

The Russian Far East's illegal timber trade: an organized crime?

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Abstract Transnational environmental crime is a global problem encompassing not only criminal violations of the law, but harms against the environment and the people reliant upon it as a natural resource. Grounded in the green criminological theory of eco-global criminology, this paper explores the transnational environmental crime of the illegal timber trade in the Russian Far East unpicking the threats to ecological well-being and the global nature and impacts of this crime. In researching transnational environmental crime, it is crucial to uncover the distinct local and regional variations of the forces at play; for this paper that means analyzing the role of organized crime and corruption in Russia's timber black market. This information was obtained by using the current literature and interviews with Russian and international experts in order to uncover the role of these actors in the harvesting, smuggling and selling of timber. From this exploration, a structure of the illegal timber trade in this region is proposed including at which points along the black market chain organized crime and/or corruption are involved. Additionally, from an eco-global criminological foundation this paper analyzes the consequences to Russia's people, its environment and the global community if the illegal timber trade is to continue in its current state.

Introduction

The Russian Far East has one of the vastest tracts of forest in the world. Whereas the equatorial tropical rainforests are known for their size and diversity, it may surprise some that the forests of the Far East are nearly equally as rich in biodiversity and nearly equally important in their function as a lung of the planet. Loss of forests is of global concern as deforestation accounts for 17 % of the global carbon emissions [21]. It is essential to curb deforestation in order to help mitigate the affects of climate change [21]. “The Siberian/RFE [Russian Far East] forests are second only to the Amazon in their size and significance as a carbon sink” [7:14]. Obviously then, this

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ecosystem is crucial to the health of the region and to the health of the planet. As will become evident through the eco-global criminological framework employed in this paper, the global interconnectedness and threat to ecological well-being posed by transnational environmental crimes to these places demands more attention and new analyses of what constitutes harm [38].

As with forests all over the world, the forests of the Russian Far East are a natural resource that has been used for generations and as with the global forests, these forests too are threatened by clear-cutting and overexploitation. The primary loss of the Russian Far East's timber is for the wood itself rather than clearing the land for other purposes (i.e. agriculture) or using the wood for things other than houses and furniture (i.e. drug making and charcoal). While there are negative impacts upon the environment and people living in proximity to this transnational environmental crime as will be discussed, eco-global criminology furthers the analysis by exploring the additional global impacts such environmental degradation generates and therefore why it deserves more attention from governments and the criminological community at the regional and international levels.

While much of the harvesting is legally sanctioned, there is also an extensive illegal trade intertwined within the licit market, which is the focus of this analysis. It should be noted that legal logging is also worthy of examination (though beyond the scope of this discussion) as many of the techniques and approaches to timber harvesting are unsustainable and environmentally destructive [12]. Eco-global criminology challenges both legal and illegal practices as they threaten global ecological well-being because of the interconnectedness of the planet. Illegal logging and trade have generated global discussion yet "there has been limited rigorous work on the types, extent and causes" [33:1]. As Schloenhardt [26] states much of the literature about illegal logging has been generated by non-governmental organizations (NGOs) regarding the environmental consequences, so there has been very little academic analysis into the operational patterns of the illegal timber trade. This paper is unique then in combining an analysis of the global environmental consequences and an investigation of the criminal patterns of the illegal timber trade in the Russian Far East. Drawing on the limited literature that does explore the structure of the illegal timber trade and from interviews conducted mostly in Russia in 2007, this paper proposes a structure for how the illegal trade in timber in the Russian Far East is taking place. Additionally, this paper is unique in analyzing the consequences of this black market on the Russian people and the environment from an eco-global criminological framework, which challenges the anthropocentric use of environmental resources and argues for reassessing notions of harm in an eco-global context [38].

First an overview of the eco-global criminological framework will be given followed by a discussion of the conceptualization of organized crime in the Russian context. Then, the methodology used to obtain the data will be described. This is followed by background information regarding the Russian illegal timber trade before detailing each step of this black market: harvesting, smuggling, and selling as well as analyzing the global interconnectedness and ecological impacts at these stages. This will be followed by the proposed structure of the Russian illegal timber trade in the Far East and further discussion grounded in the eco-global framework of the impacts that the illegal timber trade has both socio-economically and environmentally.

The theoretical framework

The primary foundation of this paper is the eco-global criminological framework that has been mentioned above and will be detailed shortly. This is a unique application of this theory as to date there has been little attempt to directly use it in analyses. Additional theoretical grounding is taken from the literature on organized crime. The combined notion of what constitutes an organized criminal group that was employed when conducting this research is discussed below.

Green criminology: an eco-global criminological analysis

In recent years, environmental or green concerns have been gaining prominence within the criminological agenda, including examinations of illegal logging and timber trafficking [see 1 and 28]. Such innovations are important as they address the long overlooked consequences to both humans and the planet of environmental harms and crimes. A green criminological perspective that encompasses human, non-human and environmental rights in its exploration of environmental practices and destruction challenges traditional notions of crime and harm [19] as well as uncovers the detrimental impacts on human beings and other species when natural resources are over exploited [20, 29, 35, 36, 37, 38, 42]. Elliott [6] argues that increasingly green crimes are transnational in nature and impact and this creates concerns of its own to the security of the global community.

White [38] furthers this perspective in generating his eco-global criminology. Eco-global criminology is underpinned by the green criminological concept of eco-justice. Such an approach allows for a greater conceptualization of harm including such occurrences as global warming and climate change, which are crucial when examining the illegal timber trade as will be discussed later. Analysis of transnational environmental crime needs a different notion of harm as mentioned above. This is because of the inherent interconnectedness of our planet not only in terms of global perpetration of crime, but also of the global impact of environmental degradation [38]. Eco-global criminology provides this framework for an expanded harm-based discourse of crimes and harms against the environment. The framework encompasses not only the legal notions of harm that are recognized by law, but also the greater harms that are generated by legal actions that cause climate change and biodiversity loss [38]. In undertaking eco-global criminological research, unpicking the local and regional variations of crime and harm and the factors contributing to these will be key in developing solutions. Specific crimes relate to particular geographic regions [38] and this research is an example of this aspect of the theory by investigating the timber trafficking in the Russian Far East about which there is limited knowledge.

