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4. ‘The Security Implications of the Illegal Wildlife Trade’:

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Abstract

National security is a continuing topic of concern and part of that is the growing understanding of the connection to global crime. Often though only traditional national security issues, which are conceptualized around state sovereignty and military capability are addressed, and when exploring the criminal nexus only traditional or mainstream crimes, such as drug and weapons trafficking are analyzed. This article departs from this in two ways. First, it centers on the illegal wildlife trade, which consists of both animals and plants, and is an often overlooked green crime outside of mainstream criminological studies. Second, it argues that the illegal wildlife trade is not only a threat to national security, but also threatens other equally important non-traditional aspects of security. This article demonstrates that non-traditional security concerns and the marginalized crime of wildlife trafficking should be the focus of more research and government focus as it poses significant threats to environmental, human, economic, and national security.

Key Words

Wildlife Trafficking, Illegal Wildlife Trade, National Security, Non-traditional Security, Green Criminology

Introduction

With the terrorist attacks of September 11th 2001, North Korea launching missiles and unrest in the Middle East, so-called traditional security threats stemming from these incidents dominate government agendas. While concern for the above is obviously warranted, there is a risk that other more non-traditional threats can go unaddressed. This article details one such overlooked security threat by introducing the multitude of dangers that are posed by the illegal wildlife trade or wildlife trafficking.

Though often ignored or unbeknownst to the public and governments, the black market in wildlife occurs on a significant and problematic scale. Wildlife includes all non-human animals and plants that are indigenous or exotic and also their derivatives (Burgener et al, 2001). This means this article will draw on examples from non-human animal trade as well as timber and other plants. According to an expert at *The Independent*, the illegal wildlife trade, in this case only non-human animals, is estimated to be worth around GBP 6 billion annually (Fison, 2011). This estimate does not include timber and fish both of which are sizable black markets in themselves. The illegal wildlife trade involves the consumption of hundreds of millions of plants and animals (CITES, N.D.b). The supply and demand for this wildlife is not isolated to certain regions. It is pervasive, reaching all corners of the globe. Wildlife trafficking has many forms such as smuggling of live animals and plants for pets, sports and personal collections as well as poaching and harvesting animals and plants to make them into clothing, food and medicines (Milliken and Shaw, 2012; Pires and Clarke, 2011; Sollund, 2011; Wyatt, 2012).

This article will begin by briefly setting the context and regulation of wildlife trafficking before focusing on the global security dimensions posed by this overlooked green or environmental crime. These security concerns do not conform to the traditional singular focus on national security, though this will be addressed. The non-traditional concerns are broken down into environmental, human, and economic security, which will be followed by a discussion of the connections to national security. Each of these has multiple elements that will demonstrate the security threats present with the continued unregulated trade in wildlife.

Research by Rosen and Smith (2010) shows that between 1996 and 2008 20% of recorded global illegal wildlife seizures happened in India. Other areas included Australia (6%), the United States (6%), the United Kingdom (10%) and China (11%) (Rosen and Smith, 2010). Of course these seizures tell only part of the story. US Government officials have stated that China is the main area for demand of illegal wildlife followed by the US and the European Union (McMurray, 2008). The amount of illegal wildlife trade is undoubtedly higher than official estimates because of the unknown amount going undetected. Estimates of this unknown amount in different regions and for different species varies; for instance it is estimated in Vietnam that seizures account for only 10% of the total illegal trade (Drury, 2009), whereas in Russia the seizures of illegal falcons is 25% of the suspected total (Lyapustin, 2006). In regards to timber trafficking, Nelleman and INTERPOL (2012) estimate the global illegal trade to be worth USD 30 – 100 billion annually with 10-30% of total trade being illegal. This is just a brief snapshot of the scale and scope of wildlife trafficking. This article proposes that such illegal trade in wildlife affects four areas of security: environmental security, human security, economic security, and national

security. Each of these will be discussed in turn in the preceding sections. First though, an overview on the main international convention, the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES), which regulates the international trade of non-human animals and plants.

