary weaknesses, and challenges of proper preservation evidence, coupled with the lack of international cooperation undermined the securing of effective and proportionate outcomes for these cases.

There were numerous examples of other crimes that converged with ivory trafficking demonstrating that this type of wildlife crime is deeply embedded in broader criminal network operations. Crime convergence, in this context, refers to the interaction and overlap of various criminal activities, networks, or actors that facilitate or exacerbate wildlife crimes. Many crimes—like illegal wildlife trade, drug trafficking, and weapons smuggling are connected, often based on shared logistics, facilitators, and markets. Adding crime convergence analysis to crime script analysis, can highlight underlying relationships between crimes that are often not clear-cut in a single crime script analysis. The analysis of the modus of ivory trafficking in East Africa exhibited various typologies of crime convergence. For example, multiple species were trafficked together with ivory (e.g. sandalwood, timber

and rhinoceros horn), multiple networks illicitly engaged in wildlife trafficking, other serious crimes were committed in addition to ivory trafficking such as smuggling, bribery, falsification and theft of evidence. (Anagnostou & Doberstein, 2022a, 2022b; Spevack, 2021; Van Uhm & Nijman, 2022). Our approach shows it is essential to address or consider crime convergence in crime scripts. Incorporating this perspective refines the focus of analysis and increases our understanding of how criminality unfolds. Its inclusion in this crime script significantly enhances the analysis by addressing the following key dimensions.

Study limitations

While the insights gained from this study are valuable, there are several limitations that must be discussed. First, the assumptions drawn in this research as they relate to the processes involved and the *modus operandi* of the involved actors rely on cases that have resulted in legal proceedings. This may essentially introduce a case bias, as these analyses omit cases that have either been undetected or did not result in the processing through the criminal justice system.

Second, given the specific geographic focus of the cases on East Africa, the generalizability of the findings can be limited, and caution must be exercised when making assumptions about other regions where ivory trafficking is prevalent. In the same token, the generalizability of the findings is limited to ivory trafficking, and not necessarily the trafficking of other wildlife species. Nevertheless, given the focus of this research and its overarching goal, a broader generalizability was not assumed in this study.

Lastly, throughout the examination of the case files, it became evident that the amount of information available for each case was significantly variable. This may reflect the record-keeping practices across the three countries, as well as within the courts of each country. Nevertheless, the crime script presented in this paper took a holistic approach by pooling together the overall emerging patterns. While initially, each court case was scripted separately, we noted that we achieved data saturation, as regardless of the case examined, some of the steps taken by the actors (regardless of the level of detail with which this has been captured) were remarkably similar. Therefore, we believe with the sample size of 20 cases, we were able to remedy the data variability concern.

Policy recommendations

This research proposes several policy recommendations that derive from Situational Crime Prevention. This framework is based on three crime prevention theories (namely, the rational choice perspective, the routine activities approach, and the geometry of crime theory), and seeks to reduce crime opportunities by increasing

the risk of detection and reducing rewards in the immediate environment that potential offenders find themselves (Clarke, 1983; Cornish and Clarke, 2003; Cornish and Clarke, 2016). These techniques, organized under five headings of *increasing the risk*, *increasing the effort*, *reducing the reward*, *reducing the provocations*, and *removing excuses*, provide a valuable and proven framework through which effective intervention strategies can be implemented to disrupt ivory trafficking.

Increasing the effort can be achieved through three distinct techniques such as hardening targets, controlling access to facilities, and screening exits. Target hardening can be achieved by strengthening security measures in protected areas by potentially deploying advanced technologies (such as Global Positioning System tracking collars) for elephants, or monitoring drones. This can also be achieved by strengthening anti-poaching patrols and increasing law enforcement capacity to monitor and detect potential motivated offenders. Access control at exit points, specifically the airports or seaports identified as hubs for such exports, additional measures can be taken to screen the movement of luggage or good (such as through customs scanners) in order to enhance the timely detection and prevention of the movement of the ivory outside the countries involved, both origin and transit.