This paper is underpinned by this eco-global criminological framework and does so by recognizing both the instrumental and the intrinsic value of the environment itself and other species, such as trees. In adopting this theoretical foundation, not only does illegal logging and timber trafficking warrant research as a crime in the more mainstream or traditional sense as a violation of the law, but also such activities warrant research because of the harm they cause to both the ecological well-being of the region in which they occur and to the ecological well-being of the planet. This environmental destruction has negative consequences for people certainly, but the environment and other species within eco-global criminology also become subjects of inquiry as victims in their own

right. In order to address this destruction, who is responsible for it must be determined. As with other timber trafficking, in Russia it has a transnational nature of perpetration and victimization, which is of particular concern in an eco-global context. This and the fact that organized crime has been implicated in other timber trafficking [21] and is a general cause for concern in Russia leads to a discussion of organized crime.

Organized crime

A full historical discussion of the definition and varying structures of global organized crime groups is beyond the scope of this paper. The focus of this paper is the transnational environmental crime of timber trafficking in the Russian Far East, but discussion of organized crime is essential to fully understand the actors that are involved in perpetrating timber trafficking in this region. As Paoli [23] states there is no unanimous definition of organized crime. That being said a brief exploration of the meaning of organized crime that was studied in this research is important to convey to make clear the structure and actors that are being discussed. This research sought to uncover the involvement in timber trafficking of organized crime as in part conceptualized by Passas [24], where the group of criminals is highly organized and disciplined and supplies illegal goods and/or services, but also with the element of continuity and rationality that Hagan [11] found in his research. This largely corresponds to what the Russian Federation Criminal Code considers to be organized crime [5]. In the Russian context, this is not a hierarchical operation hidden in the ‘underworld’ [23]. Russian organized crime may well engage in non-traditional activities and be part of the ‘overworld’ that developed from the former Communist Party apparatus and/or from the state industries [23]. That is these criminals are by and large part of the ‘normal’ political and industrial structures. It is possible then that Russian organized crime—a stable, highly organized, disciplined, rational acting provider of illegal goods and services—is active within the timber trade.

Methodology

This paper combines the research from the current literature regarding illegal timber trade in the Russian Far East and elsewhere, and the results from semi-structured interviews in 2007 with natural resource and law enforcement experts as to how they believed the illegal timber trade in the Russian Far East to be carried out. This involved 17 in-person interviews with the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) Secretariat, three employees of the World Wildlife Fund (WWF), one employee from the International Fund for Animal Welfare (IFAW), one official from the local NGO *Feniks*, one official from the local NGO *Brok*, one employee from the Russian Ministry of Hunting in the Far East region, one employee of the Russian Ministry of Natural Resources in the Far East region, one Russian government prosecutor for crimes pertaining to bioresources, two United States government officials from the Fish and Wildlife Service (USFWS), one United States official from the Moscow Embassy division of Science, Technology, and the Environment, and one United States official from the Vladivostok Embassy division of Economics; one Russian hunting inspector; and two Russian academics from Far Eastern State University’s Department of Sociology and Center for

Organized Crime, respectively. A further three people were contacted via email—one employee of the Russian animal rights organization Viva, one employee of the USFWS Russia Division; and one zoologist from the London Zoological Society, who was researching the Amur leopard in the field in the Far East. The CITES Senior Officer for Anti-Smuggling, Fraud and Organized Crime was interviewed by telephone. Therefore a total of 21 interviews contributed data. Primarily for safety of the respondents, but also to facilitate an open discussion and for uniformity, anonymity is maintained for all participants.

Some of the questions asked during the semi-structured interviews were: What is your perception of the scope and nature of timber trade in and from Russia? Is the demand for timber and timber products foreign or domestic? Is there illegal trade taking place? If so, what kind and where? Who is involved in the Russian illegal timber trade? Are they disorganized, organized, or opportunist criminals? Are they Russians, other ethnicities or other nationalities? What is the mechanism of illegal/legal timber trade entry/exit into or from Russia? Is state corruption a concern for conservation efforts and any illegal timber trade? The basic information provided from these questions is an essential starting point in order to unpick the overall structure of the illegal timber trade particularly as little is known about the illegal timber trade in this region.

As with all chosen methods, there are limitations to the approach adopted. Access to interviewees was challenging because the topic of criminal activity and corruption is not one that everyone feels comfortable with and/or able to talk about with a researcher. This might be more pronounced in the Russian context where there are high levels of distrust [13]. Therefore the sample of interviewees is somewhat small (21) and there are likely other NGO staff and government officials who would also have relevant knowledge to the study. Furthermore, the scope of knowledge around illegal timber trade, and other illegal activities, of these experts reflects only the amount of criminal activity that has been recorded or uncovered. There is a limitation then that perpetration of unreported or undiscovered illegal logging and timber trafficking could reveal further information about the structure and extent of this green crime.

The answers from the semi-structured interviews and questionnaires were subjected to content analysis to unpick themes and trends relating to the structure and impact of Russian timber trafficking. This entailed straightforward coding of key words and themes that were then fitted into the structure of timber trafficking perpetration based upon the chronology of events taking place. The aim of this was to identify connections to organized crime as well as the eco-global consequences of timber trafficking. Combining the information obtained from these experts with the current published literature on the illegal timber trade in Russia and elsewhere, this paper now will lay out the background information regarding this crime in the Russian Far East before detailing each step—harvesting, smuggling, selling—of this black market within an eco-global criminological framework.

