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An Alternative Approach to Classify Illegal Logging: The Case in Vietnam

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Abstract

This article examines the different kinds of illegal logging that takes place in Vietnam, challenging the typical approaches to understanding and classifying the various criminal activities involved. We argue that either overlooking the classification of illegal logging or relying solely on illegal timber volumes and legal descriptions to categorise the crime is not sufficient to comprehend its diverse nature. This leads to inappropriate measures to tackle the crime. Instead, this study suggests that illegal logging should be categorised into three types, which are fundamentally distinctive, not only with regard to the volumes of illicit timber and the legislative definitions of the crime, but also (and more importantly) with reference to the attributes of harvesters, the degree of their involvement and their motivations, and the level of organisation involved in criminal commissions.

Keywords

Illegal logging; timber trafficking; illegal timber harvesting.

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Introduction

International trade in wood-based products is valued at over USD\$250 billion (Hoare 2015), while illegal trade in timber is estimated to be worth between USD\$30 and USD\$100 billion annually, or 10–30% of the global wood trade (Nellemann and Interpol Environmental Crime Programme 2012). In 2013, in nine producer countries, over 80 m³ of timber were illegally logged, which is equivalent to almost one-third of each nation's total timber production. Consequently, at least 190 million tonnes of carbon dioxide will be released into the atmosphere (Hoare 2015). Timber trafficking is assumed to invite a host of detrimental effects on (1) the economy by weakening economic efficiency, causing governments to lose revenue through the non-payment of taxes, misallocating investments, and by stealing state revenue—estimated (cumulatively) at billions of US dollars each year (Bisschop 2012; Chan 2010; Environmental Investigation Agency 2012; Rosander 2008; World Bank 2007). Further, trafficking affects (2) the natural environment by threatening biodiversity, intensifying deforestation and contributing to natural disasters (Goncalves et al. 2012; Interpol and World Bank 2009; Lawson and MacFaul 2010). It also endangers (3) human wellbeing by threatening individuals' livelihood, employment and food, as well as the physical safety of indigenous people living in forest areas (Chan 2010; Food and Agriculture Organization [FAO] 2007; van Solinge and Kuijpers 2013). Finally, trafficking disturbs (4) political stability by creating conflict between local communities with outsiders, challenging proper operations of governments and provoking the expansion of organised and transnational criminal syndicates (European Commission 2003; FAO 2007; Harwell and Blundell 2009).

Alongside the Amazon and Central Africa, South-East Asia is among the top-three global regions for timber trafficking (Nellemann and Interpol Environmental Crime Programme 2012). This is certainly the case in Vietnam where trafficking has become a 'deep concern' and attracted a large amount of media coverage (Sikor and To 2011: 692). Irrespective of increasing commitments to tackle this crime, the results have been unsteady and insignificant (Department of Legal Affairs 2012), and trafficking remains 'a pressing concern in Vietnam today' (Phuc and Sikor 2013: 1). Nonetheless, in the international academia, very few, if any, criminological studies on Vietnamese timber trafficking have been conducted in detail; consequently, understanding of the criminological aspects remains largely unknown. Against this backdrop, this study investigates systematically how illegal logging has and continues to occur in Vietnam. It opens with figures that reveal the scope and general trend of illegal timber harvesting in Vietnam in the last five years, and then looks into three different components of the crime, explaining in detail where and when the illicit operation takes place, who the offenders are, why they get involved and what techniques they use to facilitate their crime. The article concludes by discussing critically the nature and extent of illegal logging in Vietnam, and further proposes an alternative approach to the crime's current classification.

Methods

Concerning methodological strategy, the purposive sampling in this research was determined to maximise the diversity and deepness of the research findings and, where possible, improve their representativeness of illegal logging in Vietnam as a whole. There are two main levels of sampling in this research—sampling of context and sampling of participants. Regarding the former technique (which concerns the fieldwork locations chosen), a set of four main 'criteria' was formed initially. Specifically, the chosen provinces should have (1) a large forest area adequate to support observation of the forest governance of provincial authorities and reliance of the local communities on the forests; (2) a large number of forest offences that guarantee a wide variety of incidents of timber trafficking; (3) serious cases of timber trafficking in terms of number of offenders; (4) consequences of the crime; (4) and sophistication of criminal activities. Together, this provides deeper insight on the problem of timber trafficking in Vietnam, and ensures the findings cover various regions, each with different natural, economic, social and cultural conditions.