CITES

There are 178 countries that have voluntarily joined CITES since its inception in 1973 (CITES, N.D.b). By becoming a member of CITES, countries agree to financially support the Convention and to establish legislation and regulations that adhere to the licensing system. This licensing system establishes three appendices, which define the amount of trade that is allowed of a particular species and the specific permits that are required for trade in a species in each of the differing appendices (CITES, N.D.a). Appendix I species are essentially banned from trade except in certain circumstances (CITES, N.D.a). Appendix II species are subject to quotas that are designed to create sustainable trade that will not decrease populations (CITES, N.D.a). Appendix III species are protected within at least one country, which has sought the help of other member countries in controlling the trade (CITES, N.D.a).

Two authorities need to be created under CITES – a Management Authority and a Scientific Authority. The Management Authority oversees the licensing system, which includes the import, export, and re-export permits that are needed for trade in CITES listed species (CITES, N.D.a). The Management Authority communicates with other CITES members and the CITES Secretariat as well as making formal reports to the CITES Secretariat. The Scientific Authorities are tasked with determining the effects of trade on the status of species and

recommending trade quotas (CITES, N.D.a). Now that a brief overview of CITES has been given, the security threats posed by illegal wildlife trade which does not adhere to CITES regulations will be detailed. CITES will be returned to when discussing what inclusion of wildlife trafficking on security agendas would mean.

Environmental Security

The illegal wildlife trade poses two main threats to the security of the environment. First, wildlife trafficking harms and destabilizes ecosystems because of the loss of biodiversity stemming from poaching and the collection of excessive amounts of wildlife. Second, the illegal wildlife trade provides a mechanism for the introduction of invasive species and diseases, which also upsets the balance and stability of ecosystems. In regard to the first environmental security threat, the illegal trade in wildlife can be the cause of species extinctions, contributing to the loss of essential biodiversity. Whereas habitat destruction is often considered to be the most prominent threat to animals, two species go extinct each year due to hunting and poaching (Domalain, 1977). In Africa, for example, there has been unprecedented loss of wildlife from poaching. The Black rhinoceros' population, poached for their horns, has diminished by 97% and some countries have lost 90% of their elephant populations because of uncontrolled trafficking in ivory all within the last 35 years (Krott, 2005). Levels of poaching of both of these species are on the rise (Christy, 2012; Milliken and Shaw, 2012).

Plant loss through illegal trafficking also damages ecosystems and in turn animal life. Researchers in Far East Russia believe that the clear cutting and illegal logging of the cedar forests in the regions have destroyed the staple diet (seeds

and leaves) and habitat of the wild boar. This is thought to be the reason for the wild boars' drop in population (Wyatt, 2012). The decrease in the number of wild boar directly affects the survival of the approximately 400 highly endangered Amur or Siberian tigers, reliant on wild boar for food (Wyatt, 2012).

Illegal logging and timber trafficking, a large part of the illegal wildlife trade, are a major cause of deforestation, which accounts for 20% of global CO₂ emissions - a key contributor to climate change (UNFAO, 2006). The loss of significant amounts of trees limits the ability of the environment to offset some of the consequences of global warming. These consequences, such as rising sea levels and the alteration of flooding and drought patterns, further destabilize the environment. This can have direct impact on human well-being because people can be displaced from their homes (environmental refugees) and be unable to farm because of the damage to the environment. As is evident, the illegal wildlife trade contributes to the loss of biodiversity, which is in itself a concern, but this loss of biodiversity also has larger environmental security implications.

Additionally, environmental security can be compromised by threats to biosecurity and dangers to public health through the introduction of alien species and from diseases brought to countries through the illegal wildlife trade. In regard to environmental health, for instance, the entry of non-native species is reportedly increasing around the world. This occurs both accidentally through stowaway species in cargo and through the illegal wildlife trade. In San Francisco Bay for instance, a new non-native species now enters the ecosystem every 14 weeks, on average, compared to an average of once every 55 weeks between 1851 and 1960 (USFWS, 2005).