Background

Illegal logging in the Russian Far East

The Far East region is one of the poorest areas of Russia though as mentioned it is rich in natural resources, particularly timber. With a lack of commercial timber infrastructure,

timber is harvested in Russia but then usually taken to other countries to be processed. Amur Oblast and Khabarovsk Krai, both in the Far East, are the main areas for logging, both legally and illegally (personal communication: US Embassy official in Vladivostok). These areas account for 70 % of all of Russia's forests, which means that the bulk of the timber is within proximity to China, the world's largest importer of timber [16]. Wood consumption in China continues to grow and is expected to double by 2020 [14]. In general, "Illegal logging [is] the breaking of national laws on harvesting, processing and transporting timber or wood products" and it is accomplished "by logging in protected areas (such as national parks) or over allowed quotas, by processing the logs without acquiring licenses, and by exporting the products without paying export duties" [3:3]. One official (personal communication: US Embassy official in Vladivostok) stated that the illegal harvesting was of pine, not nationally protected species or those that are protected by CITES. In contrast, one expert (personal communication: *Brok* employee) stated that the lime or linden tree, a regionally protected species, is under pressure from illegal and legal logging with the demand coming mostly from China. This was problematic since the tree has not been labeled as a commercial wood product and it is under examination to be given protected status through CITES (personal communication: *Brok* employee). Additionally the Korean pine, which is actually a cedar species, and oak trees are illegally taken because they have a high value on the market (personal communication: *Brok* employee).

In 2006 the World Bank [39] estimated that 10 % of the global annual forestry trade, which is worth approximately \$150 billion, was illegally sourced or traded. Nelleman and Interpol [21] estimate the illegal global timber trade to be worth \$30–100 billion annually making up 10–30 % of trade. Other estimates place the amount of illegal logging anywhere from 0.5 % all the way up to 50 % or even up to 100 % in some parts of the world [27]. Historically, the level of illegal logging during the Soviet Union is unknown [32]. With its collapse though, the former regulatory institutions, authorities, and laws also collapsed, and illegal logging surfaced as a major national and international concern [32]. In Russia recently, the proportions of illegality are thought to be the same as the World Bank [39] estimates with 10 to 15 % of the volume of timber being illegal—amounting to 19 million cubic meters [33]. The Russian government suggests that the illegality is between 5 and 10 % [2] yet others estimate that it is from 10 to 15 % [27] or as high as 20 to 30 % [9]. A research report by Seneca Creek [27] states that 17 % of both logs of soft and hardwoods are considered suspicious in origin. Yet, "by some estimates, in five of the top ten most forested countries on the planet, at least half of the trees cut are felled illegally" [3:1]. Obviously, these are merely estimates of a crime difficult to detect due to its isolation and the technical expertise required to examine the paperwork and the species of trees.

Why the Russian Far East?

In addition to having this abundant, valuable natural resource, why else is the Russian Far East prone to extensive illegal logging? First, this region is quite remote from the central government in Moscow—nine time zones away—and as mentioned has limited infrastructure. Also, as part of the centralized government there used to be a federal forestry management agency in Moscow; this was dissolved with the intention

of having regional offices instead, but this transition had not been realized leaving no oversight (personal communication: Brok employee). Additionally, the region's negative reputation regarding bureaucracy and corruption is so strong that companies from neighboring countries prefer to go through Moscow, thousands of miles away, rather than risk doing business in the east (personal communication: US Embassy official in Vladivostok). Because of the corruption problems, foreign companies have expressed hesitation to invest in mills in the Russian Far East (personal communication: US Embassy official in Vladivostok).

According to the United States Department of Agriculture (USDA) [33], there are four reasons for illegal logging in Russia:

- High profits and strong demand from domestic and overseas markets encourage people to trade timber illegally.
- Poor living conditions in rural areas force people to the forests to help support their basic economic needs.
- Weak forestry regulations such as outdated forest management plans, lack of environmental impact statements, inaccurate estimates of forest resources, and weak control of logging operations.
- Overly complicated administrative and customs requirements and high compliance costs.

Other research indicates other conditions play a role in the existence of illegal logging in the Russian Far East. The Environmental Investigation Agency (EIA) [7] points to the collapse of the forest management system in conjunction with a huge increase in the number of people harvesting timber and the number of exporters. Also, by logging illegally “companies may be able to generate much greater profits for themselves than by behaving legally” [3: 1]. It is estimated that illegal logging generates revenue five to ten times higher than legal practices [21]. At the same time, the demand from China for high quality timber has increased dramatically [7] and as mentioned is expected to continue to increase. All of this coupled with pervasive corruption throughout the government and within the forest service [7] has led to an extensive illegal timber trade. So remoteness, poverty, abundant natural resources that are poorly managed and monitored, high external demand, and extensive bureaucracy and corruption, seem to combine to create the conditions for a flourishing transnational illegal timber trade. This raises the question of who is it that is exploiting these conditions.

The question of organized crime

“Illegal logging is fueled by a global market where few actors—factory suppliers, importers, retailers, or consumers—have the incentive to ask questions” [7: 2]. This not only affects more remote areas like the Russian Far East, but also Western main stream consumer box stores such as Wal-Mart, which EIA [7] has found to sell potentially illegally sourced wood products from the Russian Far East. Graycar and Felson [10] argue that this sheer scale—from isolated forests to major retailers—of the illegal timber market most likely will be highly organized and corrupt.

Schloenhardt [26] agrees that this black market is being carried out by sophisticated organizations at times on an industrial scale and this includes large companies

partnering with the criminal networks to obtain the extensive profits from cheap timber and timber products. In order to harvest, transport, and sell large volumes and weights of illegal wood, there needs to be multiple people involved therefore organized crime is nearly always a player [10].

“The complexity of the processes of illegal trade in timber does raise some important questions of whether any one group can control the whole process from beginning to end. While this is not a likely scenario, there are multiple points at which illegal activities can occur, and empirical work should be undertaken to identify how and where the organized illegality and corruption occur” [10: 87].

