Security Coordination in an Illegal Market: The Transnational Trade in Rhinoceros Horn

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ABSTRACT: The seemingly inevitable demise of two species of charismatic megafauna in our lifetime – the rhinoceros and the elephant – has captured the attention of conservation organizations, regulators, and the international community. Anti-poaching measures, regulatory interventions and demand reduction campaigns have been instituted to curb the flow of illegal wildlife contraband. While these measures are laudable, they appear to achieve limited success in disrupting illegal wildlife markets. Using the example of the illegal market in rhinoceros horn, this paper focuses on security coordinating mechanisms that render illegal transnational flows of rhino horn resilient and difficult to disrupt. While analyses of legal or formal markets focus on the coordination problems of value, cooperation, and competition, it is argued here that the need to exercise caution and implement a security plan becomes more pressing when transacting in illegal and transnational markets. The paper focuses on security precautions of illegal market actors at the source and en route to consumer markets. The label of 'organized crime' is of limited use unless the concept bridges the legal/illegal divide, incorporating actors from the legal and criminal realm. The objective is to highlight the need for a deeper understanding of actors and their relationships to develop regulatory and criminal justice interventions that disrupt illegal markets and transnational flows in the long-term.

Introduction

Between two to three rhinoceroses (hereafter 'rhinos') are illegally hunted and dehorned in southern Africa daily (Key informant interviews: law enforcement official 1 and 2, 2015). Rhino horns are transported from the kill site to transport hubs including international airports and ports. From there, they travel either directly or via transit hubs to consumer markets. A variable number of actors, transport modes and routes are involved. With a price tag of 25 000 to 75 000 US $ per kg in Asian consumer markets, the horn of the three-toed ungulate counts amongst the most expensive goods in the world. According to field data from northern Vietnam (Amman, 2015) consumers were paying between 100 US $ to 120 US $ per gram for rhino horn bangles and prayer beads in 2015. At an average weight of 5,5 kg per pair of rhino horns (Pienaar, Hall-Martin and Hitchens, 1991), the horns of a single white rhino are worth close to half a million Dollars in consumer markets. Meanwhile, illegal hunters (often referred to as 'rhino poachers') were paid between 500 US $ to 12 000 US $ per horn depending on the geography, experience and social capital of the illegal huntsmen. Since 2014, poachers operating in the Kruger National Park are compensated according to the weight of the horn. Despite the huge gap in price at the source and in the market, the payment for one rhino horn outperforms most rural dwellers' annual income from legitimate means. In light of the international ban on the trade of rhino horn,[1] the dangerous method of killing the wild animal in conservation areas and on private land guarded by highly militarized wildlife custodians and the high price paid for horn, participation in the rhino horn supply chain comes with its own set of security challenges and dangers.

Resolving the coordination problems of cooperation, value and competition are pivotal to the operation of legal markets; the coordination problem of security provides an additional and crucial obstacle to actors transacting in any market. It is argued here that security coordination is a particular concern in illegal and gray markets. Not only is the security of illegal market participants and the illegal good at stake, but also the continuity of the supply chain. Especially in cases

where high-value contraband such as rhino horn is transported, actors need to ensure that the illegal goods are not intercepted en route to the market. As will be shown in the following, actors have devised clever methods to circumvent regulations and obstacles put in their paths, such as the laundering of illegal wildlife contraband into legal trade flows, or the recruitment of trustworthy legitimate actors in the transportation and subsequent distribution. Scholars and regulators are increasingly pointing to organized crime as the main culprits behind rhino poaching and illegal wildlife trade. While organized crime networks appear to possess the logistical 'know how' of transporting and distributing legal and illegal goods, a multitude of actors from the legal and illegal sector facilitate illegal trade in wildlife. In the case of rhino horn, one of the safest and most expedient methods involves facilitation and/or transportation by 'untouchables', which includes diplomats and law enforcement officials.

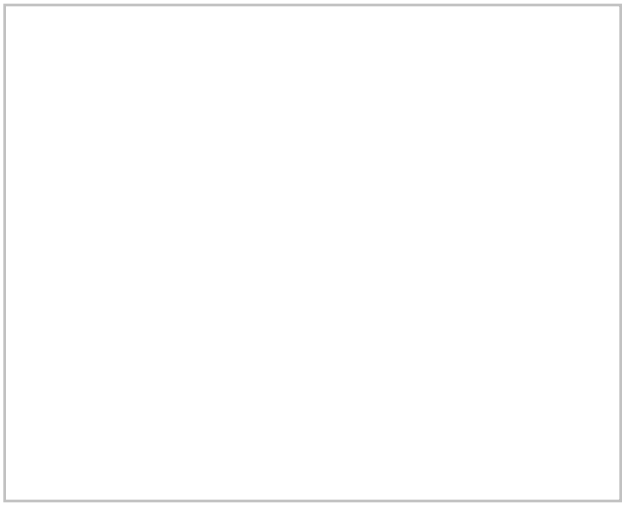
The research for this paper emanates from a doctoral research project undertaken between 2011 and 2015, and subsequent follow-up visits to field sites in 2015. The initial research project was fashioned as a multi-sited ethnography, during which the researcher followed rhino horn from the southern African bush to Asian markets. More than 420 research informants participated in interviews and focus groups during 14 months of fieldwork. The sample included, amongst others, convicted rhino poachers, active kingpins, private rhino breeders and farmers, private anti-poachers and state security forces, as well as affected local communities and Asian consumers. Court files, CITES trade data, archival materials, newspaper reports and social media posts were also analysed and used to verify and triangulate data from interviews, focus groups and observations from the field.

This paper responds to the question why the illegal market in rhino market is so resilient by honing in on security coordination mechanisms employed illegal market actors. The next section looks at existing works of literature with special reference to the resilience of rhino poaching syndicates. After that a theoretical overview of coordination problems in markets is given before moving to the coordination problem of security. While the illegal market in rhino horn consists of a complex system of flows between source and end market, this paper highlights structural and functional aspects of illegal markets that facilitate the unhindered flow of rhino horn. The concluding assessment suggests possible modes for intervention and disruption of flows.

Organized crime and rhino poaching

A growing body of literature links the resilience of poaching and trafficking networks to the structure of criminal groups or networks. Australian criminologist Ayling (2013. pp. 76-77), for example, attributes the resilience[2] of the rhino horn supply chain to the inherent features of criminal networks and the operational environment from which they operate. Ayling is somewhat ambiguous as to whether organized crime is complicit, citing an authoritative report produced by Milliken and Shaw (2012) for the trade monitoring network TRAFFIC. According to the duo, 'the organization and planning of South Africa's rhino horn trade has rapidly evolved into a sophisticated and efficient phenomenon' (Milliken and Shaw, 2012, p.76). The pronouncement that multinational crime syndicates are converging toward the illegal rhino horn sector[3] is not further elaborated or referenced in the report (Milliken and Shaw 2012, p.12). Milliken and Shaw proffer a hierarchical structure of the levels of organized crime involved in the rhino horn trade (see Graph 1).[4] It is suggested that local, national and international levels of organized crime manage the

transnational trade chain, of which the highest level ‘invariably comprised Asian individuals’ (Milliken and Shaw, 2012, p. 62).



Graph 1. Structure of rhino horn conduits; Source: adapted from Milliken and Shaw (2012, pp. 61 and 78) with additional data provided by South African law enforcement officials in 2013 and 2015

Montesh (2013, p.19) also points to the role of African-based Asian syndicate leaders in the supply chain, suggesting links to organized crime groups such as the Chinese Triads already resident in South Africa. Milliken (2014, p. 18) explains in a subsequent TRAFFIC report that Level 4 operatives (international exporter, buyer or courier as per Graph 1) are ‘African-based Asian operatives with permanent resident or long-term status within key countries such as South Africa’. These operatives associate with corrupt actors within the private sector and the state. They are highly mobile and well financed, which allows them to travel in the southern African regions and Asia to set up deals (Milliken, 2014, p. 18). While not further explained, the implicit suggestion is that the Level 4 operatives fulfil a bridging function between poachers and buyers by way of cooperative alliances and corruption. Milliken’s contribution is thus the acknowledgment of the existence of an interface between illegality and legality (the significance of the interface is explained later) and the use of corruption by criminal players to ensure the continued flow of rhino horn from the source to the market. Investigative journalist Rademeyer (2012) supports the notion of a hierarchical structure underpinning rhino poaching and wildlife trafficking networks but also points to the flexibility and changeability of the overall network structure and its parts. Rademeyer researched the ‘Pablo Escobar of animal trafficking’, Laotian national Vixay Keosavang, who is believed to head the Xayasavang network.[5] The kingpin ‘remained in the shadows, a distant puppet–master reaping the rewards of the killing but rarely dirtying his own hands’ (Rademeyer, 2014). He explains the resilience of the Xayasavang network by way of Keosavang’s arms-length approach to running the network, protection from arrest by Laotian law enforcement officials and huge financial resources as compared to the lesser resources of law enforcement agencies, bureaucratic red-tape and ‘investigations [*that*] stop where borders start’.

