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"This is an Accepted Manuscript of a book chapter published by Routledge/Willan Publishing in A New Response to Youth Crime in 2011, available online: <http://www.routledge.com/9781843927549>."

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Situational Prevention of Organized Timber Theft and Related Corruption

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Abstract

Organized theft of timber is a large and significant worldwide enterprise. Corruption in every step of the timber harvesting and selling process involves substantial criminal cooperation, with bribes paid at every stage of the way. The authors review several situational crime prevention measures that could be brought into play. The timber theft example has general significance, offering ideas for preventing criminal enterprise from expanding and for containing public corruption of other processes.

INTRODUCTION

At any time there is more timber being transported on the seas than there is oil. Illegal timber could not move on this scale without considerable organization and corruption.

In 2007 the Indonesian Environment Minister estimated in that over 70% of the total timber harvest in that country was illegal (Environmental Investigation Agency, 2007: 11). In recent years this has cost the government over \$20 billion in revenue forgone and enforcement. Illegal cuts impair tree conservation, have implications for climate change, threaten endangered species, and neglect scientific forestry (the science and art of cultivating, maintaining, and developing forests, including harvesting that balances sustainability, regeneration and consumption).

The World Bank (2006) estimated the global forestry trade to be worth around \$150 billion, and as much as 10% of that was illegally sourced or traded. Thus the losses to illegal logging were likely between \$10 and \$15 billion, totaling around 2 billion cubic metres of illicit roundwood (Logs, bolts or other round sections cut from trees for industrial or consumer uses), lumber (partly prepared timber, usually sawn into rough planks or otherwise roughly prepared for further processing) and plywood (boards consisting of two or more layers of timber glued, pressed or otherwise bonded together with the grain of adjacent layers crosswise to give it increased strength). The illegal trade in one wood species, ramin -- which ends up as baby cribs, paint brushes, pool cues and dowels -- was alleged to be more profitable than drug smuggling. (Khatchadourian, 2008: 66)

Burma's rare old-growth teak is highly prized, and teams of Chinese loggers cross the border to cut what they can to take back across the border. Bribes are paid at every step of the way to either government or rebel forces

(Environmental Investigation Agency, 2007: 9). In many countries illegal timbering becomes a threat to government stability and the proceeds are used to kill people. "Conflict timber", like conflict diamonds engenders a special criminality, an example of crimes that are sometimes under the radar screen, yet have important human consequences.

Criminologists have paid little attention to illegalities in the timber trade, though there have been some papers (Green, Ward and McConnachie, 2007; White 2003; White, 2008 for example), though these works have not focused on organized crime or situational crime prevention. A situational approach is worthy of further analysis because traditional criminological approaches, telling people not to behave illegally and working on improving social conditions on the one hand, or using the might of law enforcement on the other, have had little effect on illegal timber markets. Exploring how to make the crime harder, how to increase the risks, reduce the rewards and remove excuses is worth a shot. Situational approaches to minimizing corruption has received scant attention in the literature though Angela Gorta addressed the issue over a decade ago (Gorta, 1998).

In addition, timber theft can become highly elaborate in its organization, and can involve substantial corruption of public officials. That corruption has a market basis. A truckload of timber is worth over \$US10,000 if legally harvested, but if illegally harvested this timber is likely to cost half the legal price. 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. Merbau timber stolen in Indonesia is worth \$120 per cubic metre in the port, \$250 upon arrival in China and \$2200 when sold for high quality flooring in an American store. (Environmental Investigation Agency, 2007: 3).

Andreas Schloenhardt (2008) examines the illegal trade in timber products in the Asia/ Pacific region, and this paragraph and the next report his findings. The largest forest area in the Asia/ Pacific region is in Indonesia (second globally to Brazil), and it is variously estimated that over 70% of the logging is illegal, and as much as three times the sustainable yield. While much of the logging in Indonesia involves logging without government permits “corruption and bribery are perhaps the greatest facilitators of illegal logging in Indonesia” (Schloenhardt 2008, p.53). This comes in a variety of forms, the military extorting fees from illegal loggers, and local and provincial officials accepting bribes to ignore illegality or corruptly to issue permits. There have also been allegations of judges taking bribes not to prosecute illegal loggers (p. 53).