Based on the criteria, five provinces in three different regions of the North (Bac Kan), the Centre (Thanh Hoa and Quang Binh) and the Central Highlands (Gia Lai and Kon Tum) of Vietnam were selected to conduct the fieldwork. These areas had a total of 2.7 million hectares of forest, accounting for 21% of the

entire forest area in Vietnam. These provinces also recorded more than 5,600 cases, making up approximately 20% of the total cases discovered nationwide (Ministry of Agriculture and Rural Development [MARD] 2016). Besides, all of the chosen provinces have national parks where illegal logging currently and frequently takes place. They also consistently suffered from serious cases of timber trafficking, as reflected through various channels including media coverage and official reports.

The second level of sampling aimed at selecting the research participants. To collect interview data with the highest possible degree of relevance and detail, respondents either interacted with or believed to hold a deep understanding of timber trafficking. Accordingly, 41 semi-structured interviews were conducted with 11 environmental police officers (mainly tasked with collecting intelligence on illegal logging), six investigative police officers (tasked with conducting formal criminal investigations into serious illegal logging cases), seven forest protection (Kiem Lam) officers (tasked with issuing administrative fines into less serious illegal logging cases), three local authorities, six local residents, three timber traders and five non-government organisation staff. All interviewees provided their informed consent.

Conversations mainly revolved around current typologies of illegal logging in Vietnam, such as the scale and trends of illegal activities, the demographics of those involved, the techniques used and its connection with other criminal activities. In addition, an ethics form was completed and cleared before conducting the fieldwork, minimising any potential dangers facing the interviewer. Naturally, all discussions were guided with participants' freely informed consent in mind. Numerous official documents including criminal case files, reports from law enforcement authorities and conference papers, as well as hundreds of online newspapers articles, were collected and analysed.

Green Criminology and Illegal Logging

According to Ruggiero and South (2013: 360):

Green Criminology can be defined as a framework of intellectual, empirical and political orientations toward primary and secondary harms, offences and crimes that impact in a damaging way on the natural environment, diverse species (human and non-human) and the planet.

American criminologist Michael Lynch (1990) first coined the term 'green criminology', envisioning that radical criminology could benefit from association with environmental movements. Over the last three decades, the criminological discourse has witnessed the rapid growth of green criminology, in which a number of in-depth projects—focusing on obtaining empirical data and developing theoretical frameworks—have been conducted (Goyes and South 2017; Lynch and Pires 2019; Spapens, White and Huisman 2016). A number of well-known criminologists in the West have made significant efforts to develop it as 'a staple at most international criminology conferences' (White 2013: 8).

One of the core concerns in green criminology is identifying 'the extraordinary extent and volume' of the various forms of green crime, which could be among 'the biggest crimes in the history of the world' (Lynch and Stretesky 2014: 174). In fact, green crimes are 'emerging as very serious global threats that cannot be underestimated any longer' (United Nations Office of Drugs and Crime 2013: para. 1) and 'no other crimes have threatened the existence of the entire planet' (Lynch and Stretesky 2014: 174). Irrespective of this gravity, these crimes have long been overlooked by mainstream criminology or subsumed within the study of other criminal types such as corporate or organised crime (South and Beirne 2006).

Within the field of criminology, green crime already receives little attention compared to other categories of crime, so it is unsurprising that illegal logging attracts even less concern among criminologists than such offences as pollution, hazardous waste and wild animal trafficking. This is interesting since illegal logging is frequently considered to be one of the most major green crimes. Indeed, for its 'alarming pace, level of sophistication, and globalised nature' (Nellemann et al. 2014: 4), illegal logging, together with trafficking of other forest resources, has notoriously contributed to an 'environmental crime crisis'.