Some scholars cast the net beyond the 'usual suspects', pointing to the significant role of agents of the state, the wildlife industry and conservation NGOs in illegal wildlife markets. In this stream of literature, illegal rhino horn trade is described as a business enterprise facilitated by a multitude of diverse actors with close, limited or no links to 'organized crime'. Insider knowledge of market structures and exposure or access to political or economic elites render such actors important facilitators or intermediaries of illegal wildlife markets. The issue of agency in the illegal wildlife markets is not only theoretically significant but also bears policy consequences in the real world. Regulatory responses to 'insider trading' within the wildlife industry, corruption and collusion between state and industry players, as opposed to organized crime and terror networks, are likely to differ regarding the perceived seriousness of the crime, punishment and recompenses.

Naylor (2004, p. 263) refers to the "recurrent fables" of "Organized Crime" (Naylor's capitalization) operating in illegal wildlife markets "along with stories about links between wildlife trafficking and drug smuggling, and parallel claims that the contraband in wildlife ranks second only to that in drugs in terms of value". Naylor (2004, op cit.) stresses the dominant role of the wildlife industry and corrupt state officials in the illegal wildlife trade:

> "In reality this is a business largely run by industry insiders from the forest to the factory, from primary acquisition to final sale, although it may be aided and abetted by complicit politicians and corrupt functionaries."

Green criminologist Tanya Wyatt (2009) found that strict regulation of the Russian fur trade constituted a significant barrier to entry, preventing 'organized crime' and other 'outsiders' from entering the lucrative illegal trade. Local impoverished villagers from the *taiga*, registered hunters, wealthy individuals, and law enforcement officials poach, hunt or lay traps for wild animals whose pelts are destined for the fur trade. Well-heeled people with political connections or business interests in the legal fur trade act as the intermediaries and launder illegally obtained pelts into legal trade channels. Cook and colleagues (2002: 23) argue that familiarity with trade controls, government regulations, and transport routes would provide actors already in the legal trade with knowledge of the 'tricks of the trade' and possible legal loopholes to exploit opportunities in illegal markets.

Turning to the illegal rhino horn trade, Ellis (1994) shows how South Africa's apartheid-era security apparatus used illicit ivory and rhino horn trades to fund its operations. Using the controversial anti-poaching 'Operation Lock' as his point of departure, Hanks (2015) likewise shows a diverse assortment of actors, including North Korean diplomats, involved in illegal wildlife trade during the 1980s in southern Africa. Other researchers (Milliken, 2014; Milliken and Shaw, 2012; Animal Rights Africa, 2009) depict the complicit role of the wildlife industry. Rademeyer (2012) examines, for example, the role of the so-called "boeremafia" (white Afrikaners who are involved in the wildlife industry) in the illegal rhino horn trade. While the authors describe permit fraud and the laundering of illegally harvested horn into legal flows, the literature remains silent on the social mechanisms and market structures that enable these flows. While the authors describe permit fraud and the laundering of illegally harvested horn into legal flows, the literature remains silent on the social mechanisms and market structures that enable these flows. It also remains unclear how wildlife industry actors (and poachers) are connected to Asian distribution networks. Another gap relates to how actors make initial contact and establish business relations in spite of cleavages based on language, culture, nationality, social status and ethnicity. Moreover, little is known about the vertical and horizontal integration of these diverse actors

in the transnational trade chain. While the public discourse on the 'rhino crisis' is increasingly steered towards the 'underworld' of organized crime and terrorism (Bergenas and Knight, 2015; Duffy, 2014; Humphreys and Smith, 2014; Lunstrum, 2014; Sellar, 2015), important questions relating to the interface between legality and illegality remain unresolved. In the following section, an alternative theoretical approach grounded in economic sociology is proposed. This method integrates institutions, social networks and cognitive frames.

Coordination mechanisms in illegal markets

In order to study the operation and structure of illegal markets systematically, Beckert and Wehinger (2013, p. 12) propose the use of the typology of coordination problems. The point of departure lies in the recognition that for markets to operate 'uncertainty in market transactions must be reduced in several dimensions' (Beckert and Wehinger, 2013, p. 12). According to them, uncertainty in markets stems from the three coordination problems concerning value, competition, and cooperation. Actors in illegal markets are likely to be confronted with coordination problems similar to those of legal markets, subject to additional challenges due to the illegality of the market exchanges (Beckert and Wehinger, 2011, p. 7). While Beckert and Wehinger (ibid) argue that market actors require 'stable worlds' and calculability to reproduce legal and illegal markets, Fligstein (cited in Beckert, 2007, p.23) argues against the notion of stability in illegal markets. Reuter (1983) introduced the notion of 'disorganized crime', suggesting the supply of illegal commodities takes place in a disorganized manner due to the constraint imposed by the illegality, and the lack of large-scale criminal enterprises in illegal markets (Paoli, 2002, p. 52). Market actors may seek to reduce uncertainty in illegal markets; however, they might not be seeking 'stable worlds' as stability and predictability constitute operational weaknesses, which could be exploited by regulators (especially law enforcement agencies) whose aim is to disrupt illegal markets.

This paper argues that market actors face another coordination problem, the problem of security. It is suggested here that the constraints of illegality combined with the transnational nature of the market exchange render security coordination an important element of market processes. In resolving security coordination, an important element of market resilience is achieved. Security in this instance constitutes a multi-dimensional problem with implications for the personal security of market participants, the security of the supply chain and the illegal goods or services traded in illegal markets, and the possibility that a security premium might be added to the cost of illegal goods. Security measures and protection can be procured locally but how do actors ensure the security of the supply chain, the safe transfer of illegal goods from source to market and payment for the goods and transfer costs?

The coordination problem of security proposed here is qualitatively different from the problem of cooperation.[6] In fact, illegal market actors have to strike a careful balance between cooperation on the one hand, and security on the other. While cooperation may entail partnerships and resource sharing, security may reduce cooperative efforts in favour of secrecy and concealment (Morselli 2008, p. 63). Central to what Morselli et al. (2007, p. 145) describe as the 'efficiency-security trade-off' is whether criminal network actors can rely exclusively on trusting relationships or whether they have to engage in uncertain and potentially risky relationships. Reducing risk and thereby increasing security leads to a sacrifice in terms of time and efficiency, as 'each operation and the transmission of information take longer to process across the network' (ibid). In reference to transaction cost theory,[7] Basu (2014, p. 4) proposes that

due to regulatory attempts to disrupt illicit trade chains, actors have to factor in 'direct or indirect costs of exchange (concealment, corruption, evasion), as well as be prepared to write off a certain percentage of their profits due to circumstances involving contraband shipments being seized by customs or police'. The question arising here is whether the suggested security premium leads to an escalation of the overall price of an illegal good or whether actors can conceive of innovative mechanisms that increase both efficiency and security of the illegal supply chain. The illegal and transnational status of goods may perhaps lead to cost savings elsewhere, such as tax and tariffs avoidance or a structural adaptation of the supply chain (for example, fewer segments or shorter more direct routes). A further consideration relates to whether all market actors are equally affected by security considerations and precautions. Are certain flows or segments of the supply chain more prone to danger than others? How do security considerations affect the flow of goods? Security risks may arise from environmental, regulatory, intra- or inter-organizational factors, further exacerbated by the fact that market exchanges are both illegal and transnational. How does the end-user of an illegal good ensure that the good is safe for consumption? How does the buyer ensure that another actor upstream is not cheating her? Do illegal market actors outsource security? What mechanisms are employed to ensure security? The following sections show innovative security-enhancing methods employed in transnational flows of rhino horn.