The evidence for the consequences of introducing invasive species is mounting. For example, recent studies in Florida warn of the dangers of the rapidly growing population of Burmese pythons (Harvey et al, 2008). These and other large snake species are brought to Florida for the pet trade. Such snakes reach 8-feet in length and the owners, unable or unwilling to care for the snakes when they reach that size, often release them illegally into the wild. This poses several dangers to Everglades National Park and other vulnerable areas, such as the Florida Keys. First, Burmese pythons are out competing the native reptiles and other predators because unlike native species, Burmese pythons have “broad dietary preferences, a long lifespan (15-25 years), a high reproductive output, and [the] ability to move long distances” (Harvey et al, 2008: 2). Second, the pythons prey upon endangered species that are already on the brink of extinction, such as Key Largo woodrats and round-tailed muskrats (Science Daily, 2008). This is one of many possible examples that testify to the threat to environmental security from the illegal wildlife trade, because it enables invasive species to enter new ecosystems.

Also of concern, is that the illegal wildlife trade can possibly facilitate disease transmission between animals, including humans. The human health implications will be discussed in the human security section. Karesh et al (2005) emphasize the global scope of both the wildlife trade and the markets where products are sold. This coupled with quick transportation creates the potential for the transmission of naturally occurring diseases between species (Karesh et al, 2005). For example, Australia witnessed one instance where four Green Tree pythons shipped from Singapore were infected with an unknown pathogen called Wamena virus, which is lethal to a range of cold-blooded animals including fish, salamanders, turtles and tortoises (Hyatt et al, 2002). Since the shipment was

legal, the animals underwent the proper health screenings. It is possible though that an illegal, smuggled reptile or other animal could carry such a disease. Such disease can infect the native flora and fauna, causing populations to decline. Additionally, animal industries might be infected with diseases from trafficked animals. This not only has animal welfare implications for those animals, which will undoubtedly be culled, but also can damage the economy and people's livelihoods. "Trade in wildlife provides disease transmission mechanisms at levels that not only cause human disease outbreaks but also threaten livestock, international trade, rural livelihoods, native wildlife populations, and the health of ecosystems" (Karesh et al, 2005).

Diseases that can be transferred through the unregulated trade of animals threaten domesticated animals and the industries associated with them. Brucellosis (a chronic bacterial infectious disease possibly resulting in spontaneous abortion) can infect cattle and other hoofed stock (Green and CPI, 1999). "In early 2003, the United Nation Food and Agriculture Organization reported that more than one third of the global meat trade was embargoed as a result of mad cow disease, avian influenza, and other livestock disease outbreaks" (Karesh et al, 2005). Also, wild sources of meat like elk and deer, which are also domesticated in smaller numbers, carry a disease similar to mad cow disease called wasting disease (Green and CPI, 1999). Though the avian flu did not infect the human population as was predicted, there was substantial loss of animal life to prevent it from spreading. Hundreds of millions of poultry and livestock were killed as a precautionary measure (Karesh et al, 2005).

As is evident, transmission of any of these diseases into farms or livestock operations would have significant negative implications for both the animals and

the humans relying on them for their livelihoods. Such occurrences in the past have resulted in destabilized trade, billions of dollars in global economic damage, and massive disruption to people (Karesh et al, 2005). “The illegal wildlife trade bypasses the essential veterinarian and health inspections that need to occur to ensure the health of the animals, the food industries, and therefore people” (Wyatt, 2012: 66).

As shown, wildlife trafficking poses several dangers to environmental security. It contributes to the loss of biodiversity through poaching, collecting, and logging, and also by enabling the introduction of invasive species and transmission of disease. Reducing biodiversity negatively impacts the overall health of ecosystems and can disrupt the stability needed for long-term survival of humans and other species. Disease transmission poses further threats to the health and safety of domesticated animals, food industries, and as the next section highlights, to people.