This is somewhat evidenced in the most substantial collections on green crime to date. Notably, South and Brisman (2013), Spapens, White and Kluin (2014) and White (2009, 2010) offer one essay relating to illegal timber trade, whereas Beirne and South (2006), Ellefsen, Larsen and Sollund (2012), South and Beirne (2007) and Walters, Wyatt and Westerhuis (2013) fail to address the offence. To date, almost all intensive research projects on timber trafficking have been undertaken mainly by international organisations such as the Environmental Investigation Agency, Telapak, Global Witness, Interpol and the World Bank, and by scholars in such fields as forestry, forest conservation, policy analysis and international development. Conversely, interest from criminologists on illegal logging remains limited (Graycar and Felson 2010; van Solinge 2008, 2010; van Solinge and Kuijpers 2013). Of note, van Solinge and Kuijpers (2013) believe that on the basis of ubiquitous, highly illicit profits and severe violence associated with timber trafficking, it would be a significant oversight if the crime were marginalised in the criminological agenda. It is also predicted that repositioning timber trafficking within a green criminology framework may produce deeper and more fruitful insight on the crime (van Solinge and Kuijpers 2013). Another example of neglect among international communities regarding timber trafficking is that virtually each form of environmental crime is mainly targeted and intensively handled by a corresponding international treaty. Curiously, to date there is no single universal instrument designed specifically to prevent and suppress timber trafficking. In a similar vein, timber trafficking has not received high priority at a national level. To this, Stewart (2014: 238) observes that, 'governments have, for the most part, failed to prioritize tackling this type of crime, resulting in a failure to enact the legislative reforms necessary or provide the financial and technical resources needed'.

The effects these responses from national and local authorities have are 'far from satisfactory' (Reboredo 2013: 295), and still lag behind the scope and enlargement of the crime (Nellemann et al. 2014).

Overview of Illegal Logging in Vietnam

According to the Forest Protection Department (FPD) in Vietnam, by 2016, Vietnamese authorities detected a total of 19,389 violations of the laws and regulations on forest protection—a 9% decline compared to 2015. The main forest offences include illegal deforestation (e.g., illegal cutting, burning and destroying of forest trees; illegal digging and blasting of forests; and illegally releasing toxins in forests), violations of forest fire prevention (e.g., failure to submit regular reports on and equip the required tools for forest fire prevention, and failure to establish forest fire prevention teams), violations of forest land usage (e.g., illegal transformation of forest land usage purposes and failure to establish forest land usage records), violations of wildlife management (e.g., illegal poaching, storage, buying and selling of forest animals) and timber trafficking (e.g., illegal timber harvesting, smuggling, processing and trade). However, as generally observed from official statistics and by the majority of interviewees in this study, the number of forest offences appears to be decreasing and, overall, the problem of forest crimes (including illegal logging) has been better controlled (Cao 2017).

However, it must be noted that although the number of detected cases shows gradual decline, the number of serious cases—often demonstrated by large volumes of illegal timber, large numbers of harvesters and high level of sophistication—is apparently increasing. Participants in this study firmly believed, in line with the media and confirmed by official reports, that in one form or another illegal logging still exists in all forested parts of Vietnam, and that in many provinces illegal logging remains alarmingly severe.

Classification of Illegal Logging in Vietnam

Investigating illegal timber harvesters and their conduct in present-day Vietnam reveals three different forms of illegal logging. These consist of small-, medium- and large-scale illegal timber harvesting (LSITH).

Small-Scale Illegal Timber Harvesting

A number of studies on illegal logging, which essentially refer to the illegal harvesting of small volumes of timber, mention the terms 'small-scale logging', 'small-scale timber extraction', 'informal logging' and (occasionally) 'artisanal logging'. At international levels, although small-scale illegal logging receives much

less academic discussion than its large-scale equivalent, this unlawful practice has been examined in some regions including Indonesia (specifically Kalimantan and the Indonesian portion of Borneo) (Casson and Obidzinski 2007), Ghana and Cameroon (Lawson and MacFaul 2010; Lescuyer 2007), South-East Albania (Stahl 2010) and Uganda (Jagger, Shively and Arinaitwe 2012). These studies all show concern over the legality of logging but jointly recognise that it is relatively popular among forest-based communities, further playing an important role in supporting the livelihood of loggers.

In Vietnam, some studies also mention the term 'small-scale illegal logging' (McElwee 2004; Phuc and Sikor 2013; Sikor and To 2011; Sunderlin and Huynh 2005). These works offer general descriptions of the logging, characterised by small volumes of timber illegally cut down by loggers who are often local residents. However, it is observed that other defining features associated with this illicit trade—such as where, when, how and why it occurs—still remain comparatively unknown. More fundamentally, the studies do not examine other parallel forms of illegal logging, thus, overlooking the possible connections with, and meaningful comparisons between, different types of illegal logging concurrently occurring in Vietnam.