Utilizing the legal/illegal interface

In recognition of South Africa's success with rhino conservation and management, the multilateral treaty governing international trade in wild species of fauna and flora – the United Nations Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) – moved white rhino populations in South Africa to Appendix II in 1994. Instead of an outright trade ban, an annotation confined permissible trade to live rhinos to 'acceptable and appropriate destinations and hunting trophies only' (CITES 1994). While CITES deals with international trade and trade bans, individual states have to domesticate CITES stipulations at the local level, and regulate the domestic trade of endangered species. Domestic trade of rhino horn was permissible in South Africa until 2009 and presented a regulatory loophole, which criminal actors were readily abusing. The annotation of permissible trades and the relatively short lifespan of the CITES prohibition[8] have allowed for legal flows to co-exist with gray (unregulated malpractices) and illegal flows. It is thus legal for live animals and hunting trophies to be exported from rhino range countries to elsewhere in the world (certain safeguards apply). Once the live rhino or the hunting trophy leaves African shores, national regulatory agencies relinquish their responsibilities to authorities in receiving countries.

Laundering illegally harvested rhino horns into legal flows thus constitutes a clever and innovative method of transporting horn from the source to the market. Several court cases heard in South African courts between 2012 and 2015 showcase the involvement of rhino breeders, professional hunters, wildlife veterinarians, taxidermists, nature conservation as well as customs officials, and wildlife guardians in the illicit 'production' and trafficking of rhino horn.[9] These actors from the formal or 'legal' sector did not only orchestrate poaching in private and public conservation areas and thefts from rhino horn stockpiles, but they were also involved in complex schemes that bypass existing conservation regulations, exploit regulatory loopholes and use legal trade channels to export illegally obtained rhino horn.

A particularly creative way of supplying Asian consumer markets with 'legally' attained rhino horn involved hunters

originating from countries that have no tradition or culture of sports hunting. For example, young Vietnamese nationals with no or a limited (sometimes falsified) track record of trophy hunting booked white rhino hunts with South African outfitters from the early 2000s onwards. In terms of CITES stipulations and domestic laws in South Africa, hunters are allowed to shoot one white rhino per calendar year while the annual quota for black rhinos is restricted to five animals. These hunting trophies may be exported as hunting memorabilia for non-commercial use. Vietnamese crime groups together with their local intermediaries recruited Vietnamese citizens as stand-in trophy hunters – this practice became known as "pseudo-hunting". The role of the stand-in trophy hunters was to pose as trophy hunters for the purposes of compliance with permit regulations while a South African professional hunter would shoot the rhino on their behalf. It is mandatory in terms of South African law that a South African professional hunter and an official from nature conservation accompany each rhino hunting party. The professional hunter is only supposed to dispatch the so-called 'kill shot' if the hunter, as per the hunting permit, fails to kill the rhino with his or her first shot and the animal is wounded. CITES regulations ban the commercial exploitation of rhino horn; rhino trophies have to stay intact when exported (as opposed to the export of the horns only, pieces of horn or powdered horn), and they may not be traded commercially. The only permissible use of a rhino trophy is thus as a hunting memorabilia in the trophy hunter's private collection.

While rhino horn obtained through "pseudo–hunting" initially passed as a legal flow out of South Africa, law abiding wildlife professionals and conservation officials became suspicious once it became apparent that the young Southeast Asian hunters were stand-in trophy hunters to obtain greater volumes of rhino horn through legal channels. The resilience and creativity of rhino horn traffickers is apparent in the employment of new strategies to bypass regulations by using local Thai sex workers and East European nationals as well as nationals from traditional hunting nations (such as the US and Russia) as trophy hunters and 'legitimate' recipients of hunting trophies (investigators found that such trophies were laundered into illegal markets). Official records show that the exportation of 'legally' attained rhino horn from South Africa to Vietnam was prevalent throughout the 2000s. The CITES Trade Database provides a register of legally exported and imported rhino trophies, and other rhino products (such as rhino tails and genitalia) from South Africa. Vietnamese horn importers were using CITES export permits to import multiple rhino horns on the same single-use export permit to Vietnam until its expiration date was reached after six months (Milliken and Shaw, 2012, p. 58). According to annual export and import data provided to CITES, Vietnam acknowledged receipt of about 25 per cent of the legally imported rhino horn trophies between 20003 and 2010. This suggests that approximately 487 of 657 'legal' rhino horns entered the illegal market in Vietnam (Milliken and Shaw, 2012, p. 58). Direct exports of rhino trophies from South Africa to Vietnam stopped entirely by 2013 (CITES Trade Database 2013) and remain suspended until the Vietnamese government imposes checks and controls.

What renders these flows particularly safe is the early stage conversion of an essentially illegal good to legal status (the laundering of illegally harvested horn into legal trade flows), and contrariwise, the conversion of a legal product (hunting trophy) into an illegally traded good in consumer markets. The early conversion curtails opportunity costs and risks further down the supply chain. From an illegal market actor's perspective, this mode of obtaining horn is not only a safe and expedient method, but it also minimizes the number of transport intermediaries required from the point of origin to the consumer market. It also allows a largely unhindered passage of rhino horn through the minimal exposure to social control actors (national and international law enforcement agents) and measures aimed at disrupting the

market. Moreover, the horn stays in its original state, meaning it is not processed into smaller pieces or powder form before reaching the consumer market. This is significant when it comes to quality control, valuation and pricing of the horn in the consumer markets. However, the cost of pseudo-hunts tallies with market prices for legal rhino trophy hunts. It is, therefore, more expensive than the illegal hunting of rhinos in conservation areas. Rhino poaching is essentially cheaper but carries more security risks with regards to obtaining the horn, which is discussed in the following section.

Security concerns of poachers and kingpins

Interviews with rhino kingpins,[10] intermediaries, smugglers and poachers and their law enforcement nemeses revealed that hunting expeditions into parks and reserves range from highly organized, well-planned and executed to opportunistic and sometimes chaotic operations. Tidings of the high earnings attached to rhino poaching have led to amateurs seizing the opportunity, and embarking on chaotic badly planned rhino hunts. While some opportunists are caught and arrested, others succeed.[11] Rhino kingpins coordinate highly-organized operations, which come with the promise of fringe benefits to poachers such as life insurance in case of death, support to the family, and access to top criminal lawyers in the case of capture.[12] They tolerate 'unattached' or independent hunting crews, many of whom ultimately choose to cooperate with the kingpins, as they have ready access to buyers, hunting rifles, ammunition, and they provide logistical support before and after hunts. While there was no evidence that kingpins or competing poaching crews informed on unattached or less experienced hunting crews, there was a sense that the unlucky ones served as cannon fodder[13] or 'dead cows for piranhas'.[14] A kingpin explained that the 'bosses' had a preference for a great number of rhino hunts to take place concurrently. The Kruger National Park's security forces[15] have only the capacity to deal with a limited number of 'trespassing' incidents – 'maybe one or two' while the others 'will still bring back the horn' (Key informant interview: rhino kingpin 1, 2013). Some hunting expeditions are choreographed in such an efficient manner that the outgoing hunting crew will swap hunting rifles and intelligence on fresh rhino tracks and the position of anti-poaching units as they pass incoming crews.

Originally kingpins recruited their own hunting teams from local villagers who were firmly embedded in their communities, and could be trusted to bring back rhino horn. However, news of the good fortunes of rhino poachers has travelled beyond the village communities in and around the parks. Many new hopefuls arrive daily in the hope of getting recruited into poaching crews. Initially, these rhino crime bosses were seeking to recruit men with hunting or bush tracking skills. In the aftermath of the decades-long civil war in Mozambique, many men (and women) possess military and tracking skills, and some have access to old weapons from caches situated in the border areas.[16] In the early phase of poaching in the Kruger National Park (KNP), and AK-47's, as well as Portuguese colonial hunting rifles fitted with home-made silencers were used to kill rhinos. As the rhino fortunes grew, kingpins and poachers invested in sophisticated hunting rifles such as Mauser .458's and .375's typically used by trophy hunters to shoot rhinos or elephants. One kingpin said that he and one of his close associates would also provide weapons training to new recruits. Another kingpin accepted new recruits once they had passed a test, which could range from hunting bush meat through to acquiring hunting rifles through a holdup or robbery.[17] Poaching crews usually consist of a hunter, a tracker and a

food and water carrier. The number of participants in hunting crews is, however, variable, depending on the projected duration of the stay inside the KNP. In light of declining rhino numbers and increasing pressure from anti-poaching units, poaching crews spend longer periods of time tracking rhinos and evading detection in the KNP. The duration of the hunting expedition is contingent on the reliability of the group's intelligence. The changed state of affairs has led to the enlargement of some hunting crews. Additional members are enlisted to carry extra provisions for longer stays in the park and to provide protection in case of detection. Larger groups may split up once they are inside the KNP. Some hunting crews enter the KNP legally and book into rest camps; others use one of the many footpaths and animal migration routes traversing parks, reserves, and wilderness areas. When rhino poaching increased in frequency in the late 2000s, poaching crews focused on areas with high rhino densities in the southern parts of the KNP. When entering the KNP from the Mozambican side, poachers are dropped off as closely as possible to the fence line. An off-street vehicle (a so-called four-by-four) is needed to drive along the bad sand roads. Another option further south is the hiring of a boat to row across the Corumana dam, or simply to wade across the Sabi River. While the majority of poachers[18] were crossing into the KNP from the Mozambican side until 2015, poaching gangs were increasingly entering the Park from the 'eastern boundary' at the time of writing. This move suggests an adaptation of criminal behaviour based on the "balloon effect". The term refers to the geographic displacement of criminal markets as a reaction to policy or law enforcement interventions (Windle and Farrell, 2012, p.868). The deployment of ninety South African National Defence Force (SANDF) troops and the growing number of well-coordinated poaching disruptions of the Kruger rangers may have contributed to the geographic displacement.