Human Security

As mentioned in the previous section, the disease transmission aspect of the illegal wildlife trade not only poses a danger to environmental security, but it also can endanger human health. Incidents of zoonosis, where disease is transmitted from an animal to a human – have been shown to coincide with the global, largely unscrutinized wildlife trade (Naim, 2005). The most well-known of zoonotic diseases are Severe Acute Respiratory Syndrome (SARS) from civet cats and Ebola from monkeys.

Zoonotic diseases are more prevalent than only SARS or Ebola. As Green and the Center for Public Integrity (CPI) (1999) have found, monkeys alone can

transmit multiple pathogens to humans and other animals, such as monkey pox, Hepatitis A and B, Herpes B, shigellosis (a highly infectious form of dysentery), cholera, and tuberculosis, in addition to Ebola. Monkeys are popular animals in the pet trade and this poses particular concern as some of the monkeys sold in the pet trade have been used in medical research, which means that there is the risk of transmitting zoonotic disease to their new owners. For instance, laboratory monkeys can be infected with simian immunodeficiency virus (SIV), thought to be the precursor to the human immunodeficiency virus (HIV), but which has an unknown effect on humans (Green and CPI, 1999).

Other animals that are in demand in the pet trade pose similar dangers. Small mammals can carry tapeworms that cause cysts in the liver, lungs, and brains of humans (Green and CPI, 1999). Additionally, small mammals might have roundworms, which migrate throughout the body of any mammal, including humans, eating the organs and the brain (Green and CPI, 1999). Armadillos, sometimes found in the pet trade, are carriers of human leprosy (Green and CPI, 1999). Small rodents and also reptiles can transmit salmonella. As is evident here from the inclusion of reptiles, zoonotic diseases are not confined to mammals and reptiles are a particular cause for concern as they make up the bulk of the pet trade. The avian flu mentioned early was thought to be zoonotic and it certainly is not the only disease that can be transmitted by birds. Parrots and other birds also can carry and transmit psittacosis, or parrot fever, that causes a high fever, severe headache, and pneumonia-like symptoms in humans (Green and CPI, 1999). The swine flu, or H1N1, is more recent evidence and reminder that human health can be endangered by diseases that they contract from animals. Again, smuggled wildlife bypasses quarantines and routine health inspections that ensure the containment of diseases that are harmful to humans.

The illegal wildlife trade can pose other threats to humans though beyond the danger to their health.

Economic Security

Global industries and people's livelihoods depend on healthy ecosystems and natural resources, but these resources are not inexhaustible, nor are they managed sustainably. According to the United Nations Environment Programme (UNEP) (2007), half of the world's jobs are associated with fisheries, forestry, and agriculture. Yet, corporations all over the world exploit these natural resources through the illegal wildlife trade - be it illegal logging, overfishing or poaching (Boekhout van Solinge, 2010; Nelleman and INTERPOL, 2012). The loss of these natural resources is also a critical loss of revenue for the countries and for the people where it occurs. Contributing to the negative economic implications, but with much less of an impact, rural villagers and marginalized people engage in unsustainable practices like slash-and-burn farming, poaching of wildlife and collecting of rare plants.

As mentioned above, deforestation and biodiversity loss affect the health of the ecosystem and therefore industries that are reliant on the environment. Just one of the many possible examples comes from the Cardamom Mountain Range in Southwestern Cambodia. This mountain range is the main watershed to the southern coast of the country. Alterations and damage to this area caused by the deforestation from illegal logging and slash-and-burn farming are beginning to affect the environment that supports the fisheries downstream. These fisheries provide the livelihood and lifeline for many Cambodians. Further damage to the watershed could disrupt this region's main industry.