Following systematic analysis of the study data, one can define 'small-scale illegal timber harvesting' (SSITH) in Vietnam as any acts of illegally harvesting trivial volumes of timber that are opportunistically and/or committed occasionally by individuals or small groups of poor, forest-based residents using rudimentary methods under subsistence-based motivations. Analysing evidence pertaining to SSITH indicates several archetypal features of this form of logging.

First, regarding the demographic characteristics of loggers, participants in SSITH are typically poor indigenous forest dwellers for whom forests are an inherent part of life. These loggers have exceedingly limited land and production tools to carry out farming; thus, harvesting forest resources becomes their everyday job. They might carry out the work individually, but small groups are preferred due to the physical risks and arduous nature of logging inside the forests (Ba Be Investigation Police Agency 2013a, 2013b). These groups are either family-, village- or peer-based, and routinely contain three to five members.

Second, the main purpose of SSITH is mostly subsistence-led rather than commercial, and the timber harvested is important for harvesters' survival. According to one resident, locals typically cut down trees for the purpose of building their homes, kitchens, furniture and corrals for cattle ranching. In fact, forest-based people have been enjoying houses and furniture made from timber for generations, believing that maintaining this form of housing is also a way of keeping their ancestors' assets. More fundamentally, in many remote and forested areas of Vietnam, it is often extremely expensive for locals to build decent houses made from bricks and cement due to elevated costs of transporting building materials from the lowlands using rugged, winding and uphill routes. While the locals are inherently poor, a sizable number of households construct and repair their houses, furniture and kitchens with lumber logged unlawfully from the forests close to their communities (MARD and Forest Sector Support Programme 2014; Xuan 2014).

In SSITH, loggers may perceive their conduct as both illegal and environmentally harmful, but because of the difficulty in guaranteeing subsistence, they decide to carry out SSITH anyway. Here, Pham (2008: 108) indicates that for many remote, forest-based communities in Vietnam where forests are a unique source of individuals' livelihood, 'in order for survival they ignore the law, do whatever that gives them something to eat, to wear in everyday life'. A local resident in Bac Kan asserted firmly and repeatedly that to build or fix his houses, he must log:

We know logging is not good for the forests. It is forbidden by the state and we want to protect the forests for our descendants. But due to the pressing needs, we now have to log. When my son is going to get married, he needs a new house, right? When our house has been destroyed by landslides, flooding or storms, we need to fix or build a new house, right?

Even though our logs may be seized by officials, we still have to log again and again until the houses get built or repaired.

In addition to meeting practical subsistence needs, SSITH is also motivated and justified by the traditional attitude of indigenous loggers. They believe that harvesting forest resources such as timber, which has existed 'for thousands of years', should be recognised as a legitimate right. Research by Phuc and Sikor (2013: 4) highlights the longstanding belief that 'forest belongs to villagers', which rationalises native logging, regardless of the government-enforced ban.

Third, SSITH actors take part in logging in an occasional and opportunistic manner. This is explained by the primary purpose of SSITH to meet local residents' subsistence needs, which occur infrequently. A study by To, Tran and Nguyen (2014) estimates that because timber is a durable material for building, each forest-dwelling household needs, on average, to build a new timber house every 10 years. Moreover, since timber sources in Vietnam are no longer abundant, it is difficult for unskilled loggers to find large trees and illicitly log.

Fourth, loggers often use rudimentary techniques to carry out SSITH. Indeed, their initial ideas about logging and other activities—such as looking for trees, cutting trees and bringing logs out of the forests—are simple and not well planned. For example, the idea of carrying out such an incident comes up swiftly by chance, and perhaps after alcohol has been consumed (Ba Be Investigation Police Agency 2013b). For the cutting, loggers may still use handsaws, but in most cases chainsaws are used to cut down one or two trees, which can remain in the forest for several days before being carried back to a nearby village (Kon Tum Investigation Police Agency 2009).

These elementary methods are also visible in the task of carrying illegal logs from cutting sites to neighbouring village. Depending on the forest terrain, porters employ different carrying methods, which are mainly physical. For example, if a forest were sloped steeply, the best way is to carry the logs is on one's shoulders or back (Kon Tum Investigation Police Agency 2009). According to law enforcement officers, this method enables local loggers to carry a 10 cm × 40 cm × 50 cm lumber that weighs about 70 kg, walking effortlessly along rugged cliffs. If there were a small pathway, loggers can use water buffalo, bulls or special bicycles for transportation. In case of detection, one can disconnect the logs from the buffalo and bulls, and beat them to run fast enough to escape. In short, characteristics typical of SSITH include involvement of poor, forest-based harvesters; subsistence-led purposes and small volumes of illegal timber; opportunistic and/or occasional involvement; and rudimentary methods. These attributes differ from medium-scale illegal timber harvesting (MSITH), discussed in the next section.