Beyond traversing difficult terrain, poachers face a multitude of dangers and risks for which they have developed innovative protective measures. Brotherhood exists between poaching crews from village communities: Information on rhino sightings and ranger presence is shared. An early warning system has been devised in Massingir: different types of cool drink cans on the roof rack of kingpin's off-street vehicle signal whether it is safe to head into the KNP. Poachers also consult with traditional healers (so-called 'sangomas') ahead of poaching expeditions. A sangoma will advise as to when it might be safe for poachers to slip through the fence line and hunt rhinos. They also prepare 'muti' (medicine) to protect poachers during the hunt.[19] Some sangomas recommend the removal of the eyes and ears of the dead rhino. According to a convicted poacher (Key informant interview: convicted offender 17, October 2013), 'the rhino's soul can't hear or see you [the poacher] and can't show who you [the poacher] are.' The role of the sangoma is attributed to high status and influence in village life. Many poachers related how the sangoma's sanctioning of a planned hunt was as important as leasing the gun. In essence, the sangoma legitimized the illegal expedition into the KNP by providing protection and the go-ahead.

Once the hunting crew leaves the bush, the buck stops with the kingpin, who wears many different hats, but most importantly, he has to assure that the horn moves further along the illicit supply chain. What differentiates kingpins from poachers is their social capital, which incorporates the ability to communicate and trade beyond the geographic confines of village communities. On the one hand, kingpins are competent economic actors that hold the key to local horn transactions; on the other hand, these kingpins exude high levels of social and cross-cultural mobility enabling them to undertake business with criminal actors, transcending boundaries presented by ethnicity, language, and nationality. Kingpins recruit, mobilize and motivate others to partake in hunting expeditions that involve the illegal

killing and dehorning of rhinos in protected areas. They ensure that hunts go ahead without disruptions by governmental or traditional authorities; in other words, standing arrangements exist to ensure the uninterrupted flow of horn from the park to the buyer. Once the kingpin takes receipt of the horn, a process of quality control commences. Upon confirming weight, provenance and authenticity of the horn, the kingpin 'secures' the horn from detection through law enforcement for its onward journey. Kingpins, poachers, and smugglers confirmed that the horn is left intact; in other words, it is not processed into disks, pieces or powder at the source. As an anti-poaching measure, some rhinos carry satellite trackers in their horn. Poaching crews use rubber tubes of car tires to disrupt the tracker signal en route to the kingpin (Key informant interview: poacher 15, August 2013). The kingpin will boil the horn to stop organic material from releasing putrid smell,[20] which could attract the attention of sniffer dogs. To permanently disrupt the tracking device, kingpins put the horn into an oven, 'baking' the tracking device at extremely high temperatures for several hours, which destroys the signal permanently (Key informant interview: kingpin 2, June 2013). These security and quality control measures showcase sophisticated planning and foresight of wildlife trafficking groups.

Kingpins also provide the important bridge between supply and demand by facilitating the safe and speedy passage of horn from the park to the buyer or smuggler. This process earns them double commission; they thus profit from 'buying' the horn from their own or independent poaching crews, and from selling the horn to the smuggler or buyer. Initially, the rhino horn was supplied to South African buyers, who arranged its integration into gray and legal flows. The migration to new buyers (Chinese and Vietnamese buyers), local markets (Chokwe, Maputo, Beira) and routes (from Maputo, Nairobi, Lusaka to Middle Eastern and Asian entrepôts or directly to the market) appears to have been triggered by opportunity structures presented by the geographic location of Mozambique, the presence of rhinos close to the Mozambican border in the KNP and the state of the criminal justice system in that country (dedicated conservation legislation rendering poaching a punishable crime was passed in 2014). In the late 2000s, kingpins and independent poachers sought out new buyers to introduce competition and negotiate better prices for the horn. The rapprochement of kingpins, poachers, and Asian buyers was actively pursued, and business connections were established through opportunistic meetings or referrals. Many of the extant kingpins have worked and travelled beyond their village communities, which allowed them to reach out and establish both strong and weak links in South Africa and beyond.

While business alliances are fluid and reinvented frequently, the demand has grown to the extent that horn is pre-ordered and, in some cases, a deposit is paid to ensure exclusive delivery to the ordering party. The time-span between placing the order and receiving the horn plays a significant role, especially in cases where couriers are already awaiting their consignment. Transporters and buyers hence prefer to engage with kingpins who have a reputation for speedy delivery of the genuine product. There are however no exclusive relationships; in other words, kingpins engage with a number of buyers and vice versa. Moreover, some kingpins combine intermediary and transport functions. In such cases, the kingpin or a trusted associate transports the horn to the buyer or courier, or the latter undertakes the journey to fetch the horn (a rare occasion).

Although the initial procurement of rhino horn is essential to initiating this illegal flow, securing its onward journey is equally important and navigated through relationships built on trust and the reputation of those involved. Kingpins have struck up deals with law enforcement officials in some instances, whereby a police officer transports rhino horn to the buyer, or ensures its safe passage. The most common form of horn transportation from the border villages involved a

close and trusted associate of the kingpin transporting the horn to the buyer or transnational courier. These local horn couriers tend to use public transport – buses and minibus taxis – commuting between Gaza Province and Maputo (or one of the other transhipment hubs). Public transport provides another layer of protection to the courier. In the case of detection, the courier can easily shift the blame to the driver or fellow passengers. Local couriers have trust-based relationships with kingpins anchored through familial, kinship or past criminal relationships; kingpins seldom use so-called 'runners' as the risk of detection and defection is too uncertain.

The role of intermediaries as insurance policy

The significance of the responsibilities and functions linked to the intermediary role needs to be underscored: The function is not only important in connecting potential buyers (Asian networks) with suppliers (rhino poachers and farmers), but it also puts distance (an additional node or segment) between different stages of the supply chain. The intermediary may also fulfil the function of the 'fall guy' should 'something go wrong'. In essence, the intermediary provides protection to both the supplier and buyer, thus resolving a potential fall-out due to distrust on either side.

The story of Chumlong Lemtongthai, the Thai intermediary of the Xayasavang network provides an interesting case study: The primary modus operandi of the Xaysavang network is the conversion of illegally obtained wildlife and wildlife parts into seemingly legal wildlife commodities. The network smuggles 1000s of wild animals and animal parts to Laos each year. Keosavang maintains several captive breeding facilities and farms in Laos, from where illegally obtained wild animals or animal parts are exported with legitimate Laotian government paperwork stating that the animals derive from captive breeding facilities (Fuller, 2013, key informant interview: Steven Galster September 2013). Dubbed the 'Pablo Escobar' of illegal wildlife trade (Rademeyer, 2014), Vixay Keosavang has robust networks extending to the political and military elite of the Southeast Asian country (Gosling, Reitano, and Shaw 2014, p. 24). The former soldier turned business mogul remains 'untouchable' in his home country of Laos (Gosling, Reitano, and Shaw, 2014, p. 23) despite the US issuing a $1 million reward for information leading to the dismantling of the Xaysavang network in 2013.