Pye-Smith [25] agrees that due to the complex scope of the illegal timber trade organized crime most likely has a hand in some of the trade, particularly those with an international reach. The Russian Minister for Natural Resources in 2008 was quoted as saying that “There has emerged an entire criminal branch connected with the preparation, storage, transport and selling of stolen timber” [15: 64]. This could quite possibly be organized crime as conceptualized previously. There have been other reports that connect Russian and Chinese organized crime to illegal logging in the Russian Far East [34]. So the involvement of organized crime does not seem to be in doubt, but as Graycar and Felson [10] state the exact point of the insertion of organized crime is worthy of further exploration. Information addressing this very issue is given throughout the next sections when detailing the harvesting, smuggling, and selling of illegal timber in the Russian Far East. Additionally, woven throughout is analysis of the ecological and global impacts of timber trafficking.

Harvesting

In Russia, “illegal logging has expanded enormously since the collapse of the Soviet Union” [3: 4]. As Brack [4: A80] notes regarding international environmental crime as a whole, “The transformation of the former Soviet bloc, the difficulties of environmental law-making and law enforcement, and the rise of organized crime in many former communist economies have also contributed to the problem”. In 2004, as indicated above, the Russian Federal Forest Agency estimated that illegal logging was 5 to 10 % of the total harvest [2] though other estimates place it as high as 30 % [9]. The Russian Far East forests are the center of Russia’s illegal logging problem [28]. Nelleman and Interpol [21] list Eastern Russia as one of the main producers in the world of illegal timber.

“The remote borderlands of northern China and eastern Russia are the site of a booming cross-border trade in timber logged from high conservation value forests, most of it environmentally damaging, and a large proportion clearly illegal. While swaths of southeast Siberia along the Mongolian border are also seeing a dramatic rise in timber traffic, the Korean pine and hardwoods of Primorsky and Khabarovsk Krai [Russian Far East] are uniquely desirable in the export trade” [7: 10].

As is evident then, there is the obvious green crime of the illegal logging. Under an eco-global criminological analysis, there is also the green harm around the accompanying environmental damage of such logging that is often disregarded when conceptualizing harmful human actions. As mentioned, deforestation is closely linked to climate change and desertification. Climate change and desertification cause global harm and threaten ecological well-being where they take place and also to the biosphere as a whole. The interconnected nature of the damage caused makes this a transnational crime in that it harms more than those directly in contact with it.

In the Primorsky region, 35 to 50 % of the total harvest is estimated to be suspicious or illegal and 35 % also in Khabarovsk Krai [28]. Oak, ash, birch, and Korean pine are the target species of illegal logging [7]. These species grow in many of the protected areas of the Far East; so illegal logging takes place within the protected areas and, since these species grow in riparian habitats, in restricted areas along riverbanks [7]. In addition then to the green crime of illegal logging, further green harms are perpetrated by logging taking place in threatened ecosystems that are protected and in fragile areas like riverbanks where excessive logging can lead to further environmental degradation such as soil erosion.

Vandergert and Newell [37: 304] list several types of illegal harvesting in Russia, “logging of protected species, logging outside authorized areas, excessive logging, logging using unauthorized methods of cutting trees, and logging without a permit or with a fake permit”. Also people illegally obtain permits or purposely damage trees—so that they can be harvested legally [34]. Similarly, research has found that people will intentionally set fires, which results in permits being issued to clear the affected areas thus creating access to the forest [7]. Again, this provides evidence of green harms connected to illegal logging that have impacts beyond the area in which they happen. Soil erosion and fires can not only result in long-term damage affecting ecosystem and species health where they have taken place, but also in neighboring areas.

Corruption plays a seemingly prominent role in the harvesting stage of the illegal timber trade. Mid-level local Forest Service officials earn small wages, yet have considerable authority within their own territories to distribute forest lands for logging [32]. These officials when bribed will grant rights to log in protected areas or not pursue charges against logging violations in the forest preserves [28]. One interviewee who had formerly worked in the Krai administration had firsthand knowledge of such transactions as the interviewee processed the paperwork. In the regional administration, the Krai officials would sell remote areas, supposedly protected, of the taiga to loggers in return for a share of the profits. It was the interviewee's understanding that some of the buyers were Chinese and that some of the wood was protected cedar (personal communication: Far Eastern State University staff member). Additionally, auctions are held for acres of forest. Russians win the auctions, but it is known that in some cases a Chinese partner is in control (personal communication: US Embassy official in Vladivostok).

Outside of the one US official who referred to the forest ‘mafia’s’ involvement in the acquiring of forest acreage control (personal communication: US Embassy official in Vladivostok), the other interviewees and the current literature does not provide evidence that at the harvesting stage of the illegal timber trade that organized crime is a factor. In contrast, it was indicated that it is usually unemployed Russian

men who are actually harvesting and transporting the trees (personal communication: *Brok* employee). In jobless villages, the Russian citizens illegally log partly because the Chinese have difficulty in gaining permits to do it themselves (personal communication: US Embassy official in Vladivostok). Many of these people's livelihoods used to rely on non-timber products of the forest, which were well managed under the USSR (personal communication: *Brok* employee). Illegal logging and poaching are the only things left to local Russians in these remote areas (personal communication: *Brok* employee) and contribute to the environmental degradation and biodiversity loss that are causes for concern in the eco-global context.

"Timber supply chains are becoming more complex, as timber is increasingly logged in one country and then exported to another for processing (into plywood, for example, or furniture) before export to its final destination" [3: 3]. As indicated previously, this has been the case in the Russian Far East. It has been documented though that Chinese businesses set up logging stations in the Russian taiga (personal communication: *Brok* employee) and that they are in control of the processing and trade (personal communication: US Embassy official in Vladivostok). There appears then to be a mixture of Russians and Chinese processing or transporting the logs after they have been harvested. It is estimated that every year 9.2 million cubic meters of timber are illegally sent from Russia to China [17]. More than 50 % of the illegally logged timber in the Russian Far East goes to China with Japan also being a destination [21]. This smuggling is the focus of the next section.