As previously discussed, the loss of species and biodiversity damages and destabilizes ecosystems, further threatening wildlife, but biodiversity loss can also negatively impact certain aspects of the economy, particularly the agricultural industry. Agriculture is dependent on particular species. For example, one pangolin eats up to 70 million ants and insects annually, which is thought to help control pests (WAZA, 2011) - an essential component of a balanced ecosystem and important to the agricultural industry. The pangolin is now one of the most trafficked animals in Asia because of the desire for its exotic meat and the supposed medicinal properties of its scales (Pantel and Anak, 2010). With the extreme decrease in the number of pangolins, pest levels will likely increase resulting in increased damage to crops meant for human consumption. This has economic implications for a variety of agricultural industries in the pangolin's range. The illegal wildlife trade then is tied to the security of the environment, people and as shown in this section, the economy as well. The next section will demonstrate that it is also connected to the stability of nations.

National Security

The illegal wildlife trade can pose a threat to the national security of countries around the world. Some of this danger to national security stems from the aforementioned risks to environmental, human, and economic security - all of which are closely tied together. A damaged environment can, as mentioned, create environmental refugees that can have far reaching implications for the nation where this occurs. Be it forced migrations within the country or to other countries to escape environmental destruction, large-scale movement of people has impacts upon governments and their stability. Inter-human conflicts can arise when resources become scarce or are contested (Boekhout van Solinge,

2010; Brisman and South, 2013). Even without forced migration, the destruction of arable land or collapse of ecosystems that then become unable to support human populations could cause severe economic consequences. This in turn could potentially destabilize governments as well. The different aspects of security proposed here and the threats posed to them through the illegal wildlife trade are closely interlinked and on some level inseparable, so if the security of the environment, people, or the economy is breached this can ultimately affect the nation.

As will be evident, national security in this article is beyond military security and refers to territorial inviolability (Romm, 1994) as well as national economic or political interests, which protect the values and vitality of the state (Jordan and Taylor, 1991). Actions or threats of actions that limit the state's ability to choose policies relating to these interests and values can be considered as threats to national security (Ullman, 1983). In this case then, the illegal wildlife trade is a national security threat in addition to the above reasons, because of its connection to corruption, terrorism and insurgency, and organized crime, all of which challenge the state's authority and legitimacy, and the rule of law.

Corruption in this article is primarily concerned with the state and reflects the elements that Holmes (2006) developed. Even though there is not a universal or agreed upon definition of corruption there are actions or non-actions, which are widely considered throughout diverse societies to be corrupt (Holmes, 2006). For example, even in countries where officials routinely demand a bribe to complete a task that is part of their duties, citizens tend to regard this as corruption (Holmes, 2006). Other examples of behavior that is widely agreed upon as corrupt are the diversion of public funds or goods to the officials'

personal accounts or ownership, and the demand for bribes in return for breaking the rules or looking the other way (Holmes, 2006). In regard to wildlife trafficking, this kind of corruption has several implications. First, bribery of officials is integral to the smuggling operation. This may be paying for wildlife import/export permits or paying for Customs agents, for example, to not notice illegal wildlife at the border. Second, diversion of public goods can come in the form of property ownership being given to government officials, who can then illegally log or poach wildlife on the ill gotten property. It is argued that smuggling of wildlife and other black market commodities can only take place because of the complicity of some governments (Naim, 2005).

In more extreme instances, corrupt high level officials who are profiting from the illegal wildlife trade enable the trafficking to continue by not implementing or enforcing the pertinent legislation such as laws to comply with CITES. This seems to be the case in states that were weakened by the collapse of the Soviet Union (Naim, 2005). In some instances, corrupt officials control law enforcement and the courts, which allow black markets like wildlife trafficking to continue (Naim, 2005). This might be an individual official, or as is suspected in the case of North Korea, the government itself supposedly participates in the illegal wildlife trade (Naim, 2005). Similarly in Cambodia, different factions of the government along with opposition parties and the wealthy bypass the state prohibition on logging to sell timber (Global Witness 2007; Tagliacozzo, 2001). This level of corruption threatens the environment and challenges the rule of law.

