

Wildlife trafficking and criminogenic asymmetries in a globalised world

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Introduction

In the twentieth century, with advancements in technology and transportation, wildlife trafficking developed into a professional global enterprise. Indeed, with technological innovation as a result of the Industrial Revolution, people succeeded in transporting large numbers of exotic animals from the Global South to the Global North from as far away as Antarctica, New Zealand and South Africa (Broad et al. 2003; Simons 2012). Strengthened colonial relationships and overall growth in post-WW II economies helped ensure expanding markets for wildlife and wildlife products (Collard 2013). Consequently, large flows of endangered species became important to the global economy and were traded as commodities for a wide range of purposes (e.g., for food; for use as/in medicines; as pets) (van Uhm 2018a). This was the beginning of the specialist animal trade, as we know it today in the twenty-first century, in which commercial and specialist traders foresaw the increasing demand for exotic species.

Gradually, the trade in exotic animals has evolved as a trend-sensitive market that responds to consumer demand (Kalof 2007; Ryhiner and Mannix 1958).¹ The transformation of the world order through globalisation—through the multiplication and intensification of linkages and interconnectedness—has not only facilitated the massive boom in the demand for exotic animals, but has also had a devastating effect on species' populations and ecosystems (Collard 2013). The international demand for ivory, for example, has led to the extinction of elephant populations in many parts of Africa (Blanc et al. 2003), while three out of the nine tiger species have disappeared in Asia due to human activities in the twentieth century (Abbott and van Kooten 2011). While the value of wildlife is socially constructed by scarcity and social meanings (van Uhm 2018a), the market dynamics for these products depend on global anomie and criminogenic asymmetries. According to Passas (1999), criminogenic asymmetries mean that structural discrepancies and inequalities in a globalised world provide new opportunities for crime. This chapter shows how *criminogenic asymmetries* in the realms of ecology, economy, law, politics and power have enabled large flows of the illegal wildlife trade to flourish.

Worldwide wildlife flows and crimes of the powerful

Traditionally, conditions such as poverty and unemployment appear to be important incentives for poaching in the source countries (Duffy 2010; Martin and Martin 2006; Nurse 2015; van Uhm 2016a). According to Mainka and Trivedi (2002), on a global basis, rural poverty and the exploitation of resources are often closely connected. Research conducted by wildlife experts, who have examined the economic and social driving forces of the trade in wildlife, have concluded that most poachers originate from the poorest one-third of all households. Middle- and upper-income groups are involved far less in the harvesting of wildlife (e.g. World Bank 2008). This section will reflect upon the illegal wildlife trade in the context of the dynamic of inequalities between the Global North and Global South, partly based on previous research on confiscations of illegal wildlife.

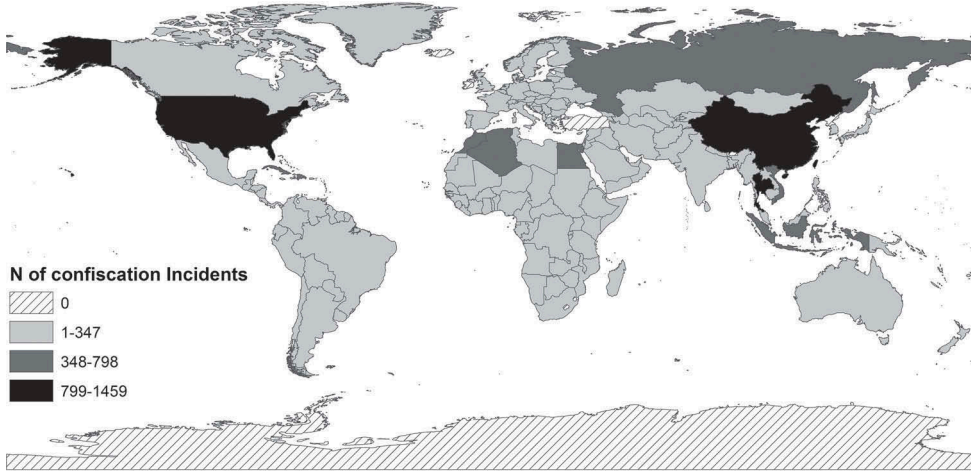
Willingness to engage in poaching often originates as a result of the impacts of economic inequalities and, subsequently, frustration and strain experienced by the affected communities. While local people are often involved in harvesting illegal wildlife, they usually work for 'outsiders' (e.g., Milliken and Shaw 2012; Nooren and Claridge 2001; Pantel and Chin 2009; Raymakers 2002). Such outsiders are able to capitalise on the poor socio-economic conditions in the source countries to recruit potential poachers to meet the demand from developed countries (e.g., Duffy 2010; Roe et al. 2002).