In Cambodia and Papua New Guinea there is commercial logging on a wide scale and generally undertaken in accordance with the issuing of commercial logging concessions. The introduction of these concessions increased the amount of illegality as activities that were formerly legal had become illegal, and widespread allegations have been made of corruption against government officials, politicians, police and military all of whom supposedly have ignored illegal logging, and have manipulated the concession system. In Papua New Guinea, the second largest Asia/ Pacific exporter of tropical logs (after Malaysia) it is suggested that 70% – 90% of all logging is illegal involves a high level of organization.

China, the largest importer of timber and the largest consumer of illicit timber (Environmental Investigation Agency, 2007) has relatively little logging because central controls have been implemented to counter severe environmental damage. China is a global intermediary for high risk wood transforming illegal timber from many countries into manufactured products for major consumer markets in the US and Europe (Environmental Investigation Agency, 2007, p.5). Much of the illegal wood in China comes from Russia, and in that country illegal logging has expanded enormously since the collapse of the Soviet Union, and

Schloenhardt (2008, p.67) lists several types of illegality 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.

Schloenhardt surveys the situation across the Asia/ Pacific and describes the situation in about a dozen countries (2008, pages 51- 133). All these countries are signatories to CITES , the Convention on International Trade in Endangered Species of Wild Flora and Fauna. This is the major international instrument in this field which deals with the illicit trade in timber. CITES, which has 169 signatories is widely praised in international law as it is the only convention that requires State Parties to criminalize the illicit trade in protected species and that enables importing countries to seize illegally sourced timber (Schloenhardt 2008, p.11). Implementation unfortunately lags far behind the aspirations of the convention.

SIGNIFICANCE FOR ORGANIZED CRIME

Some of the illicit timber trade requires complex criminal organization with international activities. Consider that on a normal day a rail yard in Suifenke, China, receives hundreds of rail cars carrying contraband timber from Primorski Krai, the neighboring province in the Russian Far East (Pye-Smith, 2006). This amounts to more than 2.3 billion kilograms of hardwood per year, over half of which is harvested in violation of Russian law. To quote the Russian Minister for Natural Resources,

“There has emerged an entire criminal branch connected with the preparation, storage, transport and selling of stolen timber” (quoted in Khatchadourian, 2008:64).

As noted above, wood items made in China and sold in the US are often made from timber imported from Russia and transported through Suifenke.

Investigative journalists tell of protection money, payments to organized crime groups, and of business people and environmental activists murdered for interfering in the business practices of organized crime. Writing about the Russian Far East, Vandergert and Newell (2003, p 304) have claimed that criminal organizations increasingly control much of the industry and that corrupt officials are linked with organized crime operations. These examples illustrate a complex network taking illicit products from the forest to the ultimate consumer.

A recent report (2007) by the Environmental Investigation Agency, an independent NGO with offices in Washington and London, noted that in numerous countries illegal logging is financed and conducted by criminal syndicates with high level connections who maintain immunity with police and courts. Timber barons in countries as diverse as Indonesia, Malaysia, Honduras, Peru, Liberia and Papua New Guinea are well connected, often linked to other organized crime groups, and participate in international business on a huge scale, thus blending illegal activities with legal activity.

The current paper examines how situational crime prevention ideas have been applied to the illicit timber issue. We draw upon existing work by others and relate that work to the field of situational crime prevention. We are particularly interested in techniques which reduce the corruptive influence of organized criminal transport of timber products.

FUNDAMENTALS

Not all illicit timber trade is highly organized. We do not deny that some people steal limited wood for their own purposes or for direct sale to a few others. We acknowledge that unorganized timber thefts by lone individuals can add up. In many parts of the world, human populations are very large, tree populations are dwindling, and alternative fuel sources are nonexistent or very expensive. Poor women scavenging for firewood perpetrate small-time thefts and this can have environmental significance, and can deplete the store of fuel for the future. Yet we

maintain a focus in the current paper on more organized criminal efforts, especially when timber is imported and exported. With sufficient scale, timber theft is nearly always an organized crime because to fell, transport and sell trees of substantial volume and weight, several persons are required and they need to coordinate their efforts to a significant degree.