And so, too, does the lower levels of corruption that take place at the globalized borders around the world. Corrupt law enforcement officers and politicians

capitalize on the relaxed border crossings for personal profit and to fund opposition to or insurgency against legitimate governments (Tagliacozzo, 2001). Politicians can also pressure law enforcement to ignore or under-enforce wildlife regulations so that the politicians can continue receiving profits (Gavitt, 1992; Schmidt, 2004). In regard to law enforcement, in many of the nations where wildlife is sourced from, the police are poorly paid and often times asking for bribes is part of their expected behavior (Tagliacozzo, 2001). These are significant ways in which the corruption tied to the illegal wildlife trade threatens national security by potentially contributing to the destabilization of governments and unreliability of law enforcement.

Corruption also has several other ramifications, which tie into the other security threats posed by the illegal wildlife trade. Smith and Walpole introduce a two-fold problem in terms of the environment (Smith and Walpole, 2005). First, corruption can negatively impact the success of conservation programs by diverting conservation funds to other areas, which can reduce the amount of law enforcement and wildlife protection. This can contribute to the loss in biodiversity discussed earlier. Second, the profits derived from corruptly obtained natural resources and wildlife result in further overexploitation of the environment and its inhabitants (Smith and Walpole, 2005). This further endangers wildlife, which oftentimes then increases their value even further because of their increased rarity (Smith and Walpole, 2005).

“Systematic corruption generates economic costs by distorting incentives, political costs by undermining institutions, and social costs by redistributing wealth and power toward the undeserving. When corruption undermines property rights, the rule of law and incentives to invest, economic and political development are crippled” (Klitgaard et al, 2004: 4)

In terms of national security, this then limits the policy choices of the state and challenges its vitality. According to Holmes (2006: 1), the World Bank has identified corruption “as the single greatest source of poverty in today’s world”. Furthermore, corruption intersects with terrorism and insurgency, and organized crime that could potentially threaten national security further through the destabilization of countries and regions.

At the core of security discussions is the role of both terrorism and insurgency, but little attention is paid to their connection to green crimes, such as the illegal wildlife trade. Terrorism here corresponds to Schmid’s (2008) research that has found that terrorism is not only a doctrine, which adopts certain methods for generating fear, but it also involves planned violent action aimed to produce particular effects on multiple audiences. Wyler and Sheikh’s (2009) report sites anecdotal evidence that terrorists are using the profits from the illegal wildlife trade to fund their operations. Further support for this possible tie is that terrorist groups are active in the biodiversity hotspots where the black market in wildlife is running rampant (Wyler and Sheikh, 2009). Wildlife trade experts in Russia believe this is the case in their own country where Chechen and Middle Eastern terrorist groups supposedly use the profits of the illegal sale of endangered falcons to fund their training camps (Wyatt, 2012). This challenges the previous stance of security analysts’ that traffickers would not work with terrorists because of the higher-risk of getting caught (Shelley and Orrtung, 2006). In addition to terrorists possibly receiving funding through the smuggling of wildlife, experts have also speculated that they could purposely traffic diseased animals or plants to use as a bioterrorist attack thus using the illegal wildlife

trade as a vector for terrorist activity rather than as a source of income (Wyler and Sheikh, 2009).

The involvement of insurgency groups in wildlife trafficking seems to fit a similar profile. Rebel and militia groups throughout the elephant ranges of Africa are known to poach ivory (Naylor, 2004). Sudanese rebels poach ivory and trade it for weapons; Somali militias are encouraged to poach ivory rather than receiving a salary and militia and insurgent groups in Mozambique and Angola are also known to poach elephant ivory for profit (Naylor, 2004; Warchol 2004). Terrorism and militia or insurgency groups add to the instability and violence of society and evidence is beginning to emerge that this might in part be possible through funding generated by the illegal wildlife trade (Brisman and South, 2013), but this connection needs further study to be fully verified. More well known is that organized crime, which can be powerful enough to disrupt the rule of law, is involved in wildlife trafficking.