Several studies have identified relatively poor African and Asian countries as the main countries of origin for illegal wildlife (van Uhm et al. 2019; Lawson and Vines 2014; Rosen and Smith 2010; UNODC 2010; World Bank 2008). Data from more than 20,000 seizures ($N = 22,204$) in the European Union (E.U.) between 2001 and 2010 reveal a marked concentration of seizures of illegal wildlife emanating from African and Asian countries (van Uhm 2016b).² An exception is the illegal trade in reptile products from the United States (U.S.). North African countries seem to play an important role in the trade in live animals, such as reptiles and monkeys, to the E.U., partly because of geographical advantages: the Strait of Gibraltar, for example, offers the possibility of a quick border crossing. China, Thailand and Vietnam are major exporters of illegal (animal parts for) traditional Asian medicine and reptile products, while caviar is mostly smuggled from Russia to the E.U. (Figures 30.1 and 30.2).

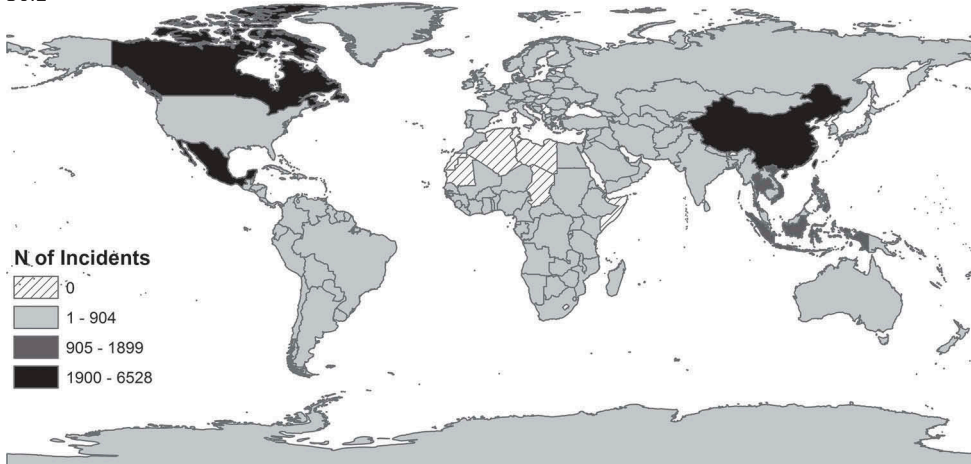
Wildlife confiscations ($N = 40,113$) in the U.S. between 2003 and 2012 demonstrate the significant role of Southeast Asian countries.³ Besides the neighbouring countries that play the most important role in the illegal wildlife trade heading to the U.S., more than 20 per cent of the seizures were from Southeast Asia. The data show that 52 per cent of the seizures were from six countries alone, which included the U.S.' neighbouring countries, Canada and Mexico and the Southeast Asian countries, China, Indonesia, Thailand and the Philippines (Petrossian et al. 2016). A disproportionate share of the U.S. reptile seizures, for example, were from the Asian countries of China, Indonesia and Thailand, while relatively high numbers of seizures of traditional Asian medicines made from parts of endangered mammals that took place in the U.S. were from China and Vietnam (Figure 30.2).