Smuggling

The smuggling of illegal timber begins out in the remote taiga regions where it was harvested. The transport of the timber is very well developed (personal communication: *Brok* employee). Either whole logs are transported or less often they are processed into timber in small illegal or partly legal sawmills near to where the wood was harvested (personal communication: *Brok* employee). This wood is then taken to one of the timber checkpoints in the taiga, where the police monitor the roads leading to these inspection points (personal communication: *Brok* employee). To be able to reach one of these stations without problems or hassle one needs to pay the officer to allow the timber to pass through the inspection point (personal communication: *Brok* employee). This is a popular position in the police and officers are transferred from these posts regularly because of the levels of corruption (personal communication: *Brok* employee). The timber then makes its way to the border where officials, like they did in the taiga, have created paid corridors for the illegal timber (personal communication: *Brok* employee).

The Russian-Chinese border has multiple border crossings many of which are too limited in terms of infrastructure to handle large amounts of timber [7]. This means that the larger border crossings with inspectors are typically where the illegal timber is taken. For example, the Northeast Chinese border town of Suifenhe on a typical workday receives hundreds of rail cars of contraband timber from the Russian Far East's Primorsky Krai across the border [25]. This is estimated to be upwards of 2.3 billion kilograms of hardwood each year and more than half of this is thought to be harvested in violation of Russian law [25]. It is believed that at this stage of the timber

black market, again, corruption is a key feature. It is even suspected to be so pervasive that each border crossing is a particular Customs official's territory where they collect all the bribery profits (personal communication: US Embassy official in Vladivostok). These officials are very wealthy and the corruption goes very high up in both the Customs agency and the police (personal communication: *Brok* employee). Further corruption is evident in that almost always, the illegal timber has falsified documentation with very little of the timber crossing the border without any paperwork at all [7]. Corrupt companies and/or their employees, and Customs officials are those providing the documentation to where timber crossing the border is 'legalized' [7].

Although exporters of illegally sourced logs cannot escape all payments, as corrupt officials have to be bribed, they are able to avoid some of the compliance costs and offer logs at significantly reduced prices [34: 13]. In fact, "The prices fetched by export-quality wood products justify the economics of illicit extraction activities: building new infrastructure, bribing local officials and/or community leaders, and creating elaborate smuggling arrangements" [7: 4]. Since all logs at the border are subject to export taxes, exporters have developed techniques of avoiding the taxes when possible [27]. This includes bribery as mentioned above, but also, some "elaborate smuggling arrangements" [7: 4], such as hiding logs in rail cars with solid sides and ends, and by mixing low valued logs with high valued logs [27]. Additionally, high valued species are mislabeled as pulp wood, which incurs lower export taxes [18], or the overall value of the shipment is understated to avoid higher taxes [16].

Much of the smuggling across the border then appears to be orchestrated by businesses. One of the ways in which the contraband timber is smuggled out of Russia, is through fictitious firms [17]. A firm will register with the appropriate tax authorities and set up contracts to export forest products to China [17]. A proper bank account will be opened and for several months the account will show active deliveries going to China [17]. Taxes and Customs duties are charged to the firm's account, but after several months the firm will be dissolved and all the outstanding balances left unpaid [17]. In this scenario, the timber may actually be sourced from either legal or illegal sources. The result is though that it is transported out of Russia with no taxes or duties being paid for. The Russian government does not know the exact number (fictitious or otherwise) of companies, which export timber to Chinese companies, but there is a permanent group of Chinese businesses operating in the area [22]. Newell [22] states Chinese and Russian mafias shadow both the Chinese businesses and the local Russian businesses respectively. Hard evidence is lacking though to indicate organized crimes involvement in the smuggling operations at the border.

There is an obvious loss of tax revenue attached to this green crime. This is more than just a criminal circumventing the law; loss of this amount of taxes can have larger consequences to the social and welfare services, infrastructure and development of an entire country. This can be particularly harmful to the marginalized and vulnerable citizens that rely on these services for their health and livelihoods. This loss of revenue is also then not returned to the forestry industry, which will continue to be plagued by corruption and illegal logging without the proper infrastructure and oversight. This contributes to the continuation of the environmental degradation, which has regional and global consequences.

At the border crossing, timber is placed on trains or ships (if at a river crossing) by Russians and moved by Chinese to Harbin and Suifenhe (both in northern China) and later on to Beijing and Shanghai (personal communication: *Brok* employee). Women help coordinate the transportation of the illegal timber into China. For instance, the husband or the son will come to Russia and the mother in China will arrange for pick up and transport in China (personal communication: *Brok* employee). The timber now has most likely been smuggled into China, but the final destination for this black market product still has not been reached.

Selling

Whereas China is one of the major buyers of Russian timber, both illegal and legal, Russian timber also makes it to other parts of the world. As indicated, Japan is also a buyer of Russian timber. Though they have made many efforts to try to combat illegal shipments into Japan (personal communication: *Brok* employee), Nelleman and Interpol [21] find that nearly 50 % of the illegal timber from Russia goes to Japan. The European Union is another of Russia's most important markets, but receives wood from Western Russian. The World Wildlife Fund [41] estimated that in 2004, 27 % of Russia's timber exports to the EU were from illegal sources, which again is not coming from the Far East. The percentages to China were thought to be higher. In fact, "Much of the illegal wood in China comes from Russia" [3: 4], partly because China has restricted much of its own logging activities [26]. As EIA [8: 1] has found, "China, the largest importer of timber and the largest consumer of illicit timber has relatively little logging because central controls have been implemented to counter severe environmental damage". Other research by Seneca Creek [29: 15–16] supports this claim—China is believed to be the world's largest consumer of illegal timber, with 32 % of imports of timber, pulp and paper in 2000 estimated to be illegal. Furthermore, "China is increasingly important as an importer and processor of raw timber; Chinese imports of timber, pulp and paper grew by 75 % from 1997 to 2002" [3: 3] and are continuing to increase [14].