Medium-Scale Illegal Timber Harvesting

Evidently, MSITH or 'medium-scale illegal logging' has not been used in the literature on illegal logging and illegal trade in timber. To some extent, both small-scale and large-scale illegal logging (as addressed by other studies) have some overlap with MSITH in this research. However, this study suggests that, overall, the two forms of small- and medium-scale illegal logging are fundamentally different. Thus, MSITH in Vietnam can be understood as an illegal form of logging that involves specialist loggers that, motivated by profit, illegally harvest relatively large volumes of timber in a well-planned manner. There are several distinctive attributes associated with MSITH.

First, like small-scale illicit loggers, their medium-scale counterparts are often poor and unemployed. Their difference clarifies when comparing SSITH participants, who are mainly indigenous residents that harvest nearby forests, with MSITH actors, who are largely migrants from other regions travelling to different forests for illicit logging. These migrants move from high-density regions of Vietnam, particularly the northern provinces, to highland areas (such as the Central Highlands), where far more cultivable lands and forest-based resources are thought to be available (Pham 2008). General Statistics Office (2009) data show that from 2005 to 2009, 161,000 migrants moved to the Central Highlands, many of whom found no stable jobs and believed that logging was better paid than other occupations, such as rice cultivation and

cattle ranching. One police officer from the Central Highlands explained that 'logging in one year is enough for eating for 10 years'. Evidently, more disadvantaged migrants are vulnerable to engage in illegal logging. Whether indigenous or foreign, these loggers share, by and large, similar underprivileged backgrounds, demonstrated by their poverty, poor education and unemployment. This makes loggers different from other actors, such as traders and processors, who are commonly better off.

Second, MSITH involves professional loggers that carry out illegal harvesting in an intensive and well-planned manner. Indeed, these loggers may stay in forests for long periods of time—often weeks or even months—and their earnings can contribute majorly to their annual income. Like small-scale loggers, medium ones also form 'cutting groups' (*nhóm thợ cưa*), which are much more durable and typically larger in number, consisting of seven to 10 people.

The loggers are self-employed or commissioned by local traders that assign specific tasks to each member, such as preparing logging tools, cutting and carrying logs, and observing the anti-trafficking agencies. In areas with large forests, loggers may also be tasked with locating rich timber zones and estimating accessibility to and timber capacity of the forests. When a cutting group teams up with a trader that pays little or is late with payments, the whole group can work for another trader. The close connection between logger groups and timber traders indicates an apparent distinction between SSITH and MSITH actors. While the former has almost no links to other actors in the entire chain of timber trafficking, such as professional traders and transporters, the latter does the opposite. This connection can be observed more clearly in later sections and in other stages of timber trafficking.

Medium-scale loggers employ a wide range of sophisticated tricks to conduct their harvesting. For example, to gain access to protected forests, chainsaws are taken apart and hidden inside backpacks, and petrol is passed off as drinking water. In some cases, if the trees are big, loggers will cut two-thirds of the bodies so that they stay alive (Minh Thi–Minh Trieu 2014). If the trees are positioned in such a way that makes cutting difficult, they can be poisoned or burned slowly. The trees will then be felled by winds. Occasionally, highly valuable trees are moved to loggers' forest gardens. After that, they ask local authorities for permission to harvest the garden trees, making it easier to receive valid logging documents. When logging teams are arrested, a very common technique among harvesters is to divide illicit timber volumes into small fractions for each individual logger. Consequently, the divided portions are small and do not meet the thresholds of a crime, as defined in the national Penal Code, so loggers incur only administrative fines. Given that these fines can greatly exceed the value of loggers' property, meaning that authorities are unable to seize any of their possessions, they receive no criminal charges and bear little or no legal liability. This legal loophole, as widely mentioned by police officers in the study, is a major reason for the extremely low rate of criminal cases among those detected for timber trafficking. In terms of location, SSITH often focuses on forests close to local communities, while MSITH loggers target any timber species in any types of forests. To reduce the likelihood of detection, forest zones near the boundaries between different districts and provinces, where anti-trafficking forces overlap, are especially targeted. Evidently, both small- and medium-scale harvesters are prominently poor people who log in a clandestine manner. However, there is in Vietnam another type of logger that is almost entirely different from the first two—large-scale or commercial illegal loggers.