Sorting out the organization process for timber theft is not always easy. The process is complicated by a fundamental fact of the illegal timber trade: that illegal and legal timber are often mixed together, with legal timber providing camouflage for contraband. Once processed the end consumer is not able to distinguish legal wood from illegal wood. As the span of the illicit timber trade widens and its complexity multiplies, so do the social, environmental, financial and economic consequences of the crimes. We can expect illegal cutting, illegal transport, and bribery at so many levels to involve organization. As the illicit enterprise grows in size and complexity, more persons are involved and more corruption also emerges.

Many of these issues come into play when licit and illicit come together and legal provides camouflage for illegal. Markets in diamonds, wildlife, pharmaceuticals, art and antiques, intellectual property to mention a few, have components where organized crime has a significant, but not necessarily a comprehensive role. 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.

THE CORRUPTION ISSUE

The impacts of corruption disproportionately affect the poorest and most vulnerable in any society, and when widespread, corruption deters investment and weakens economic growth. If system integrity is dubious then the rule of law cannot be

maintained, and business cannot be well regulated. Corruption and bribery at all levels of government are common at every stage of this illicit, and highly organized trade. Corruption, for simple purposes, can be defined as the abuse of entrusted power for personal gain (Transparency International, 2008). For the illicit timber to have value added it must be cleared and then transported, often across a border. Documentation can be forged, or those approving the documentation can be bribed, as can the permits for clearing the timber in the first place. Corruption plays a major role in the component parts of timber theft. Timber trade involves many processes, from sourcing the timber to selling it in a distant country. Thus illicit timber trade readily becomes transnational organized crime, fostering substantial corruption in more than one nation.

Weak governance enhances the corruptive process for illegal logging, offering little counterweight to the illicit timber trade. That corruption process includes bribery, graft, kickbacks, extortion, misappropriation, abuse of discretion, self-dealing, patronage, nepotism, favoritism, conflict of interest and political corruption. The enormous profits also make it worthwhile for loggers to corrupt, and for government officials and politicians to accept illicit benefits from loggers. Moreover, nations with stronger governance are not immune to these corruptive influences.

VARIETIES OF CORRUPTION

A long list of corrupt practices is found in the illicit logging process. Many of these practices can be sorted into three categories, *Simple corruption*: Officials provide normal services for an extra illicit charge; *Corrupt complication*: Officials insist upon providing new services, for an illicit charge; *Corrupt enactment*: In response to a bribe, officials add new regulations or procedures to the legal regime, benefitting those who pay, and/or costing their rivals

First, examples of simple corruption include taking bribes to

- Grant a permit to cut trees in the public forest;

- Harvest beyond permit limits;
- Speed up issuing a timber transit permit (so labor and capital can be optimized);
- Speed up weighing the timber(also so labor and capital can be optimized);
- Writing down a lower or higher weight, (depending on who is being defrauded);
- Allow a heavy or illicit load to pass unimpeded;
- Ignore forest laws, including laws forbidding harvest in parks and laws protecting endangered species.

Simple corruption also includes these actions during the transit process:

- Customs agents taking bribes to ignore duties or endangered species protections.
- Officials take bribes to allow export of illegally harvested timber.

Second, more complex corruption includes:

- Stopping legal log shipments on the road, demanding extra money to pass;
- Ministers siphon timber money for personal enrichment – they take a cut on all transactions, or divert money that would normally go to the Treasury.
- Politicians use timber receipts to fund political campaigns. The commodity of timber is embedded in the political process (and vice versa), and the wealth generated is used not only for personal gain, but also for the achievement of political office and political payoffs. Sometimes politicians are beholden to senior officials without whom the money cannot be mis-applied or stolen.

Third is an illegal enactment of new legal procedures. This means bribing politicians to write legislation, shape forest policy, or grant large scale concessions. Once enacted, the procedures become authoritative and legal.

Corruption and illegal organization are quite complex processes. For the duration of this paper we narrow down our concerns to consider the harvest, transit, and sale of illegal timber.