Chumlong Lemthongthai was coordinating the South African operation of the wildlife trafficking network until his arrest in 2011 and subsequent conviction in 2012. Why was Lemthongthai arrested? Moreover, did his arrest and his subsequent trial and of his co-accused successfully disrupt the market for any length of time? Johnny Olivier, the South African associate who was responsible for the 'administrative go-between activities' (he was paid R 5000 per rhino) allegedly got scruples when he discovered an order from Lemthongthai to game farmer Marnus Steyl for a further fifty rhinos (one hundred rhino horns) and three hundred sets of lion skeletons.[21] Olivier turned state witness, and his statement to private investigator Paul O'Sullivan led customs investigators to the heart of the Xaysavang's South African operation, but left the transnational smuggling operation and supply chain virtually undisturbed. Olivier and his girlfriend received immunity from prosecution and entered a witness protection programme; however, his betrayal did not go unnoticed. Lemthongthai put out an R 100 000 bounty on their heads, and the couple started receiving veiled threats on social media and suspicious phone calls. Apparently Lemthongthai had taken everyone's photo at a party a few months earlier. Should any team member 'snitch', then their photo would be sent to people that knew how to take care of snitching (Kvinta, 2014). While the digital capture of conspirators suggests that Lemthonghai tried to secure his illegal operation by way of a perfunctory insurance policy, an intricate and complex system appears to protect the

Xayasavang network. Lemthongthai was assigned as the 'fall guy' who took the blame as the 'director' of the import export company; Olivier had his day in court and lived to tell the tale. Charges were dropped against all of Lemthongthai's co-accused[22] after he pleaded guilty and claimed that the others had no knowledge of the illegal dealings.

The risk of 'getting caught' is considered an operational risk to wildlife traffickers and succession planning and securing the continuity of the supply chain is inherent to any successful transnational operation, thus resolving the coordination problem of security. The network had several fall back scenarios in case of detection and defection of key players. Lemthongthai had left an impeccable digital record of his 'legal' business dealings,[23] which had assisted investigators and prosecutors in putting their case together. While Lemthongthai may have been the designated as the 'fall guy', the network assigned some of South Africa's finest legal minds to his case. The lawyers first fought in the High Court and later in the Supreme Court of Appeal for reductions to Lemthongthai's prison term. The initial 40-year sentence was first reduced to a 30-year term, and then the Supreme Court of Appeal took off a further 17 years in 2013. Lemthongthai is to serve a 13-jail sentence and pay a fine of R 1 million. According to law enforcement sources, the Laotian kingpin Keosavang is taking good care of Lemthongthai's family in Thailand in the interim, and he will be generously rewarded upon his release from prison. By exonerating the others, Lemthongthai ensured that none of the other co-accused would release privileged information about the network's operations and that they could carry on with their nefarious activities. The arrest and conviction of Keosavang's 'deputy' (Rademeyer, 2014) failed to disrupt the market. While it put an end to the recruitment of Thai sex workers as trophy hunters, other 'legal' and illegal flows of rhino horn continue to feed the market. A separate case in Kenya has linked the Xaysavang network to ivory trafficking (Fuller 2013)[24] while interviews with convicted rhino offenders and organized crime investigators indicated that the network members were involved in a number of other legal and illegal flows of rhino horn, ivory, lion bone and other wildlife products out of South Africa, Namibia, Mozambique, and Tanzania. Evidence at Lemthongthai's trial had included airway bills showing that some rhino horns had been shipped to one of Keosavang's addresses in Laos – yet, this evidence did little to dismantle or disrupt his transnational operations (Fuller, 2013).

Opportunity structures

The heterogeneous profile of local and international transporters and their strategic deployment is noteworthy. Transporters acting on behalf of international buyers (predominantly Asian) are individuals with legitimate business interests in rural areas and village communities or in local markets, such as running a local retail business, or involvement in the telecommunications, construction, mining or university sectors. The mode of inland transportation and transhipment hub changes frequently, contingent on the choice of transcontinental transportation. Research elsewhere (Milliken, 2014, p. 20–21) and empirical data collected for the current study at both ends of the supply chain[25] suggest that most horn leaves the African continent by plane, its onward journey from entrepôts depends on the connectedness of intermediaries. Kingpins and their trusted assistants thus ferry the horn either to the local market (Chokwe, Beira, and Maputo)[26] or directly to the buyer's transport intermediary who would be based in Maputo or [27]

Johannesburg. The latter option of the kingpin or the local transporter transferring the horn to the buyer, or the transcontinental transport intermediary, is the preferred choice as it is fast and efficient. While earlier sections pointed to complex systems and relationships involving wildlife professionals and criminal networks participating in gray channelling, rhino poaching in the KNP has afforded criminal actors the opportunity to pursue decentralized, simple and direct routes due to the opportunity structures presented by Mozambique bordering the Park. The simplest, most direct and efficient route from the KNP to international transport hubs is also the most secure and has been tried and tested by cross-border smugglers involved in a bouquet of criminal markets for several decades.

Seen from a Mozambican perspective, rhino poaching was not specified as a criminal offence in the Mozambican criminal code until April 2014. According to Portuguese colonial laws, poaching of wildlife was indeed a minor transgression in Mozambique obtaining discretionary fines until April 2014, except for the occasional heavy-handed action against villagers suspected of subsistence poaching in national parks (Witter, 2013). Rhino kingpins justified illegal hunting by stating that rhino poaching was not even a crime in Mozambique (at the time). Moreover, hunting of wild animals is a rite of passage for young boys growing up in rural areas, and boys and men had been hunting in the former Coutada 16 (now designated as the Limpopo National Park, which borders the KNP) for many generations. Poachers referred to the double-edged morality of the state allowing 'white men' to hunt rhino legally while the 'black man' was guilty of a criminal offence, and stigmatized as a 'poacher' because he could not afford the pricing of commercial sports hunting. The Mozambican parliament passed the Conservation Areas Act (Republic of Mozambique 2013) in April 2014, which provides for custodial sentences of between eight and twelve years for individuals who kill any protected species without a license or use banned fishing gear such as explosives or toxic substances. The Act also penalizes individuals found using illegal firearms or snares with a prison sentence of up to two years. Anyone found guilty of the illegal exploitation, storage, transport or sale of protected species will be fined between 50 and 1000 times the minimum monthly national wage paid to public officials (CITES Secretariat 2014, p. 8– 9). Rhino poaching and the trafficking and possession of rhino horn thus were criminalized in Mozambique in April 2014. However, the country's legislation is currently being revised to impose stiffer penalties for traffickers. At this stage, smugglers receive a monetary fine whereas poachers get jail time.

South African authorities have successfully intercepted several huge and multiple smaller consignments of rhino horn, often smuggled in tandem with other prohibited wildlife products passing through Oliver Reginald (OR) Tambo International Airport (Key informant interviews: SARS investigator 1, March 2013). Similar to drug trafficking networks, the profile of rhino horn couriers, routes, and the points of departure and arrival are highly adaptable. According to law enforcement sources, Vietnamese nationals have smuggled rhino horn from airports elsewhere in southern Africa, with the international airports in Nairobi and Maputo frequently featuring as transhipment nodes. Airlines with direct or indirect flights to Vietnam and other Southeast Asian destinations such as Bangkok and Hong Kong are preferred. European airports also serve as transit hubs (An, 2015). Enrolled at South African universities and educational facilities, several Vietnamese students acted as horn couriers upon returning to their home country for Tet celebrations[28] and other holidays (Key informant interview: Organized crime investigator 3, August 2013). African transcontinental smugglers are a rarity because Asian law enforcement agents are reputed to screen people traveling on southern African passports (Small group discussion: Customs officials, Hong Kong, August 2013 and key informant interview: Law enforcement professional 1, Ho Chih Minh City, September 2013).

While rhino horn is still transiting through OR Tambo International Airport, Maputo International Airport has become the airport of choice for organized crime groups. Staff members from the higher echelons of airport management through to customs and cleaning staff have a reputation for assisting with the safe passage of contraband against a small fee. This corresponds with the observation of an airport executive based at Maputo International Airport, who stated that illegal wildlife contraband was only detected, and confiscated when the relevant gatekeepers had not received their bribe. They may also be unhappy with the amount paid, or, the horns were 'supposed' to be confiscated as a token of political will (Key informant interview: airport official, Maputo, July 2013). Rhino horn is also smuggled onboard of shipping vessels, concealed inside containers carrying a variety of natural resources from southern and East African port cities including Cape Town, Durban, Beira, Mombassa and Dar es Salaam. Smugglers remarked that air travel was the preferred mode of transportation due to time and efficiency concerns.