Large-Scale Illegal Timber Harvesting

'Large-scale', 'commercial' or 'industrial illegal logging', largely characterised by the unlawful removal of large volumes of logs, has been documented in at least 30 countries, with the definitions and distinctions varying by country (Lawson and Macfaul 2010). This form of logging has attracted the bulk of international discussions on illegal logging. In fact, most studies on the trade discussed in this article refer to this category.

However, in the recent context of Vietnam and due to the substantial decrease in timber resources—in tandem with improvements in political will, legal provisions and law enforcement in the forestry sector—this form of logging is no longer able to yield very large volumes of illicit timber. To obtain such gross

amounts, the technique of unlawfully abusing forestry policies has been employed in Vietnam over the last decade. There, LSITH includes any acts committed by large companies or timber barons that abuse forest-based policies and violate relevant legal requirements to harvest large volumes of timber for commercial purposes.

Minh Phuc in the Dak Nong province is a typical example of LSITH. In April 2009, the Dak Nong People's Committee approved 402 hectares of forest land for the purpose of forest protection and plantation, including 173 hectares for a rubber plantation. Taking advantage of the permission to log in areas designed for construction, the firm illegally logged outside the authorised zone, moved illegal logs to the permitted area and mixed them with logs legally harvested there. In January 2011, anti-trafficking forces inspected six log-gathering locations and detected 149 illegal logs, totalling 177 m³. The provincial investigative police agency then laid criminal charges on the company (Dak Nong Environmental Police 2012). While the Minh Phuc case demonstrates LSITH, it is believed that such large-scale logging is not uncommon, despite that only a handful of similar cases have been brought to the criminal courts. Examining LSITH in Vietnam at present reveals a number of its distinctive features.

First, LSITH is often organised by commercial company owners or powerful timber traffickers. These corporations can influence policymaking processes in the forestry sector, resulting in forestry policies that create opportunities for both large-scale legal logging and LSITH. In terms of harvesting operation, these LSITH harvesters do not take part in cutting trees directly, but organise and manage the logging by making proposals to law enforcement authorities, bribery (if necessary), falsifying the required documents, employing loggers, and integrating logging with additional steps such as smuggling and trading.

Second, LSITH is carried out by unlawfully taking advantage of forest-based policies. This is a crucial point in the trade, making it fundamentally different from the two other forms of illegal logging. There are a variety of sources providing strong evidence that suggest some forest-based policies are being abused to unlawfully harvest large amounts of timber in Vietnam. Indeed, many interviewees showed deep concern over the abuse; meanwhile, a simple digital search reveals a large number of online newspapers reporting on the problem.

In one notable study investigating the forest land policy in five provinces in the Central Highlands, Uyen (2013: 3) found 'the majority of the rubber plantation projects occupy forestland, exploit forests, and then abandon them'. Among the forest areas devoted to rubber plantation projects, over 7,400 hectares had been logged illegally. In the Central Highlands, some of the latest violations can be observed in two Inspection Conclusions announced by the Government Inspectorate (2014a, 2014b). These indicate problems associated with the mismanagement of projects of forest land conversion in the Dak Nong and Gia Lai provinces. Consequently, a number of project owners have been criminally charged (Dang 2014). There are now several policies in Vietnam that notoriously enable illegitimately acquiring large-scale quantities of timber. Perhaps the most notable concerns forest land conversion. Indeed, in the last decade, some 363,500 hectares of forest throughout Vietnam have been used for approximately 2,400 projects of forest land conversion, including exploitation of natural resources, hydropower plants, irrigation construction, plantations, resettlement and building of spiritual sites, and road building (FPD 2014). While each option offers economic and social benefits, all present certain opportunities for the illegal acquisition of large amounts of timber. The majority of interviewees indicated that forest land conversion for the purposes of hydropower construction and rubber plantation development are likely to bring about illegal logging. These two practices also represent the larger portion (around 73%) of the total area of converted forests in Vietnam (To, Tran and Nguyen 2014).