Whereas the data and figures noted in the previous paragraph reflect the role of African and Southeast Asian countries as sources, traditionally the demand market for the illegal trade has been in wealthy countries in the Global North (Sollund and Maher 2015; Wyatt 2013). Similar patterns of exploitative trade from the Global South to the Global North have been identified where powerful Northern countries overexploit poor Southern countries and profit from their resources (e.g., Bavinck et al. 2014; Passas and Goodwin 2005). These 'crimes of the powerful', which often encompass a combination of criminal, illegal, legal and unethical practices, are not always defined

30.1



30.2



Figures 30.1 and 30.2 Source countries for illegal wildlife based on confiscations; EU confiscations between 2001–2010 (30.1), US confiscations between 2003–2012 (30.2).

Sources: van Uhm (2016b) (30.1); Petrossian et al. (2016) (30.2).

as criminal offences (e.g., Friedrichs 1996; Friedrichs and Rothe 2011). This allows processes of ‘accumulation by dispossession’ to perpetuate, whereby the Global South is stripped of its commons, while the Global North profits, illustrating the power dynamics and discrepancies in and of a globalised world (Harvey 2003). At the same time, international law enforcement endeavours focus primarily on the countries of origin, instead of the Northern countries—including Europe and the U.S.—which are the most important importing regions (e.g., Engler and Parry-Jones 2007). While each market is distinct, one can summarise the illegal trade of flora and fauna as follows: the illegal trade is driven by the demand from the rich North (Passas 2000), while the accusing finger points at the countries of origin (Boekhout van Solinge 2010).

Global anomie and misconduct

Global anomie has emerged as a result of growing inequalities between poor countries of the Global South and powerful industrialised countries of the Global North, creating a fertile breeding ground for crime (Friedrichs 1996; Passas 2000).⁴ In the context of global communication and improved trade lines, entrepreneurs abuse economic and power inequalities in illegal ways; indeed, both organised crime syndicates and powerful corporations overexploit natural resources and leave the damage behind (Lynch and Stretesky 2014; Lynch and Stretesky 2003; Passas and Goodwin 2005). Contrary to growing conventional wisdom and efficient market ideologies that promise global economic growth, globalisation also contributes to dysnomie, misconduct and criminogenic asymmetries (Passas 1999). These criminogenic asymmetries—structural discrepancies, inequalities and mismatches within the realms of economy, law, politics and power that provide new opportunities for crimes—create conditions ripe for global defaunation.⁵

According to Passas (2000), criminogenic asymmetries can cause crime by fuelling the demand for illegal goods and services, generating incentives for people and organisations to engage in illegal practices, and reducing the ability of authorities to control crime. Passas (2000) refers to regulatory discrepancies, along with economic and political asymmetries, that have given rise to a variety of environmental crimes. For instance, developing nations frequently do not regulate environmental degradation or do so much less rigorously than industrial states, which provides opportunities for companies from rich countries to benefit in those areas where rules are lax or non-existent (Bisschop 2015; van Uhm 2016a).

Moreover, asymmetries are multiplied, intensified and their criminogenic potential is activated during globalisation. As Giddens (1991) explains, the process of ‘disembedding’ social relations enables people to leave their local contexts and reconstitute across space and time. Essentially, the world becomes smaller with technological advances and the dismantling of trade barriers, both of which facilitate the development of new criminal alliances (Aas 2007; Miklaucic and Brewer 2013). In this way, asymmetries contribute in complex ways to the absence of adequate controls and provide opportunities for crime. To understand the criminogenic asymmetries providing opportunities for illegal wildlife trafficking, three case studies will be discussed.

Case study 1 (traditional Chinese medicine): (a) crime to cure

The first case study involves the illegal trade in Traditional Chinese Medicine (TCM). TCM, which involves animal and plant products, has existed for thousands of years and is deeply rooted in Chinese society. In the context of globalisation, the trade in TCM has increased significantly—in particular in the second half of the twentieth century and the beginning of the twenty-first century—as China has slowly developed a more open market economy (Goodman 1998). The combination of decentralisation, privatisation and open borders has created new opportunities for both legal and illegal entrepreneurs. The recent plans to improve the Silk Road, the ancient trade route that ran between China and the West during the days of the Roman Empire, is believed to start a new era of globalisation by reopening channels between China and its neighbours in the West (van Uhm 2019).