A particularly safe method of horn transportation involves diplomatic staff of Asian embassies based in southern Africa. The dubious role of embassy staff came initially under the spotlight after environmental journalists filmed the Vietnamese embassy's former first secretary receiving rhino horns from a known trafficker on the street outside the Vietnamese embassy in Pretoria in 2008 (50/50, 2008).[29] South African police officers also found evidence that the former economic attaché was using his diplomatic immunity to transport and smuggle rhino horns in diplomatic vehicles and bags (Rademeyer 2012, p. 257). A political counsellor at the embassy and the deputy head of the Vietnamese 'Government Office' were equally implicated in rhino horn procurement and transport (Rademeyer 2012). The South African government is believed to have expelled a North Korean diplomat in December 2015. The diplomat allegedly abused his diplomatic immunity and the embassy's diplomatic pouch to smuggle rhino horn out of South Africa. He was arrested in the Mozambican capital of Maputo in May 2015 after 4.5 kilograms of rhino horn and close to $ 100 000 were found inside a vehicle he was traveling. The car had diplomatic number plates and was registered to the North Korean embassy in Pretoria. The diplomat and his companion were subsequently released on bail of $ 30 000 and returned to South Africa (Rademeyer, 2015). Disrupting illegal flows of rhino horn becomes a matter of high politics and quiet diplomacy when criminal actors can claim diplomatic immunity from prosecution. By virtue of their diplomatic status, diplomats and their pouches are considered untouchable. The smuggling of any contraband through diplomatic channels is the most secure flow because law enforcement bodies hold no jurisdiction to open and search diplomatic pouches (compare with the United Nations Conference on Diplomatic Intercourse and Immunities 1961: Article 27 of the Vienna Convention on Diplomatic Relations). Fieldwork in Vietnam revealed that buyers and consumers trusted the provenance and authenticity of rhino horn when procured from or via diplomats and government officials. As was the case with pseudo-hunted rhino trophies, the horn stays unprocessed, which aids quality control and product differentiation at later stages.

Conclusion

A striking aspect of organized crime literature is the dominant narrative of stigmatizing 'the other'. Although the so-called 'alien conspiracy theory'[30] has been discredited in the literature (Varese, 2011; Gambetta, 2009; Naylor, 2004 (b); Reuter, 1983); stereotypical notions of 'good versus evil' or an underworld of criminals versus a sea of law-abiding citizens persists in much of the literature.[31] Of concern in the rhino literature is the 'othering' and stigmatization of

foreign criminals while the role of local crime syndicates, wildlife industry players, and state actors remains unacknowledged or is downplayed. This further contributes to established notions of foreign or 'transnational' organized crime networks disrupting political governance and economic structures in southern Africa while local or 'indigenous' criminal groups serve as the foot soldiers of these foreign groups (see for example Standing, 2003). Corruption is presented as a key strategy of organized crime to undermine the government, law enforcement and the formal economy. The idea of a foreign-dominated parasitic conspiracy that rides on the weaknesses of regulatory and legislative structures as suggested in the literature is questioned in this paper. The reliance on this traditional notion of 'organized crime' as the driving force behind the illegal rhino horn market ignores the role of other 'non-criminal' actors. The literature also falls short on providing a convincing answer as to how different segments in the rhino horn supply chain are interlinked. With regards to the overall rhino horn market structure, an open question pertains to whether the notion of 'organized crime' as conceived in the rhino and broader organized crime literature is a useful conceptual and theoretical construct, or whether it serves to muddy the analytical waters and feeds into regulatory objectives.

The focus of this paper was to show how actors resolve security coordination in illegal markets. By honing in on such coordination mechanisms, actors from the legal realm were also included in the overall analysis. Existing literature suggests that criminal networks face an efficiency/security trade-off and security concerns appear to reign supreme in operational decision-making (Morselli, Giguère, and Petit, 2007; Lindelauf, Borm, and Hamers, 2009). Trust and secrecy thus are considered the two binding mechanisms that ensure and facilitate collaboration between network members and enable flows (Morselli, Giguère, and Petit, 2007, p. 144). Empirical evidence collected for this project suggests the need for a more nuanced interpretation when it comes to rhino horn supply chains. While security concerns appear to play a structuring role in gray flows of rhino horn (for example the Lemthongthai case study), a security plan can also enhance the efficiency of the supply chain. In other words, securing the good, supply chain and/or key actors may equally resolve efficiency concerns, including quality control. A few innovative security methods were highlighted in this paper, which did not only enhance the personal security of market participants but also ensured the unhindered passage of rhino horn from the source to the market. The role of intermediaries was underscored by using case studies of kingpins and poachers, as well as transporters. While some illegal market actors utilize the interface between legality and illegality to their advantage, others use their social or official status to ensure the safe transfer of rhino horn. The paper also highlighted opportunity structures such as geographic location and governance structures that facilitate poaching and trafficking.

The shorter the supply chain (fewer segments or nodal points), the faster and more secure the flow. Gray channelling (capitalizing on the illegal/legal interface) tends to involve more segments along the supply chain as a precautionary security measure. The increase of market segments also leads to a greater number of intermediaries, which may carry the risk of defection and additional costs. Pseudo-hunting, for example, was more costly (incurred a security premium) than rhino poaching because criminal actors had to pay for trophy hunts, flights, accommodation and time of the stand-in trophy hunters, professional hunters, and conservation officials.

Buyers commented on their preference for shorter supply chains with a few 'tried and tested' intermediaries. These are nonetheless frequently swapped depending on the final destination of the horn and the mode of transportation. A few

strategic actors such as government officials and law enforcement agents receive regular payments to ‘clear the coast’, suggesting that bribery and corruption do feature in both gray and illegal flows of rhino horn. While few diplomats have been caught red-handed in southern Africa, empirical data from Vietnam suggests that the use of diplomatic pouches to transfer wildlife contraband is not an isolated phenomenon. Moreover, the role of customs and police officers in facilitating the transfer of rhino horn at transport hubs secures onward passage while also avoiding lengthy customs clearance processes that obtain to ‘legal’ export and imports. Finally, illegal market participants use legitimate business projects in rural areas and import/export sectors as concealment of illegal economic activities. Future research should tackle how these legitimate businesses might channel illicit financial flows emanating from poaching and illegal trade in wildlife. In conclusion, it is proposed that regulators and law enforcement turn their attention to following illegal flows of rhino horn beyond national jurisdictions. An enhanced understanding as to how poaching and illegal wildlife trade are financed and ‘follow the money’ approaches might lead to surprising insights as to who the real culprits are.

References

50/50. (2008). ‘Vietnam embassy was caught red-handed in illegal rhino horn transaction’ In.

Amman, Karl. (2015). ‘Characteristics of rhino horn trade along Vietnam's northern borders' on: Conservation Action Trust website.

An, Ha. (2015). '65 kgs of smuggled rhino horns, ivory busted at Hanoi airport', *Thanhnien News*. Ho Chi Minh City.

Animal Rights Africa. (2009). 'Under siege: Rhinoceroses in South Africa.' in: Animal Rights Africa. Johannesburg.

Ayling, Julie. (2013). 'What Sustains Wildlife Crime? Rhino Horn Trading and the Resilience of Criminal Networks.', Review of. *Journal of International Wildlife Law& Policy* 16 (1), p. 57-80. doi: 10.1080/13880292.2013.764776.

Basu, Gautam. (2014). 'Concealment, corruption, and evasion: a transaction cost and case analysis of illicit supply chain activity.', Review of. *Journal of Transportation Security*,1-18. doi: 10.1007/s12198-014-0140-8.

Beare, Margaret. 2003. 'Introduction,’ in: *Critical reflections on transnational organised crime, money laundering, and corruption*, Margaret Beare (ed), XI - XXIX. (Toronto, Canada University of Toronto Press).

Beckert, Jens. (2007). 'The Social Order of Markets’, in: *MPIfG Discussion Papers,* 32. (Cologne: Max Planck Institute for the Study of Societies).

———. (2009). 'The social order of markets. Review of. *Theory and Society,* 38 (3), pp. 245-269. doi: 10.1007/s11186-008-9082-0.

Beckert, Jens, and Wehinger Frank. (2011). 'In the Shadow: Illegal markets and economic sociology' in *MPIfG Discussion Papers*, 25. (Cologne: Max Planck Institute for the Study of Societies).

Beckert, Jens and Wehinger, Frank (2013). 'In the Shadow: Illegal markets and economic sociology' Review of. *Socio-Economic Review* 11 (1), pp. 5-30. doi: 10.1093/ser/mws020.