The most sophisticated tactic employed in LSITH occurs in the permitting process, in which the status of forests, the volume of timber and the diversity of timber species are misrepresented (Lam Dong Province Inspection 2013). By law—specifically stipulated in the Circular 58/2009/TT-BNNPTNT, issued by MARD to guide rubber plantations on forest land—one of the prerequisites to conduct forest land conversion is

that an area must actually have poor timber capacity, normally less than 10–100 m³ of timber per hectare of forest, depending on the type of forest and the species of timber.

However, this research found that many of the logged forests are not poor—that is to say, evaluations of forest timber productivity are, at times, problematic. For example, one staff member at the Forest Inventory and Planning Institute observed that most of the shifted forests are rich (Bich 2013). Elsewhere, an intensive study by To, Tran and Nguyen (2014: vii) on forest conversion into rubber plantations in Vietnam found that 79% of the total area of 116,000 hectares of converted forests in the Central Highlands were natural forests. Hence, not all of these forests are poor, whereas almost 400,000 m³ of timber from the salvage harvest obtained during implementation ‘only partially reflect[s] the true volume of harvested timber’ (vii). At the same time, over 3,000 hectares of special-use and watershed-protected forests in the Central Highlands (i.e., forests that are unusually rich in biodiversity) have been converted to build hydropower plants (Nhien 2013).

A number of interviewees stated that there may have been several ways to misrepresent rich forests as poor ones, mainly by deliberately selecting actually poor zones in the forests to sample forest quality, skipping some of the required procedures, influencing the forest evaluators and bribing officials that serve as evaluation supervisors. Another common tactic is to illegally log or buy illegal timber outside the permitted areas, and then move and mix them with lawfully harvested timber. Through this technique, the permitted areas can be used many times to launder illegal timber.

The cases of Minh Phuc in the Dak Nong province and Khe Dien Hydropower in Quang Nam are prominent examples that demonstrate the technique of mixing hundreds of cubic metres of illegal timber with legal logs. In some projects carried out near the border areas in the Central Highlands, timber traffickers smuggle illegal timber from Cambodia and mix them with legal logs from the projects (Duong 2012).

Thus far, the research has examined three forms of illegal timber harvesting in Vietnam: SSITH, MSITH and LSITH. While the framework reflects typical and general features of harvesting practices in the region, there are connections and overlap between them. For example, while loggers in SSITH can take part in MSITH and LSITH, LSITH offenders can, once logging is approved, collude with medium- and small-scale loggers to take the most advantage of logging permits. Further, LSITH may both tangibly and intangibly create conditions for MSITH and SSITH to take place. Indeed, LSITH emerging in forest-based projects may enable easy access to remote but rich forests through the building of roads and other ancillary infrastructures—which only worsens the problem of timber harvesting as a whole. For example, following the approval of 451 projects in the Lam Dong province for conversion of 77,438 hectares of forest land, some project owners did not employ the necessary measures to protect forests (as required in their approved project proposal), after receiving forest lands and harvesting timber. This resulted in rampant illegal logging being carried out by local loggers (Lam Dong Environmental Police 2012). In the Quang Nam province, the problems of illegal logging have emerged suddenly and prolifically since the Bung 4 Hydropower Plant began its operation. Permitted to harvest over 1,000 m³ of timber during development, 35 motorboats have since become available for smuggling illegal timber (ANTV 2014; Tan 2014). Similar situations are addressed in other provinces such as Son La (Xuan 2014), Kon Tum (Quang 2015) and Dak Nong (Government Inspectorate 2014a).

Discussion and Conclusion

Considering the findings presented, it appears that in recent years Vietnam has experienced a decrease in timber trafficking incidence. While nationally the number of detected cases of timber trafficking has dropped by nearly 2,000 each year, locally, the crime is no longer an everyday problem in many provinces. For example, two decades ago, a significant proportion of villagers visiting nearby forests to participate in illegal logging would be widespread in most forested areas in Vietnam (Sunderlin and Huynh 2005). However, the practice has been slowing gradually. Despite this, when illicit logging does take place the

methods and organisation of those involved have become increasingly more sophisticated, maintaining 'pressing concern' across Vietnam (Phuc and Sikor 2013: 1).

These trends appear to be consistent with the United Nations Environment Programme's and Interpol's current evaluations of global timber trafficking. In short, reductions in the number of reported cases is simply 'temporary', and 'apparent decline in illegal logging is due to more advanced laundering operations masking criminal activities, and not necessarily due to an overall decline in illegal logging' (Nellemann and Interpol Environmental Crime Programme 2012: 7). Although illegal timber trafficking has declined in countries such as Brazil, Cameroon, Ghana, Indonesia and Malaysia (Lawson and MacFaul 2010), it is highly possible that the practice has instead become 'more prominent, increasingly organized, sophisticated and transnational' (Stewart 2014: 241).