Simultaneously, the increasing economic prosperity in China has allowed more people to afford traditional Chinese medicines made from endangered wildlife products (e.g., van Uhm and Wong 2019; Von Moltke and Spaninks 2000). Indeed, as a result of a sharp decrease in inflation between 1995 and 1999 in China, a rapidly expanding middle class emerged with

the ability to purchase expensive TCM containing endangered species (Nooren and Claridge 2001: 41; Zhang et al. 2008). Besides the purported curing effects, medicine derived from endangered species also came to be seen as a cultural symbol of status and pride (Swan and Conrad 2014). The use of endangered species in TCM has, however, resulted in the criminalisation of possession and use of protected animal parts,⁶ and, after more than 1,500 years, animal parts, such as rhino horn and tiger bone, have become prohibited from use in TCM (Mainka and Mills 1995; Martin and Martin 1982).

Unfortunately, the combination of scarcity and criminalisation forced prices on the black market to reach new heights; for example, the same quantity of rhino horn is nowadays valued at more than gold and cocaine (van Uhm 2012).⁷ An international wildlife trafficking syndicate that hired Thai prostitutes from clubs in South Africa to pose as ‘hunters’ in sham rhino trophy hunts on their rhino farm illustrates how legitimate players have misused permits issued for hunting white rhinos (Rademeyer 2012).⁸ Moreover, ‘rhino wars’ are now being waged with organised criminal groups using helicopters, night vision equipment, rifle silencers and tranquilisers to capture their prey, while, at the same time, members of such groups carry automatic weapons to threaten (and, if necessary, kill) park rangers in order to gain profits from those endangered species (van Uhm 2016a).

Case study 2 (pets): monkey business

The second case study concerns another driver of the wildlife trade: the social phenomenon of keeping animals as pets (Sollund 2019; van Uhm 2018a). Historically, the keeping of exotic pets has been associated with the upper-classes of society (Herzog 2014; Kisling 2001). Post-WW II economic growth in Europe, however, led to a high demand for exotic animals as pets (as a representation of status and prosperity) (Kalof 2007; van Uhm 2015). Indeed, the increased demand by the middle classes for exotic animals resulted in a lucrative global market for illegal endangered species. While in the past, famous examples in the illegal trade in wildlife included Great Apes (e.g., chimpanzees; orangutans), the most seized endangered mammal in Europe nowadays consists of a lesser-known monkey species—the Barbary macaque—found in the Atlas Mountains of Algeria and Morocco (van Uhm 2016c). This species is threatened, with an estimated remaining wild population of only several thousand individuals (Majolo et al. 2013).

The large-scale illegal trade began in the 1990s when Barbary macaques were obtained legitimately from the wild for biomedical research. Sometimes hunters misused the obligatory certificates to catch additional macaques for the retail trade: for example, ten monkeys might be captured when only one was needed for biomedical research, enabling the hunter to sell the remaining monkeys illegally (van Uhm 2016c). Currently, capturing Barbary macaques for biomedical research is no longer legal because the species is excluded from the list of biomedical research primate species (van Lavieren 2004), which reflects the controversies about using monkeys for biomedical research (see also Maldonado and Lafon 2017). Today’s poachers usually consist of relatively poor local people from Berber villages in the Azrou area of Morocco; they target young monkeys because they become better accustomed to people than older ones and are easier to smuggle in suitcases or bags. In order to keep the macaque quiet and to decrease its stress levels, the monkeys are drugged with a sleeping aid for children. Hundreds of baby monkeys are estimated to be smuggled from Morocco each year to fuel the pet industry in the European Union (van Uhm 2016c).

The criminalisation of the trade in Barbary macaques has had a clear influence on the (criminal) organisation of the actors involved. Traditionally, the monkeys were sold openly

at the *souks* (Moroccan informal markets); today, legitimate animal shops order the monkeys secretly on demand from Western entrepreneurial criminal groups. The deterrence of imprisonment has also ensured that the illegal activities have become more sophisticated in order to evade law enforcement. For instance, semi-structured networks transfer the wildlife through the Strait of Gibraltar with the assistance of corrupt officials, truck drivers and professional local smugglers to avoid being uncovered (van Uhm 2016c).