As mentioned above, whole logs are typically smuggled out of Russia though there are some illegal or partly legal saw mill operations active in the taiga. One interviewee indicated that 20 % of the timber leaving Russia is processed, so the vast majority is raw logs (personal communication: US Embassy official in Vladivostok). Illegal traders sell logs at lower prices, since as mentioned previously they have avoided costs associated with established tax and Customs fees [34: 13]. These logs typically go to China where they are made into boards and then either are transported to other locations in China or are re-exported to Japan. One interviewee stated that rather than limited infrastructure in Russia being prohibitive, the logs were processed in China because Russian labor is more expensive and of lesser quality than Chinese labor, which is higher quality and cheaper (personal communication: US Embassy official in Vladivostok). A portion of this lumber is used in making furniture. "Asian furniture manufacturers, especially in China, Vietnam and Taiwan are aware that illegal sources are considerably cheaper. After being manufactured into furniture, the product usually finds its way to the shelves of a major retailer in the US or Western Europe" [10: 84]. The final destination then for illegal timber from the Russian Far East might very well be Western homes.

The timber then gets taken in Russia illegally, most likely smuggled to China where it is either used or mixed with legal timber, which may continue on to Japan or other countries and there is no way to know what was once illegal or legal (personal communication: *Brok* employee). There was no indication in the literature or in the semi-structured interviews that organized crime was involved in the selling aspect. The furniture or home manufacturers appear to be legitimate businesses that (possibly knowingly) use illegally sourced materials to maximize their profits, but do not in any way fall under the above given construction of organized crime. Regardless of their legitimacy, such business practices too contribute to environmental degradation by spurring illegal logging and thus deforestation. As will be expanded upon, the damage to ecological well-being of the region and to the planet because of the connection of deforestation to climate change is a green harm requiring global intervention and solutions as it affects everyone.

The structure of Russian Far East timber trade

As Vandergert and Newell [34] contend the path from the forest to the final consumer is a complex one. This is true of the Russian Far East where the data from the literature and personal interviews results in differing views as to how this black market is structured and the many actors that might take part. It has been recorded that the Russian Minister of Natural Resources cited the involvement of a 'criminal branch' in the illegal timber trade [16: 64]. It is unclear if by branch he was referring to organized crime or to criminals who earn their profits only from illegal logging. Previous research [34] and one interviewee (personal communication: US Embassy official in Vladivostok) indicated that there is a forest mafia that secures the land in Russia for illegal harvesting—typically done by bribery of regional officials. Others say local Russian men in the area, without ties to organized crime, undertake the actual illegal harvesting (personal communication: *Brok* employee). Local Russian experts believe that these men are simply unemployed local people without other opportunities to earn a living (personal communication: *Brok* employee).

Some believe that the Russian mafia also facilitates the transport of the illegal timber (personal communication: US Embassy official in Vladivostok). Again this is accomplished by bribery, this time of police and customs agents both at forestry checkpoints and at the international border between Russia and China. Conversely, the Russian expert contends that the transport within Russia and the processing of the timber within Russia is coordinated by Chinese organized crime (personal communication: *Brok* employee). While it occurs less often than the smuggling of whole raw logs, one interviewee's research has found that Chinese organized crime are involved in the illegal establishment of small sawmills in the remote forest and taiga regions (personal communication: *Brok* employee). Others believe that the Russian mafia controls the legitimate forest industry and is connected to Chinese criminals (personal communication: US Embassy official in Vladivostok), but obviously the level of involvement and the insertion point of Chinese criminals are not agreed upon nor is the involvement of Russian organized crime. However, there is no dispute between interviewees that paid corridors exist to smuggle either raw logs or processed timber within Russia and at the border with China.

The structure for such a large black market does not have to be an either or. The perpetration is quite probably a blending of all of the above. The cost of bribing public officials to acquire forestland may rightly be undertaken by organized crime, though further research is needed to fully determine this. Furthermore, organized crime, corrupt officials or corrupt businesses would be the only actors with the capital to pay the bribes at the timber check points and borders. The corrupt officials too can facilitate the illegal logging by granting illegal concessions. Individual criminals may well illegally harvest, but on a small scale. The illegal harvesting of timber is most likely then a mixture of these actors—organized crime, corrupt officials, corrupt businesses and individuals. Organized crime from both Russia and China appear to be involved in the smuggling portion of the trade—in terms of Chinese organized crime this is sometimes physically within Russia at illegal sawmills and/or sometimes orchestrating from China the smuggling of raw logs. The smuggling occurs in a variety of ways—fictitious businesses covering the taxes and customs duties, false reporting of shipment contents, forged documentation, and elaborate equipment to hide logs and timber. Regardless which of these paths has been utilized, the illegal logging and then smuggling includes bribes that are paid to Russian officials along the smuggling route to where by the time the once illegal timber arrives in China it has been ‘legalized’ or lost within the legitimate shipments. Businesses that are either corrupt or which are willing to look the other way in terms of illegality are woven into this structure. They are involved in the transportation of the illegal timber as well as the manufacturing and selling of it. The buyers too play a role in the illegal timber trade. Western box stores may knowingly buy furniture etc. with questionable origins and then global consumers seeking the cheapest price may well purchase illegally sourced wood. The structure uncovered for illegal timber trade in the Russian Far East may be particular to this specific geographic context. As advocated for under the eco-global criminological framework such studies are necessary to unpick variations that can then be further analyzed. In doing so here, it is now possible to explore in more detail the consequences to people and the environment both regionally and globally.

The consequences from an eco-global criminological analysis

The illegal timber trade has significant consequences not only in the Russian Far East where it takes place, but also throughout the world. As Brack [3: 1] states, “It causes environmental damage, costs governments billions of dollars in lost revenue, promotes corruption, and undermines the rule of law and funds armed conflict.” First, the negative impact on people and communities stemming from the illegal timber trade will be explored. This will be followed by an expanded discussion of the environmental consequences that arise if this black market continues unabated.