SPECIFIC ANALYSIS OF THE TIMBERING PROCESS

Perhaps the most important feature of situational crime prevention (Clarke, 1997, Clarke, 2008) is its emphasis on very specific analysis of each crime process. Magrath and associates (2007) offer such specificity in their study of timber thefts and frauds. Among the specific questions they raise about illicit forestry are these: Exactly which forest species are to be sold? From what specific locations are they taken? How is the volume of timber determined? When and where is ownership transferred? What is the sale design? Who are the parties involved at each step? What are the prices, rates, and specific terms of the harvest, transfer, approval and taxing process?

They also specify periods during which timber transactions can be corrupted or defrauded, and put these periods in rough temporal order. Paraphrasing Magrath (2007),

1. *During Pre-harvest.* Collusion and deception occurs in the pre-harvest contracting process, including bidding and negotiations. These frauds can occur in the earliest stages of logging, can involve substantial corruption, and set the stage for subsequent illegality. For example, at this stage there are opportunities to designate illegal wood to be legal.
2. *During harvesting and transport.* During these stages, timber can be diverted. Loggers and truck drivers, sometimes with connivance of others, can deliver to unauthorized locations or falsify invoices.

3. *At the time of delivery, scaling, or inventory.* At these stages those responsible for accepting deliveries or for measuring or recording quantities and weights can manipulate the records. They can commit many types of fraud or conceal frauds by others.
4. *At point of sale.* Those involved in logging or their agents can misrepresent the process to buyers who may or may not be aware that the source is illicit.

The timing of fraud depends on such factors as convenience, which private officials are directly involved in the fraud, and which government officials are corrupted. Although we have not offered a complete list of corrupt practices, we have explained that such practices have a certain logic and order that assists the design of situational measures against them. These measures are possible because theft of timber and its transport are crimes of opportunity, depending at several stages upon the complicity of others. As these crimes become more complex and corrupt, the offenders become more vulnerable to interventions at critical points in their illegal efforts.

Working with a commodity that is so thoroughly transformed and goes through so many processes, most of which add value along the way, and which occur in so many settings, often in many countries, creates an oversight nightmare. Fraud would be considerably limited if there were one body or office which had oversight of the whole process. There are still many tension points at which fraud could occur, or corrupt officials can make demands or take what is offered.

At some point most of the illegal timber finds its way into the legitimate economy, and regular commercial and regulatory processes come into play. There are two general sets of processes (and many shades within each). First, there is legally harvested timber which has, along the long road of transportation and value adding, been allowed to move to the next process only on payment of a corrupt consideration. Second, there is timber that is illegal when harvested, and corrupt

considerations are required to keep it moving and integrated into the legitimate economy.

SITUATIONAL PREVENTION OF TIMBER THEFT

Magrath (2007) detailed numerous situational prevention measures for forestry purposes. We have used Magrath's examples and have adapted Clarke's situational prevention measures to illustrate the specifics of the activities in timber theft, organized crime activity and corruption. We have re-packaged these measures into seven categories:

1. Improving how timber is traced (increase risks - [of being caught])
2. Improving the technology of labeling timber (increase effort)
3. Making vehicles more traceable (increase risks)
4. Enhancing inventory control and chain of custody (reduce rewards)
5. Reducing official discretion (increase effort)
6. Reducing procedural complexity (remove excuses)
7. Creating simpler and more visible accounting formats and systems (increase risks).

The first three categories deal with tracing timber. A simple way to improve how timber is traced is to use simple labels. A commercial log labeling system tracks logs from stump to mill. Such a system makes it more difficult to hide the origins of timber, hence to conceal illicit origins. For example, a plastic tag indicating tree and log number can be attached to each log when harvested. A matching tag is placed on the stump, thus linking the two and producing a chain of custody. Chain of custody "is the custodial sequence that occurs as ownership or control of the wood supply is transferred from one custodian to another along the supply chain. It is the method by which logs are tracked from the stump to the processing facility" (Magrath 2007, p.58). Simple technologies like fluorescent paint to identify logs through to more technological means such as transponders embedded in trees or logs, or microdot technology to identify assets can assist

the labeling and tracking process. They can be detected by authorities, but not as easily modified for criminal purposes.