The value of illegal logging in Vietnam is estimated at USD\$170 million each year—equivalent to the total sum of salaries of 12,000 forest protection officers in all of Vietnam over nine years. Although estimates are subject to conjecture, the monetary gravity of national timber trafficking tends to match observations in Green, Ward and McConnachie (2007: 117): among internationally recognised green crimes, timber trafficking is 'almost certainly the most economically significant'.

The discoveries in this research suggest that the scope, trend and level of sophistication of illegal logging in Vietnam are largely consistent with the current literature on trafficking worldwide. However, the typology of illegal timber harvesting found here does not appear to resemble the blanket approach to understanding illegal logging and typical classifications of the crime, addressed by previous research.

To date, much of the existing literature has failed to distinguish the different types of unlawful timber harvesting, classifying all illicit acts of illegally cutting down trees into one category of 'illegal logging'. Studies that are otherwise interested in examining different forms of illegal logging tend to rely on either (1) the volume of illegally harvested timber to categorise illegal logging into two forms (i.e., small-scale and large-scale logging) (Casson and Obidzinski 2007; Lawson and MacFaul 2010; Lescuyer 2007) or (2) the illegal harvesting acts described by legal provisions to classify illegal logging into several forms. These include logging without valid permits, logging in protected areas, logging of protected species and excessive logging (Goncalves et al. 2012; Nellemann and Interpol Environmental Crime Programme 2012; Seneca Creek Associates and Wood Sources International 2004; Tacconi 2007).

This article contends that overlooking the classification of timber trafficking and relying solely on illegal timber volumes or legal descriptions of illegal harvesting to categorise the crime are not sufficient to comprehend the diverse nature of illegal logging. Therefore, this leads to inadequate understanding of the harm caused and the actors involved, as well as inappropriate measures to tackle the problem. Evidently, while there is some overlap between SSITH, MSITH and LSITH, they are fundamentally distinct, not only in terms of physical volume and legal definition, but also (and perhaps more importantly) in terms of harvesters' attributes, their degree of involvement, their motivations and the level of organisation of criminal commission. Thus, it is suggested that illegal timber harvesting should be categorised into three types: SSITH, MSITH and LSITH.

It appears that the bulk of academic discussion on illegal logging falls into the category of MSITH. This is because it is (predominately) the most intensive type of criminal logging undertaken by professional loggers and organised by specialist timber traders, with additional support from corrupt agents, including violent gangs. In this sense, if the volume of timber that has been cut illegally were large, the harvesting is referred to as 'large-scale illegal logging'. Such a practice attracts the majority of research attention worldwide, but in the context of Vietnam—and due to improved forest governance and, more particularly, the substantially reduced timber resources—this type of illegal logging occurs less frequently. Against this backdrop, LSITH is the most effective method to obtain large volumes of illegal timber. However, specialist traffickers not necessarily carry this out in an entirely clandestine manner, and there is virtually no need

for support from violent gangs in this context. Thus, LSITH in this research differs from the ‘large-scale illegal logging’ discussed in much of the current literature.

At the same time, SSITH in this study does not fit neatly into the concept of ‘small-scale illegal logging’, as defined by past research examining the problem in other parts of the world, as well as in Vietnam. The key motive of SSITH actors is largely non-profit or for subsistence purposes, whereas the main goal of small-scale logging—as revealed by the literature at both an international level (Casson and Obidzinski 2007; Jagger, Shively and Arinaitwe 2012; Kaimowitz 2007; Lawson and MacFaul 2010) and in Vietnam (McElwee 2004; Pham 2008; Phuc and Sikor 2013; Sikor and To 2011; Sunderlin and Huynh 2005)—is to gain illicit profits, despite how minor and comparatively low they are to others in the trafficking chain. In addition, SSITH is carried out in an occasional manner by people who are not professional loggers, despite previous research indicating that small-scale operations are conducted relatively regularly and by specialists. Thus, the typology of illegal logging produced by this research (consisting of three components—SSITH, MSITH and LSITH) challenges its typical classification in the literature and offers an alternative way of understanding the dynamic of illegal timber harvesting in and outside Vietnam.

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