Research into the illegal wildlife trade found that in the late 1990s organized crime had become involved in this type of smuggling (Kendall, 1998). Presumably, these groups were attracted by the low risk of detection and/or arrest, the lack of serious punishment if they were to get caught, and the high profits that were (and are) available through wildlife trafficking (Cook et al, 2002; Reynolds, 2002). Additionally, since the black market in wildlife can require multiple coordinated steps – poaching, processing, transporting, and selling – organized crime groups were capable of managing the entire smuggling operation (Cook et al, 2002; Wyatt, 2012). This level of complexity is why in addition to organized crime supposedly legitimate corporate traders are involved

in the illicit selling of wildlife (Lowther et al, 2002). In both instances, it is as Ruggiero (1996: 76) states “wildlife traffickers are opportunity perceivers”.

There are several studies that provide proof of organized crime being involved in wildlife trafficking. In Germany, organized crime is involved in the trafficking of rare animal species (Van Duyne, 1996). The Japanese organized crime group, the yakuza, is involved in the illegal whale trade (Lemonick, 1994). The Russian Mafia not only advertises illegal wildlife for sale in Moscow markets in English (Lemonick, 1994), they have been known to play a leading role in smuggling caviar when Russia was a part of the USSR (Cook et al, 2002). Well-armed Asian crime syndicates are heavily involved in the poaching of rhinoceros for its horn (Milliken and Shaw, 2012).

The open borders that have accompanied globalization are thought to help organized crime trafficking wildlife (Vasquez, 2003). In Cambodia for instance, the more open border has meant fewer border police and this has been taken advantage of by highly organized gangs of wildlife smugglers (Tagliacozzo, 2001). One reason wildlife trafficking is appealing to criminals:

“is the astronomical profit....and don’t let anyone tell you that it is being done by the poor starving peasant who is trying to eke out a meager living in the face of starvation....Those that are wrecking the world are the rich and powerful who come along and see much wealth in the form of timber and meat and skins and minerals...” (Nichol, 1987: 150).

Organized crime is known to combine the trafficking of wildlife with other smuggling, particularly of drugs (Cook et al, 2002). This could be in part because the source countries for drugs and wildlife tend to be the same (Cook et al, 2002). The two black markets can have the same smuggling routes, drugs can

be concealed in shipments of legal wildlife, and drugs and wildlife can be exchanged for one another (Cook et al, 2002). Evidence of the perpetration of drug and wildlife smuggling come mostly from South America (Lemonick, 1994) particularly in Brazil where in the past 40% of drug seizures have contained illegal wildlife (Reynolds, 2002). This connection is seen in other areas also, such as the US, where in 1993 cocaine was found in 33% of wildlife seizures (Reynolds, 2002). In the UK, half of the criminals prosecuted for wildlife trafficking were previously convicted for drugs, violent crimes, theft, or possession of a firearm (Reynolds, 2002).

Drug smuggling is not the only black market that organized crime uses to hide wildlife trafficking and other smuggling. Wildlife trafficking is also blended into the organized crime networks for weapons and human trafficking (IBRD, 2005). Weapons and human trafficking are already considered to be national security concerns and the connection to wildlife trafficking is yet another reason why the illegal wildlife trade should also be deemed a threat to national security. These organized crime networks then combine the supply chains of their black market products and multiply their income by using the routes for wildlife, drugs, people, or weapons amassing significant profits in doing so (IBRD, 2005).

The national security concern stemming from organized crime is because it exerts influence on politics, the media, the public, the judiciary, and the economy (Levi, 1998). This is mostly due to the profits reaped from wildlife trafficking etc. giving organized crime tremendous power to corrupt different aspects of society. Organized crime are able to bribe politicians, who as mentioned can then not implement or under-enforce legislation that, in this case, would further benefit organized crime. The media, too, can be corrupted by

money from organized crime. With control of a newspaper or television channel, criminal groups can influence politics, which again can shift power to organized crime. Bribery of the judiciary can have similar consequences.