Case study 3 (food): black caviar

The last case study shows that wildlife is also traded as luxury food. The demand for caviar has a long and rich history, from the food of the poor to a delicacy for the Tsars and upper classes in Europe. Historically, the symbolic value of caviar—unfertilised sturgeon roe—has been determined in the context of changing environmental, political and social circumstances. With the dissolution of the Soviet Union in the 1990s, many individuals in the Republic of Dagestan, who were already poor, became unemployed and resorted to poaching (Birstein et al. 1997; Shadrina 2007). Sturgeon—one of the oldest families of fish—have now become the most endangered group of animals on the Red List of endangered species⁹ (IUCN 2010; Musing et al. 2019).

The low standard of living conditions in poaching towns in Dagestan makes the business attractive not only for organised crime, but also for fishery inspectors, senior government officials and even law enforcement—they all have a stake in the business. Militias from the republic sometimes even protect the poachers during conflicts with the federal authorities, using ‘security vessels’ to escort the poachers and to distract the police (van Uhm and Siegel 2016). Every illegal boat trip supposedly costs around \$800–1,500 USD in bribes to officials in Dagestan (Nellemann et al. 2014). The use of violence and counterstrategies is not uncommon in the caviar business, as is illustrated by numerous threats of violence and reports of gunfights between fishery inspectors, border guards and poachers (Knapp et al. 2006; Lagutov 2007; van Uhm and Siegel 2016).

Today, the ‘caviar mafia’, as it might be called, is also embedded in legal businesses, whereby the infrastructure of farms and legitimate companies are used to launder illegal caviar. In the post-Soviet period, several official directors of the current fish farms in Russia have been the alleged ‘big fish’ in the illegal trade in caviar (van Uhm and Siegel 2016). They have invested their illegally obtained money in real estate (Volkov 2002), such as sturgeon farms to produce caviar. Some of these companies still buy illegal caviar from poachers in remote villages near the Caspian Sea in order to sell it as being produced by captive-bred sturgeon. There are even examples where sturgeon are caught illegally under the pretence of scientific purposes, demonstrating the extremes to which some are willing to go to perpetuate their illegal activities (van Uhm and Siegel 2016).¹⁰

Criminogenic asymmetries and crimes against nature

The three case studies illustrate that in the context of global anomie and criminogenic asymmetries, structural discrepancies between the source and destination countries provide opportunities for crimes against nature. In this scenario, legal and illegal entrepreneurs from Northern countries exploit poverty and inequality to lure people into criminal activity, from poor farmers in Southeast Asia who hunt opportunistically for endangered species for TCM, to Berber communities in Morocco who poach monkeys for the pet industry, to poor fishermen in Dagestan who catch sturgeon for caviar. The poachers are supplied with loans,

expensive equipment and weapons in order to conduct their activities for criminal organisations and corporations (van Uhm 2016a). Increased economic prosperity in the destination countries has also made it possible to afford growing numbers of luxury wildlife products (e.g., van Uhm 2016b; Von Moltke and Spaninks 2000). In other words, the economic asymmetries between relatively wealthy and relatively poor countries ensure a fertile breeding ground for criminal organisations to exploit both the natural resources and the local communities. The socio-economic discrepancy between such wealthy consumers and such poor poachers is perhaps best illustrated by the illegal trade in caviar. While poor fishermen poach sturgeon in the Caspian Sea and risk their lives to feed their families, upper-class society nevertheless consumes the illegally obtained black caviar without knowledge or consideration of the environmental and social impacts (van Uhm and Siegel 2016).