Bergenas, Johan and Knight, Ariella, (2015). 'Green terror: Environmental crime and illicit financing.' Review of. *SAIS Review of International Affairs*, 35 (1), pp. 119-31.

CITES. (1994). 'Resolution Conference 9.14: Conservation of and trade in African and Asian rhinoceroses,' on: CITES

website.

CITES Secretariat. (2014). 'Interpretation and implementation of the Convention, Species trade and conservation: Rhinoceroses.' on: CITES website.

CITES Trade Database. (2013). 'Export data: Ceratotherium simum simum,' on: CITES website.

Connett, David. 2014. '$1m bounty of the 'Pablo Escobar' of animal trafficking head: Reward targets Vixay Keosavang in new escalation of fight against this 'lucrative' crime', *The Independent.* London.

Cook, Dee; Roberts, Martin; Lowther, Jason (2002). ' The international wildlife trade and organised crime: A review of the evidence and the role of the UK'. London, United Kingdom: WWF.

Duffy, Rosaleen (2014). 'Waging a war to save biodiversity: The rise of militarized conservation.', Review of. *International Affairs*, 90 (4), pp. 819–834.

Ellis, Stephen (1994). 'Of elephants and men: Politics and nature conservation in South Africa.' Review of. *Journal of Southern African Studies*, 20 (1). pp. 53-69.

Fuller, Thomas. 2013. 'In trafficking of wildlife, out of reach of law.' *New York Times*. New York.

Gambetta, Diego (2009). *Codes of the underworld*. (Princeton and Oxford: Princeton University Press).

Gosling, Justin; Reitano, Tuesday, and Shaw, Mark (2014). 'The global response to transnational organized environmental crime.' in *Global Initiative against Transnational Organized Crime series on Environmental Crime*. Geneva: The Global Initiative against Transnational Organized Crime.

Hanks, John (2015). *Operation Lock and the War on Rhino Poaching.* (Cape Town: Penguin Books).

Humphreys, Jasper, and Smith Mike L. R. (2014). 'The 'rhinofication' of South African security.' Review of. *International Affairs*, 90 (4), pp. 795-818. doi: 10.1111/1468-2346.12141.

Kerry, John. (2013). 'First reward offer for transnatinal organized crime.' (Washington, DC: U.S. Department of State).

Kvinta, Paul (2014). 'The madness of modern-day poaching', in: *Outside Live Bravely*.

Lindelauf, Roy; Borm, Peter and Hamers, Herbert (2009) 'The influence of secrecy on the communication structure of covert networks', Review of. *Social Networks* 31 (2), pp.126-137. doi: http://dx.doi.org/10.1016/j.socnet.2008.12.003.

Lunstrum, Elizabeth (2014). 'Green Militarization: Anti-Poaching Efforts and the Spatial Contours of Kruger National Park.' Review of. *Annals of the Association of American Geographers,* 1-17. doi: 10.1080/00045608.2014.912545.

Milliken, Tom (2014). 'Illegal trade in ivory and rhino horn: An assessment report to improve law enforcement under the Wildlife TRAPS Project', in: USAID and TRAFFIC.

Milliken, Tom and Shaw, Tom (2012). 'The South Africa–Viet Nam rhino horn trade nexus: A deadly combination of institutional lapses, corrupt wildlife industry professionals and Asian crime syndicates'. (Johannesburg, South Africa: TRAFFIC).

Montesh, Moses (2013). 'Rhino poaching: A new form of organised crime.' Pretoria: UNISA.

Morselli, Carlo (2008). *Inside Criminal Networks*. (New York: Springer).

Morselli, Carlo; Giguère, Cynthia and Petit Katia (2007). 'The efficiency/security trade-off in criminal networks.', Review of. *Social Networks,* 29 (1), pp. 143-153. doi: http//dx.doi.org/10.1016/j.socnet.2006.05.001.

Naylor, R. Thomas (2004) 'The Underworld of Ivory.' Review of. *Crime, Law and Social Change* 42 (5), pp. 261-295.

Naylor, R.Thomas (2004). *Wages of Crime: Black Markets, Illegal Finance and the Underworld Economy*. Vol. revised edition. (Montreal: McGill Queens's University Press).

Olivier, John (2011). 'Police statement',Johannesburg. Bramley Police Station.

Paoli, Letizia. (2002). 'The Paradoxes of Organized Crime.' Review of. *Crime, Law, And Social Change,* 37 (1), pp. 51-97.

Pienaar, Daan J.; Hall-Martin A. J. and Hitchens Peter M. (1991). 'Horn growth rates of free-ranging white and black rhinoceros.' Review of. *Koedoe,* 34 (2), pp. 97–105.

Rademeyer, Julian (2012) *Killing for Profit: Exposing the illegal rhino horn trade*. (Cape Town: Zebra Press).

———. 2014. 'Untouchable? Wildlife crime kingpin Vixay Keosavang.' Environmental Investigation Agency.

———. 2015. 'North Korean diplomat expelled from SA for rhino horn trafficking.' In *News24*.

Republic of Mozambique. 2013. 'Conservations Areas Act'. (Maputo: Assembly of the Republic).

Reuter, Peter. 1983. *Disorganized Crime the Economics of the Visible Hand*. (Cambridge, Massachusetts: The MIT Press).

———. 1987. 'Fact, Fancy, and Organized Crime' Review of. *The Public Interest,* 53, pp. 45-67.

Sellar, John M. (2015). 'What's happening in Kruger is so much more than poaching.' In. Linked In.

Standing, Andre. (2003). 'Rival views of organized crime', in: Institute for Security Studies (ed), *ISS Monograph Series*. (Pretoria, South Africa: Institute for Security Studies).

United Nations Conference on Diplomatic Intercourse and Immunities. (1961). 'Vienna Convention on Diplomatic Relations', in: *United Nations Treaty Series.*

United Nations General Assembly. (15 November 2000). 'United Nations Convention against Transnational Organized Crime', in: United Nations (ed), *Adopted by General Assembly resolution 55/25*.

Varese, Federico (2011) *Mafias on the move*. (Princeton: Princeton University Press).

Williamson, Oliver E. (1989). 'Transaction cost economics.' Review of. *Handbook of industrial organization,* 1, pp. 135-182).

Windle, James and Farrell, Graham (2012). ' Popping the balloon effect: Assessing drug law enforcement in terms of displacement, diffusion, and the containment hypothesis', Review of. *Substance Use and Misuse*, 47 (7-8), pp. 868-876.

Witter, Rebecca (2013). 'Elephant-induced Displacement and the Power of Choice: Moral Narratives about Resettlement in Mozambique's Limpopo National Park', Review of. *Conservation and Society,* 11 (4), pp. 406–419.

Wyatt, Tanya (2009). 'Exploring the organization of Russia Far East's illegal wildlife trade: Two case studies of the

illegal fur and illegal falcon trades.' Review of. *Global Crime* 10, pp. 144-154.

Interview data

Key informant interview: Law enforcement official 1, December 2015, Pretoria, South Africa.

Key informant interview: Law enforcement official 2, December 2015, Pretoria, South Africa.

Key informant interview: Organized crime investigator 3, August 2013, Pretoria, South Africa

Key informant interview: SARS investigator 1, March 2013, Pretoria, South Africa.

Key informant interview: Rhino kingpin 1, June 2013, Cubo, Mozambique.

Key informant interview: Rhino kingpin 2, June 2013, Massingir, Mozambique.

Key informant interview: Rhino kingpin 3, August 2013, Massingir, Mozambique.

Key informant interview: Anti-poaching official 3, July 2013, Kruger National Park, South Africa.

Key informant interview: Convicted offender 17, October 2013, undisclosed correctional centre, South Africa.

Key informant interview: Rhino poacher 15, August 2013, Massingir, Mozambique.

Key informant interview: Airport official, July 2013, Maputo, Mozambique.

Key informant interview: Steven Galster, Freeland Foundation, September 2013, Hanoi, Vietnam.

Key informant interview: Law enforcement professional, September 2013, Ho Chi Minh City, Vietnam.

Small group discussion: Customs officials, August 2013, Hong Kong.

Notes

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[1] The United Nations Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) provides the international regulatory framework for international trade in endangered plant and animal species. All rhino species were placed in Appendix I in 1977, effectively banning international trade except under exceptional circumstances (Milliken and Shaw, 2012, p. 44).