Further security issues exist if organized crime has significant control of the state or if the state is unable to challenge the power of the organized crime groups. Either situation is damaging to the nation as a whole, particularly the economy, because the nation's ability to engage with the international community will in all likelihood be limited in terms of trade and other activities (Lowther et al, 2002). Also, the state loses legitimacy and therefore stability because it cannot govern without interference. As demonstrated, corruption, and terrorism and insurgency also pose risks to the security of nations in this way because they, too, have the potential to disrupt the rule of law. Of further concern is danger to the personal safety of nations' citizens who are exposed to the often violent power struggles of organized crime, terrorists, and insurgents. Wildlife trafficking is connected to all of these threats to national security and should therefore be a national security threat as well.

If wildlife trafficking were put on the national security agenda then CITES, as described above, would most likely change to some degree. As an organization, CITES would take a much more prominent role in the United Nations and the authorities within the member countries would be included in meetings regarding national security. This would increase the awareness of wildlife trafficking, which is an important aspect in combating it. Former US Secretary of State Hillary Clinton has recently suggested that wildlife trafficking be added to national security agendas (Coalition Against Wildlife Trafficking, 2012), which may help in increasing the awareness and interest in this green crime. If

this were to happen, CITES would possibly receive more funding and this would enhance their ability to combat the illegal wildlife trade by increasing their oversight capability. Wildlife trafficking as a national security issue may lead to CITES creating a law enforcement unit of its own, which has been considered in the past (Lemonick, 1994). Such an agency would be able to coordinate international investigations, which would benefit member nations who are not able or who are unwilling to dedicate sufficient resources to tackle the illegal wildlife trade. Reducing wildlife trafficking would not only help the environment, but because of the interconnected nature of black markets, it would also contribute to the reduction of organized crime, corruption, terrorism and insurgency, which could improve the security of nations and people in various parts of the world.

Conclusion

There are a multitude of potential environmental, human, economic, and national security threats from wildlife trafficking. The threats to the environment are the instability that arises from biodiversity loss from poaching and logging, which can lead to those ecosystems being unable to support life, including human life. The environment can also be endangered by the introduction of invasive species and diseases that can be brought or transmitted through the illegal wildlife trade. This could negatively impact the global industries that are reliant on natural resources, national and individual incomes, and the food supply. The current novel coronavirus, a SARS-like virus that possibly made the jump from non-human animals to humans has killed 18 people in the Middle East and there are 34 cases in Europe (BBC News 2013). This demonstrates that diseases spread by wildlife trafficking might not just infect plants and animals, but can potentially be transmitted to humans.

Wildlife trafficking is a national security concern because corrupt officials, terrorists and insurgents, and organized crime groups are involved in it and profit from it. All of these elements can impede economic and democratic development, and limit the policy choices of nation states. Such challenges to the actions available to the government can compound poverty and human rights violations. Additionally, the groups or individuals profiting from the illegal wildlife trade can create conflict and instability in countries (particularly terrorists and insurgents) and engage in violence not only to further their cause, but also to protect their profits.

CITES is *the* international convention that addresses the illegal wildlife trade. It has been successful in encouraging stricter border monitoring for wildlife, increasing public awareness of illegal wildlife trade in conjunction with its partner organizations, and in establishing a global system of regulation that is widely adhered to (Stoett, 2002). Yet CITES remains relatively weak (Stoett, 2002). Membership is voluntary; therefore compliance with the licensing system cannot be forced upon countries. So essentially, if a country wants to continue trading a particular species they are free to do so.

Further weakness stems from CITES' lack of law enforcement capacity, which is of course a challenge for all transnational crimes. By combating the illegal wildlife trade, CITES is also helping to tackle the security threats of the illegal wildlife trade that this article has detailed. Since its reach is so extensive, CITES seems to continue to be the best mechanism to address the illegal wildlife trade. Nations would help CITES to reduce wildlife trafficking and the associated

crimes and security threats by recognizing wildlife trafficking as part of the wider threat to national security.

The illegal wildlife trade is a far-reaching security threat that deserves more attention by academics and the security community due in part to the implications that this article has outlined. Further research will provide more information about the structure and perpetration of this green crime. This can then be used for drafting policy to combat wildlife trafficking and in the development of on the ground solutions that will mitigate the security threats described here and help preserve the planet and all its inhabitants.

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