In addition, political changes, such as the dissolution of the Soviet Union, have provided new opportunities for crime (Passas 1999; Shelley 1995). In the early 1990s, the existing regulatory systems collapsed and informal criminal systems were developed to replace the formal state services in Russia (Dinerstein et al. 1994). According to Varese (1997: 580), the end of socialism resulted in a high amount of corruption and ‘Mafia-style crime’. Illegal activities, such as the illegal drug and wildlife trades, emerged. Consequently, wildlife populations suffered overexploitation by those criminal networks. The emergence of organised crime, in combination with levels of corruption, caused a lucrative illegal trade in products, such as caviar and saiga antelope horns, to fuel the global demand markets (e.g., Birstein et al. 1997; Kühl et al. 2009; van Uhm 2016a).

Another example is the ‘liberation’ of the Chinese market that provided new opportunities for both legal and illegal entrepreneurs. The Chinese economy has transformed slowly into a more open market. With new middle ‘capital-owning’ classes in China enlarging the demand for all kinds of goods and services, there has been a growth in legal and illegal businesses (Goodman 1998). The illegal wildlife industry is no exception (Nooren and Claridge 2001; Zhang et al. 2008).

The implementation of laws and regulations also created criminal opportunities for all three case studies in the context of legal or ‘law-related’ asymmetries. Although the use of rhino horn and tiger bone in TCM has a long and widespread history, these products became prohibited under Chinese national law in 1993. In order to supply the demand for endangered species used in TCM, illegal businesses emerged. There are several examples in which ‘traditional’ criminal organisations diversified or transformed completely to direct their activities into the illegal trade in rhino horn (e.g., Christy 2014; Europol 2011; van Uhm 2016a). Criminalising the poaching of Barbary macaques with harsh custodial sentences has ensured another dynamic in which criminal groups have become more sophisticated in order to evade law enforcement (van Uhm 2016c).¹¹ After the political transformation of the Soviet Union, when the large-scale poaching of sturgeon without restriction became commonplace, the trade in caviar became restricted by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)—the international treaty that regulates the trade in wild animal and plant species or products thereof through permits (see Sollund, this volume, Chapter 29).¹² Subsequently, all Caspian countries (the coastline of the Caspian Sea is shared by Azerbaijan, Iran, Kazakhstan, Russia and Turkmenistan) joined a ban on fishing sturgeon in the entire Caspian Sea (Nellemann et al. 2014; Raymakers 2006), while Russian criminal groups became increasingly involved in the context of these legal or ‘law-related’ asymmetries (van Uhm and Siegel 2016).

The historically dominant position of countries of the Global North with respect to wildlife conservation issues illustrates the influence of power asymmetries. Many regulations and the

first game reserves were developed to protect Western interests and to introduce the moral values of Western elites. This resulted in disadvantages for the local people with regard to their access to and use of natural resources, as well as social differentiation with settler communities (Grove 1995; MacKenzie 1988). Several authors see this development as a continuation of the colonial ‘white man’s burden’ approach¹³ to conservation in a post-colonial world (e.g., Dickson 2003). Duffy (2010) clarifies that instead of centring on the creation and continuation of wildlife demand markets by the wealthy world, the focus has shifted to coercion and enforcement in the world’s poorest communities. Conservation and enforcement efforts are embedded largely in identifying problems in the source countries and, consequently, this has produced exclusion, marginalisation and violence towards the local communities. Focussing on poaching in the local communities neglects the actual problem—the demand for wildlife (van Uhm 2016a). From this perspective, the traditional power asymmetries between wealthy powerful countries and relatively poor developing countries are still being used to distract attention from responsibility for the illegal *demand* for wildlife.