The people

It is argued that green crimes actually affect more people than street crimes, yet they continue to be marginalized in academia and not addressed by governments and law enforcement [20]. In the case of illegal logging and timber trafficking, a cause of major concern is the finding that resource loss can increase poverty [31]. An already

impoverished region, the Russian Far East then and its inhabitants can be acutely affected by the illegal timber trade. As indicated above one of the impacts on the people and communities in countries with timber as a natural resource is that illegal harvesting of that timber robs the government, and in turn the people, of revenue. In Russia's case, this is at least 10 to 15 % of a major industry. Worldwide the economic impact of the illegal trade is considerable. It is estimated that each year the global market loses around \$10 billion [26]. As alluded to, less government revenue results in fewer social services including much needed law enforcement to combat the very problem that is causing the lost revenue. Additionally, lost revenue and lost natural resources have a negative impact on a country's ability to develop [3]. This can mean in terms of infrastructure and also in terms of social services like hospitals and education.

The legal market itself is distorted by the shadow illegal market in terms of skewed prices resulting from the true extent of demand not being pictured in the legal industry; this too impacts on revenues in a country and has negative consequences for the industry and the people reliant on it [3: 18]. As the World Bank [40: 40] has observed, "widespread illegal extraction makes it pointless to invest in improved logging practices. This is a classic case of concurrent government and market failure." This means that improvements are not made to the infrastructure associated with the logging industry or to sustainable management or environmentally sensitive practices. This is seen in the case of Russia where little effort has been made to create any infrastructure to support the legal timber trade and government restructuring has resulted in little forestry oversight. Both legal and illegal environmentally harmful activities continue then, which impact the region and the planet. Illegal logging which results in the decrease of species can also be economically problematic to the local people. For example, the reduced number of linden trees adversely affects those people who rely on this species as integral to their beekeeping and honey industry (personal communication: *Brok* employee). The focus on the interconnected nature of the environment from the eco-global criminological framework highlights that these harms also need to be addressed in addition to the crime of illegal logging and trafficking. Green crimes are unique in this sense that the impacts are far-reaching.

The illegal timber trade also impacts larger society. High profits and low risk have drawn in organized crime and corrupt officials both of which challenge the rule of law in these countries as they can act with impunity. Organized crime and corruption also bring with them violence in the commissioning of their crimes. For instance, the forest mafia was thought to be responsible for a murder of a man running for mayor of a forest village in October of 2006 (personal communication: US Embassy official in Vladivostok). The mayoral candidate was connected to both the timber and the fisheries industries. There is a long history in the Far East region of governmental candidates being murdered and many deaths tied to forestry and fisheries, which are considered to be the most criminalized industries (personal communication: US Embassy official in Vladivostok). In other countries where there is extensive illegal logging, the profits are used to fund national and regional conflicts [3], though this is not observed in Russia. Schloenhardt [26] also sites that in very extreme cases, illegal logging and timber trafficking have been used to finance coups, rogue regimes, human rights abuses, and wars.

EIA [8: 1] summarizes the impact on people and communities well:

"Illegal logging is not a problem that dwells in faraway forests and can be blamed on impoverished local people. Export-oriented illegal logging is such a

destructive activity precisely because it does not benefit the communities or governments, who should, by right, reap the benefit from the harvest of their natural resources. Instead, it profits a small group of corrupt officials and criminal timber barons at the expense of people and the environment, human rights and the rule of law”.

Like other green crimes, the illegal timber trade “unlike most other kinds of crime, [it] harms not just individual victims but society as a whole. International environmental crime potentially damages the global environment” [4: A81]. Because of this, it is essential that further research is done to uncover these global connections and then be used to improve policy and prevention strategies. In doing so, more victimization will be addressed than simply the loss of government revenue; entire ecosystems may be saved and with them the biodiversity and carbon sinks of forests that are crucial for human survival around the world.

The environment

Not only do the above detailed consequences to the people living in proximity to the illegal timber trade make this a topic worthy of criminological research, but also from a green criminological perspective the harm to the environment itself regardless of its instrumental value to humans is a topic worthy of inquiry [43]. The harm to the environment from illegal logging can be extensive and as quoted above this does not simply affect the surrounding region, but has global consequences. These are the key elements to the eco-global criminological framework. There is the ecological concern from illegal logging as well as the transnational impacts that such harm causes. On a regional level the illegal timber trade reduces the amount of forest and destroys wildlife habitat [3]. In the Russian Far East this means the loss of Korean pine and oak trees whose nuts are the food base for small fur-bearing mammals and for the wild boar. These animals in turn are the food base for larger animals, including the highly endangered Amur (Siberian) tiger (personal communication: *Brok* employee) of which it is estimated only around 300 remain. Similar circumstances exist in Africa, for example, where illegal logging in the center of the continent is threatening the survival of populations of the great apes, including gorillas and chimpanzees [3]. As mentioned, it has been observed that illegal sawmills are being set up in the remote forests and taiga of the Russian Far East, not only does this destroy habitat, but also the added human population to these areas places additional stress on the environment and the wildlife (personal communication: *Brok* employee). These are clear examples of the interconnectedness of the planet and evidence that the eco-global criminological framework which uses this interconnectedness to assess harm is a valuable theory in uncovering overlooked harm.

In addition, to the loss of both forest and biodiversity, further physical damage can take place after tree loss in the form of floods and landslides [3]. This occurs because the trees are essential to the physical integrity of many ecosystems. Another side effect of the deforestation from illegal logging is desertification that occurs with the loss of forest [26]. This can be seen in regions of Africa and in China. On a global scale, the decrease in forest biomass brought about by “illegal logging impairs the ability of land to absorb carbon emissions, a matter of growing importance in the

context of attempts to limit climate change” [3: 2]. As mentioned in the introduction, the destruction of the Russian Far Eastern forests is destroying a key carbon sink on the planet [7]. This has global implications in regards to climate change and the predicted negative environmental consequences.