[2] Ayling (2013, p. 69) attributes two capacities to the concept of resilience, namely ‘the ability to absorb and thereby withstand disruption’ and ‘to adapt, when necessary, to changes arising from that disruption’.

[3] In other words, organized crime networks specializing in a bouquet of related illicit trades, such as drug and diamond smuggling, human trafficking and trading in other wildlife contraband like elephant ivory and abalone, have moved into the lucrative trade with rhino horn).

[4] The 'levels' pyramid reflects the thinking of South African law enforcement agencies such as the Directorate for Priority Crime Investigations (DPCI) and the National Wildlife Crime Reaction Unit (NWCRU).

[5] US authorities issued a one million Dollar reward for information leading to the dismantling of the network in 2013 (Kerry, 2013). The criminal network was involved in a clever scam, which involved the falsification of hunting permits.

[6] Market actors face social risks due to incomplete knowledge of their exchange partners' intentions and the quality of the product they are interested in purchasing (Beckert, 2009, p. 259). The possibility of a breach of contract or non–performance constitutes a risk to any economic exchange. In illegal markets, these risks arise from 'asymmetric distribution of information regarding the price, product quality and the possible opportunism of exchange partners in light of incomplete or non–enforceable contracts' (Beckert and Wehinger, 2013, p. 17).

[7] Transaction costs relate to the costs of participating in a market. Williamson (1989) argued that frequency of the exchange, specificity, uncertainty, limited rationality and opportunistic behaviour are determinants of such costs.

[8] The Convention had been in force for 41 years at the time this article was written in 2016.

[9] These 'big' cases revolve around Dawie Groenewald, Hugo Ras and Chumlong Lemthongthai.

[10] The South African Directorate for Priority Crime Investigations (DPCI) employs the term 'kingpin' to depict local crime bosses. A kingpin typically arranges local crime operations while maintaining a link to traffickers or buyers. For the sake of consistency, the controversial term is employed in this dissertation. It is acknowledged that 'queenpins' do exist and the term 'kingpin' could be construed as sexist and gender insensitive. However, those interviewed (bosses, poachers and investigators) used the term frequently and felt comfortable with the labeling, associated narratives and meanings.

[11] An anti–poacher (Interview, KZN, 2013) related how an obese teacher from an urban centre in South Africa had joined a spontaneously constituted poaching group. The quartet jumped into a saloon (an inappropriate vehicle when driving on sand roads in the bush), stopped on the road next to a rhino reserve. After scaling the game fence with difficulty, an anti-poaching unit intercepted them. The unfit teacher was apparently struggling to keep up with the rest of his crew.

[12] These fringe benefits may or may not materialize as interviews with several convicted poachers revealed. The 'boss' had arranged for legal representation in a few cases. A handful of legal teams appear to defend these rhino criminals; in other words, the same criminal lawyers appear on behalf of alleged rhino criminals in South African courts (Interview with prosecutors, 2013).

[13] Some convicted poachers claimed that they were unlucky and caught during their very first hunt. While few criminals would admit to any crimes beyond the crime at hand, some might have been 'unlucky first-timers'.

[14] South American law enforcement officials refer to 'dead meat for piranhas' when drug syndicates tip them off about an expected (small) drug delivery. While law enforcement deals with the tip off and is sufficiently distracted, other drug couriers with larger quantities may pass through ports of entry undetected.

[15] 40 per cent of the world's rhinos survive in the Kruger National Park, South Africa's signature national park. The conservation area is roughly the size of Wales and borders (and includes part of) Mozambique.

[16] Trained in low intensity warfare, ex-soldiers with bush-tracking skills from the days of the apartheid bush wars were connected with a number of poaching incidents in game reserves and parks in KwaZulu–Natal.

[17] Game and commercial farmers are reputed to hold hunting rifles and other high calibre rifles on their properties. Organized crime investigators (Interviews, 2013) pointed to the possible connection between farm attacks and rhino poaching; however, only tenuous links were made between ballistics at rhino crime scenes and stolen hunting rifles.

[18] Kruger officials estimated that 70 % of poachers were entering the Park from Mozambique until 2015.

[19] One anti–poaching official (Interview, 2013) recounted that he found raw eggs in the pocket of a poacher. The sangoma had told the man that he would have to turn around as soon as the egg broke because it would no longer be safe in the Park. The egg was intact at the time of the poacher's arrest.

[20] The horn is usually removed as close as possible to the growth point to maximize weight and profit. Hacking or cutting close to the growth point inevitably involves blood and gore, which decompose and rot once taken off a rhino.

[21] Olivier made the claim about scruples and 'blood money' to private investigator Paul O'Sullivan and later in his police statement (Olivier, 2011, p. 10). Rademeyer (2012) relates that Olivier had a rather murky past and dubious reputation His motivation to inform on the dealings of Xaysavang remains unclear; however, the sudden concern for rhinos appears out of character after previously sourcing 100s of rhinos for the network (Interview with intermediary, 2013).

[22] The National Prosecution Authority (NPA) reinstated the charges against game farmer Marnus Steyl in 2012. He fought for a permanent stay of execution, which was granted in June 2015.

[23] It would appear rather naïve of Lemthongthai to leave behind such detailed accounts of his business dealings. He was however sure of the legitimacy of his dealings in light of him attaining the 'right' paperwork to move the rhino horns 'legally' out of the country. He believed that he was acting within the limits of the South African law, which permitted Thai nationals to hunt rhinos and export the horns to their home country. While he was paying R 60 000 to R 65 000 per kg of rhino horn, poached rhino horn would enter the 'black market' at a cost of R 200 000 to the poaching organizer. Although Lemthongthai's alleged profit margin was less than R 100 000 per rhino hunt, poaching intermediaries would make a profit of R 450 000 per hunt (Interview, 2013). It is noteworthy how pseudo trophy hunting was legitimized as the lesser of two evils. Moreover, while the digital record on Lemthongthai's laptop provides insight into the 'pseudo-legal' dealings of the Xaysavang network, there was no paper trail of illegal dealings. According to sources within the criminal underworld (Interviews, 2013 and 2014), the network has been involved in the illegal killing and dehorning of at least 700 rhinos in southern Africa.

[24] The Kenya Wildlife Service and customs officers seized 260 kg of elephant ivory and 18 kg of rhino horn at Nairobi airport in 2008. The shipment was registered to Xaysavang Import and Export and bound for Laos (Connett 2014).

[25] According to interdiction data of Vietnam's CITES Scientific Authority provided in 2013 (personal communication, 2013), all interdictions involving rhino horn had occurred at the two main international airports in Ho

Chi Minh City and Ha Noi, except for one interdiction along a major highway in 2004.

[26] A curious adaption was the use of white Mozambicans of Portuguese extraction to transport horn from Massingir to Maputo. These runners supposedly carry an aura of privilege and status, which allows them to navigate through roadblocks without being stopped or searched (Interviews with intelligence officers, 2013).

[27] Rhino horn has also been smuggled via Cape Town International Airport out of the country. Police and intelligence data suggests the use of the international airports in Manzini, Swaziland and Maseru, Lesotho. Due to the high number of pilots involved in rhino poaching syndicates, organized crime investigators believe that organized trafficking groups use small light airplanes and transport rhino horn to neighbouring countries from the many unregistered landing strips sprinkled across South Africa.

[28] Tet, the 'Feast of the First Morning of the First Day' refers to Vietnamese New Year. The date of the most important cultural event in Vietnam usually falls between January and February.

[29] Vu Moc Anh was recalled after the incident. Law enforcement investigators (Interviews, 2013) believe that she has been posted to the Vietnamese embassy in Maputo. This could not be independently confirmed.

[30] The alien conspiracy theory was born out of the findings of the US Senate's Kefauver Committee, which identified organized crime with the mafia or mafia-like groups (foreigners), which were hierarchically organized and threatened the integrity of local government, infiltrated legitimate business and subverted the integrity of a free society.

[31] Beare postulates that this narrative is also visible in the international conceptualization of organized crime as per the United Nations Convention against Transnational Organized Crime (United Nations General Assembly 15 November 2000). According to her, the convention 'reproduces a global hegemonic rhetoric and countermeasures that depend on the public's perception of a growing threat of transnational crime that originates from countries foreign to the 'developed' metropolis, led by organized 'mafia'-like networks and gangsters who are seen to threaten the peace and security of the core capitalist nations, and requiring a state response of strict border and immigration controls' (Beare, 2003, p. XVIII).