The processes of globalisation also intensify the intertwined relationship between the ‘overworld’ or ‘upperworld’ and ‘underworld’. The economic, legal and political asymmetries between countries have given rise to illicit markets for the uncontrolled exploitation of natural resources by corporations (Brisman and South 2017; Passas 2000). Legitimate companies that exploit local people in their search for illegal wildlife illustrate the overlaps with economically and politically powerful actors involved in the plundering of natural resources (Carrabine et al. 2004; Lyons and Natusch 2011). Furthermore, powerful legal enterprises misuse structural weaknesses in existing regulations in source countries (see, e.g., Ruggiero and South 2010, 2013). This means that both antithetical relationships and symbiotic relationships between legal and illegal actors facilitate wildlife trafficking. For instance, competition between legal and illegal actors is present when legally registered wildlife companies offer illegal wildlife products for less money than their competitors. Symbiotic relationships occur when interests are shared and enhance mutual benefits between the ‘underworld’ and the ‘overworld’ or ‘upperworld’ (e.g., cooperation between police and caviar poachers) (van Uhm and Moreto 2018). Clearly, companies that are legally registered use their legal infrastructures to hide, launder, or trade in illegal wildlife (e.g., Knapp et al. 2006; Li et al. 2007; Nijman and Shepherd 2009; Lyons and Natusch 2011; Pantel and Chin 2009; van Uhm 2018b; Vinke and Vinke 2010).

Finally, the concept of *ecological asymmetries* may help our understanding of the way in which new opportunities for crimes emerge. Paradoxically, the presence of many natural resources appears to be detrimental to a country’s development (Kolstad and Søreide 2009). Those countries that are rich in biodiversity often experience lower economic growth rates, lower levels of human development and more inequality and poverty—the so-called ‘resource curse’ (Kolstad and Søreide 2009: 214; Sachs and Warner 2001). The presence of abundant natural resources also seems to correlate with crime and violence (Boekhout van Solinge 2014: 501, this volume, Chapter 15). Brisman and South (2013: 57) show that ‘the damaging and divisive exploitation of environmental wealth in forms such as illegal trades in diamonds, timber, and wildlife ...[has] ... generated funds that have supported and perpetuated internal conflicts, corruption, and the externalising of economic surplus’. Defaunation in the Anthropocene¹⁴ may even lead to both ecological disorganisation and trophic cascades (Courchamp et al. 2006; Lynch and Stretesky 2014; Power 1990; Wilson 1993). Not only is defaunation harmful for ecosystems and their species, but it also ensures that the economic and social value of the land decreases. Almost 30 years ago, Beck (1992: 38) observed that ‘[p]roperty is being devalued, it is undergoing a creeping ecological expropriation’. This

reflects the process of the accumulation of dispossession that has obvious repercussions for local people, ecosystems and their species (Harvey 2003; Hornborg 1998). Moreover, the ecological asymmetries where the destruction of nature leads to the increasing scarcity of endangered species (e.g., rhinoceros, sturgeon, tigers) have proved to create rising values on the black market that attract transnational criminal groups worldwide.

Conclusion

This chapter shows that the destruction of nature has become a feature of an increasingly globalised world. Structural discrepancies between wealthy consumer countries and relatively poor countries with rich biodiversity density activate several criminogenic asymmetries, resulting in the plundering of natural resources. Wildlife traffickers exploit poverty and inequality to entice people to poach in territories without government presence. In addition, they benefit from legal loopholes and political apathy to facilitate and professionalise their illegal wildlife trafficking. Crimes by powerful legal enterprises that misuse structural weaknesses in laws and regulations in the source regions illustrate the intensified symbiotic relationship between the underworld and the ‘overworld’ or ‘upperworld’ in times of globalisation. Furthermore, crime groups thrive particularly well in such socio-economically and politically weak regions with a high level of biodiversity where the government is unable to effectively apply the monopoly of violence. For instance—and as discussed above—the struggle for political and economic power in the Republic of Dagestan in the North Caucasus region of Russia has created a cover for the poaching of sturgeon, while Berber monkeys are smuggled through the Rif Mountains in northern Morocco, traditionally known as a ‘smuggling paradise’ due to political instability and poverty. All the while, endangered animals used in Chinese medicine are transported through the Golden Triangle in Southeast Asia—one of the most underdeveloped areas in the region. It comes as no surprise, then, that in such areas other forms of crime also occur.¹⁵ Thus, the socio-economic and geopolitical backgrounds of these biodiverse regions clearly provide fertile breeding grounds for criminal networks driven by criminogenic asymmetries in a changing world.