Illegal logging in Russia affects the local people through the damage to the environment, possible increase in poverty, and loss of revenue to government services; society as a whole by challenging the rule of law through organized crime and corruption; the government by taking valuable revenue for development and social services; and the environment by depleting biodiversity, and creating the conditions for floods, landslides, desertification, and climate change. These consequences are significant at the local level and have far-reaching global implications as well. All of this warrants more attention from the criminological community.

The future

Brack [4] states that political will is what is lacking when tackling the illegal timber trade not the absence of policy options aimed at controlling this black market. He argues that now countries “need to focus on the implementation of laws and international agreements not just their introduction and negotiation and the related issues of governance and corruption” [3: 4]. Schloenhardt [26] points out though that there are gaps in both domestic and international control schemes regarding the timber industry. This combined with difficulties in identifying and uncovering illegal timber and its products in conjunction with trying to pick apart complicated smuggling operations has thus far resulted in ineffective efforts to diminish the trade [26]. An added obstacle is that corruption and bribery at all levels of government are common at every stage of this illicit trade [26].

As indicated, efforts focused on the supply side have met with little success so in addition to closing loopholes in the existing regulations and ensuring that they are fully implemented, attempts to curb the illegal timber trade need to turn to the demand side. Brack [3: 4] says “Consumer countries can exert a great deal of pressure by moves to exclude illegal products from their markets”. Nelleman and Interpol [21] concur that there must be active discouragement of using timber from certain places and certification schemes for sustainable legally sourced timber such as the Forest Stewardship Council must be more rigorously adhered to. We must address “the role of consumer countries in driving illegal activities and the potential for them to take action to exclude illegal products and build markets for legal timber” [3: 4]. EIA’s [7] research into Wal-Mart highlights that Western retailers play a part in fueling the illegal timber trade, but because of their size if responsible practices are introduced to ensure that legal materials are used, these companies can have a significant impact on reducing the black market. Consumer countries can also help tackle the illegal timber trade by “providing assistance to producer countries with law enforcement on the ground” [3: 4]. Individual criminals and organized crime are exploiting and stealing this profitable natural resource from the people and community while extensively damaging the global environment. The efforts to stop this would benefit from addressing the demand side more as well as assisting the source countries in trying to tackle this black market. Increased efforts by CITES and the International Tropical

Timber Organization (ITTO) are attempting to the latter by helping source countries in the certification of their timber [21]. Criminologists can conduct the much-needed research into the actors involved in order to assess the social impacts [30] and help develop innovative crime prevention strategies [10]. Additionally, research must explore legal practices in the logging industry carried out by multinational corporations that are also harmful to the global environment.

Conclusion

“In several country case studies, illegal logging is financed and conducted by criminal syndicates and mafias with high-level connections” [7: 4]. With the prevalence of organized crime within Russia and some indication that organized crime is an actor in the illegal timber trade in the Far East, this paper set out to establish if and when organized crime was active in the illegal timber trade from the Far East. It seems likely that Russian organized crime does play a part in the harvesting and smuggling stages of this black market, but as stated above further research needs to be undertaken in order to cement this connection as the data obtained was conflicting. In light of this, it is probable that multiple actors are involved in the harvesting and smuggling including organized crime, corrupt officials, corrupt businesses, and individuals. What is consistent is that “Timber theft can become highly elaborate in its organization, and can involve substantial corruption of public officials” [10: 3]. The literature and the data from interviews conducted show the significant role that corruption of local and regional officials, and Customs agents and police officers have in the facilitation of the harvesting and smuggling of illegal timber.

Additionally, this paper supports that the illegal timber trade is organized elaborately with the harvesting stage being carried out by a range of actors; the smuggling stage being carried out by corrupt businesses, and Russian and/or Chinese organized crime through fictitious businesses covering the taxes and customs duties, false reporting of shipment contents, forged documentation, and elaborate equipment to hide logs and timber that has been processed at hidden illegal sawmills; and the selling stage being carried out possibly by Chinese organized crime or legitimate businesses since at that point the illegal has been mixed in and lost within the legal industry.

Illegal logging takes place in the Russian Far East, and other places, for the reasons that Brack [4: A80] outlines. Harvesting timber illegally maximizes profits and fills a demand for timber for a market (China) where this product has no substitute and is scarce. Additionally, there is a lack of concern for the environment in this region and that coincides with law enforcement failure. Enforcement failure occurs not only because discovery of illegal timber is difficult, but also because of insufficient law enforcement resources and corruption. Russia could benefit from efforts to curb the demand side of the illegal timber trade such as consumer countries taking steps to exclude illegally sourced timber from entering their markets. Also, international law enforcement campaigns that would assist Russia to fully implement timber regulation and improve law enforcement practices might help in combating the illegal timber trade.

Illegal logging is a cause for concern both for the impact on the countries and people where it takes place and its damaging affects on the regional and global

environment. As Schloenhardt [26] states, the illegal timber trade accelerates destruction of forest resources, impacts negatively on biodiversity, and causes deforestation and desertification as well as other environmental degradation. Deforestation then of Russian forests has global implications in terms of planetary ecological well-being. From an eco-global criminological framework such harm is rendered visible through the interconnectedness of biospheric processes—harm to the environment in one place will have negative consequences in other environments and for other people.

Schloenhardt [26] also rightly points out that countries cannot be penalized or sanctioned if they exploit, or allow the exploitation of their forests. International regulations and treaties are voluntary and do not have law enforcement provisions. Green criminologists then can contribute to the discourse of the illegal timber trade and other green crimes by researching how these markets are structured in order to highlight the social and environmental impacts of these often overlooked crimes and to help develop crime prevention strategies. Such research undertaken as a comparative analysis of different regions will aid those countries that are making efforts to stop green crimes. It might also educate those countries that continue to exploit their natural resources as to the dangers of their continued actions both to their people and to the interconnected global environment.

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