Increasing the risks can involve extending informal guardianship, strengthening formal surveillance, and utilizing place managers. Community members and their role in preventing elephant poaching and trafficking cannot be underestimated. They can act as capable guardians whose assistance to prevent poaching can be achieved through incentive-based community-oriented programs. Formal surveillance can be strengthened through the deployment of real-time monitoring systems at critical points of transit or at exit hubs, both at the locations where elephants are poached, and at the locations where they are trafficked from. Training customs officials on common concealment tactics, such as those identified here, will equip them with the necessary knowledge and skill to engage in targeted and strategic tactical operations to detect ivory.

Removing excuses and justifications, states can set up straightforward and enforceable guidelines for checking imports and exports by emphasizing on high-risk shipments and origin countries. Customs officials can prioritize shipments based on risk profiling and should be held accountable for neglected inspections, with audits and transparent reporting mechanisms. Officials can be offered targeted training on recognizing wildlife trafficking indicators and specialized wildlife enforcement units could be established within customs teams. In addition, inspections and detection rates should be linked to

performance reviews or incentives, rewarding diligence and compliance with protocols.

Reducing the rewards for trafficking and preventing future opportunities for this can be achieved through denying the benefits and disrupting the markets. Benefits can be denied by rapidly destroying the seized ivory from confiscated stockpiles so that they are effectively removed from circulation, Government stockpiles of seized ivory can be potential targets for theft and make officials responsible for safeguarding this vulnerable to the potential of corruption. Therefore, it is critical that measures be undertaken to ensure the safety of these stockpiles if these cannot be removed from circulation. Significant efforts should be made to prevent the re-entry of seized ivory into illegal markets. This can possibly be achieved by utilizing secure storage facilities that are equipped with electronic surveillance and access restriction technologies. Screening the exits of these facilities is vital for monitoring the movement of seized ivory. Periodic audits, coupled with stringent inventory controls can also ensure that these stockpiles are closely monitored and accounted for.

In addition to the efforts that can be implemented by origin and potentially transit countries, which was the focus of the recommendations above, other efforts can be undertaken at the larger (regional or international) scale. For example, controlled delivery, where law enforcement in the source country allows the ivory to continue along the trafficking routes under surveillance, can be instrumental in providing insights into the larger transnational organized criminal networks involved in this activity. Such efforts can also potentially shed light on the other convergent crimes, such as engagement of corrupt officials that facilitate the false documentation and the movement of these goods, as well as potential money laundering transactions between poachers, brokers, traffickers, and end-market buyers (Gunarto & Wahyuning-sih, 2022; Nastas & Cicala, 2024),

Lastly, enhancing mutual legal assistances between countries, which can be achieved through harmonized laws and penalties across countries, and by establishing real-time communication and monitoring channels (such as EUTWIX, AFRICATWIX) for the law enforcement to share intelligence, will likely prove successful in combatting ivory trafficking. Importantly, enhancing law enforcement efforts of proper collection, processing, and preservation of evidence is critical in ensuring that should the trafficking case reach the courts, the cases are successfully handled and not dismissed due to the lack or the contamination of evidence.

Concluding remarks

This study endeavored to use primary sources, specifically court cases, to lay out a detailed understanding of the operational dynamics involved in ivory trafficking from East Africa, specifically Kenya, Uganda, and Tanzania. The application of crime script analysis, a tool that has been employed by crime scientists to understand the sequential steps involved in crime commission, has allowed us to highlight the systematic and critical vulnerabilities exploited by traffickers. The findings highlight the need for multi-faceted approaches to combat ivory trafficking, all of which can be achieved through the application of the techniques of situational crime prevention. These techniques focus on the reduction of opportunities for this crime, regardless of the type of offenders involved. The criminological lens through which we examined the problem of elephant trafficking provided us with the valuable insights that can be used to devise more effective, empirically proven strategies to safeguard one of the world's most majestic species and contribute to their long-term conservation for future generations.

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