Notes

- 1 In post-WW II Western countries, middle- and upper-class individuals and families began to keep and collect a wide range of exotic animals. Various department stores in Europe offered monkeys, lions and even elephants for sale, while luxury coats made from the skins from big cats or bears emerged as symbols of wealth and status (van Uhm 2018a).
- 2 To obtain an overview of the illegal trade to the E.U., data on confiscations in the E.U. were obtained from the European Union Trade in Wildlife Information eXchange database (EU-TWIX)—a database of information on wildlife seizures in the E.U. (van Uhm 2016b).
- 3 In the U.S., confiscated wildlife is recorded in the Law Enforcement Management Information System (LEMIS) database. The LEMIS dataset was obtained through the Freedom of Information Act (FOIA) request made on 23 September 2013 to the USFWS—LEMIS division (Petrossian et al. 2016).
- 4 As Passas (2000: 27) explains, in societies that do not encourage high social mobility, there are disjunctions between socially induced goals and the legal means of achieving them: ‘In such societies, people may not feel that they are lacking anything, even when they are “objectively” deprived’; with globalization and neoliberalism, needs and normative models have become more ‘harmonized’ and ‘people become conscious of economic and power asymmetries, and directly experience their impact’. Thus, processes of globalisation and neoliberalism (and global neoliberalism) have brought about ‘relative deprivation as well as absolute immiseration of masses of people’. This has both generated new sources of criminogenesis and removed existing antidotes to it.

- 5 Defaunation is the equivalent of deforestation and the term is used to refer to the loss of species, populations and local declines in the abundance of individual wildlife (van Uhm 2017).
- 6 In China, the population of wild tigers decreased from 4,000 in 1949 to approximately 40–50 in 2012; meanwhile, the tigers in China's farms increased from roughly 8–13 in 1986 to 6,000 in 2010 (EIA 2013). In the 1980s, the Chinese government established tiger farms for the commercial supply of tiger bone for TCM (Nowell 2000). Since 1993, the sale has become officially banned by Article 22 of the Law of the People's Republic of China on the Protection of Wildlife. Dubious certificates are still provided by officials to sell tiger bone products through these farms, however (van Uhm 2019).
- 7 According to Traffic (2011), rhino poaching peaked after claims that rhino horn powder cures cancer.
- 8 In another instance of exploitation, the Polokwane (South Africa) game farmer Dawie Groenewald claimed to have kept rhinos for conservation purposes for years, when, in actuality, he engaged in an elaborate scheme of dehorning and killing of rhinos to make profits from the sale of their horns (Ayling 2013; Hübschle 2016). He was out on bail in the 'Groenewald case' when he was re-arrested after being caught in the illegal possession of 11 rhino horns.
- 9 The International Union for Conservation of Nature's Red List of Threatened Species is the world's most comprehensive inventory of the global conservation status of biological species.
- 10 Statistical data covering several years after the ban demonstrate that 600 t of caviar from sturgeon were fished out of the Caspian Sea for 'scientific purposes' (Zabyelina 2014).
- 11 In 2016, the commercial trade in Barbary macaques became prohibited completely by CITES.
- 12 Appendix I includes species threatened with extinction. Trade in Appendix I specimens is permitted only in exceptional circumstances. Appendix II includes species not necessarily threatened with extinction, but controlled in order to avoid utilization incompatible with their survival. Appendix III are protected in at least one country, which has asked other CITES parties for assistance in controlling the trade.
- 13 The 'white man's burden' approach refers to the supposed or presumed responsibility of white people to govern and impart their culture to non-white people, often advanced as a justification for European colonialism.
- 14 Anthropocene refers to a proposed new geological era characterized by the unprecedented impact of human activities on the Earth (see, for a discussion, Brisman and South 2018; Phelan et al. this volume, Chapter 25).
- 15 For example, the North Caucasus region is home to much trafficking of drugs, people and weapons (e.g., Arasli 2007); the Rif Mountains are known as a key area in Europe for the smuggling of hashish and immigrants (e.g., Lehtinen 2008; Soddu 2006); and the Golden Triangle is notorious for the booming opium and timber trade (e.g., Felbab-Brown 2011; Zhang and Chin 2011).

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