In the third category vehicles can be tracked with mandatory truck or trailer identification. This can be either large numbers on both sides of the truck or Automatic License Plate Recognition (ALPR) which can be installed at main entrances to logging operations and designated checkpoints. Combined with CCTV, licence plates and vehicle ID can be checked against various databases of inventory on the move, of vehicles, and on people authorized to be in particular vehicles at particular times. With this in place, real travel time and real location can be plotted and confirmed with satellite based navigation systems. Multiple methods can trace a truckload of timber, and it is this multiplicity that authorities can use, but criminals cannot easily circumvent, as there are too many linkages and connections.

The fourth category assists authorities to understand their product and its value, and identify fraud, corruption or collusion. Measuring and weighing the logs can produce enormous variations. If corruptly scaled (undermeasured) the loss can be large, and something as simple as a colored crayon or marker notation on the end of the log can send a signal that the log has already been measured. This reduces the opportunity for a corrupt worker to falsify the record. It obliges a potentially corrupt scaler to measure correctly to avoid a possible discrepancy. Measuring and weighing the logs at the scale house can create opportunities for corruption and the process of issuing tickets can create a significant fraud situation, so means can be implemented to prevent fraudulent ticket processes. Cameras at the scale house can record every transaction and the record will maintain the chronological order. Cameras can also pick up the vehicle ID as well as the driver and the load. The chain of custody is a sequence of documentation from harvest to final sale.

The next three categories (5-7) have to do with the role of officials in potentially manipulating the process. Officials can make processes very complex, and for a consideration can cut through the complexity. They can exercise discretion, and not be accountable, and for a consideration exercise in in a particular way. Reducing official discretion serves to enhance accountability and makes it harder for officials to be corrupted. This includes making clear, consistent, and coherent criteria for decisions about counting and grading timber, thus reducing the opportunity for officials to be corrupted. Reducing procedural complexity is part of this process. Very complex rules and bureaucracies are very easily corrupted, and hide the corruption that is there. Conversely, streamlining forestry rules and organizations serves to increase transparency and reduce the illicit opportunities. Finally, simpler accounting formats and systems make it more difficult to carry out and conceal corruption, especially if accounts are publicly available.

IN CONCLUSION

Underlying this paper is a challenge – to apply situational thinking to a trans-national crime that involves substantial organization and corruption at many levels. Clearly, situational analysis and situational crime prevention may help reduce large-scale timber fraud, and the resulting corruption. More generally, we believe that corruption and organized crime are amenable to situational measures that are carefully applied at the right pressure points.

To find these pressure points, it is essential first to break each legal activity and routine into its smallest and specific components and sequences. Doing so gives us the ability to devise countermeasures. In timber theft, as we discover the process in strategic terms we begin to understand how to counter illicit acts. Two basic efforts are needed. First, one must ensure that there is a tracing process - a process that identifies the timber at all stages, from pre-cut to cut to transit, and to identify every step in the process, and break down every part of the custody chain into the smallest units. The second is to harness organizational auditing techniques to follow the transit process. This involves

identifying and documenting each step that is taken and each process along the way, as a tree, perhaps illegally and corruptly, is transformed into a highly desirable value added commodity.

We suggest, too, that some of the principles offered here can in the future apply to other trans-national organized offenses and other issues in corruption. With more specific analyses of how goods and services move, it becomes possible to improve their auditing and to make them more difficult to corrupt. The pioneering work by Magrath and his colleagues at the World Bank demonstrates the applicability of situational crime prevention to natural resource management. It also points to the importance of blending criminological skills with environmental skills. Using situational analysis of forestry experts in the future will be able to sort out the components and sequences of crime systems, find critical junctures at which corruption occurs, and figure out measures to interfere with the illicit process.

REFERENCES

(All URLs correct at June 27, 2009)

Asher, William (1999), *Why Governments Waste Natural Resources: Policy Failures in Developing Countries* Baltimore, Johns Hopkins University Press

Clarke Ronald V. (2008) "Situational crime prevention" In: R. Wortley and L. Mazerolle (eds.) Environmental Criminology and Crime Analysis. Cullompton, U.K.: Willan Publishing. 2008.

Clarke Ronald V. (ed.) (1997) *Situational Crime Prevention: Successful Case Studies* Albany New York, Harrow and Heston

Environmental Investigation Agency (2007). No questions asked: the impacts of US market demand for illegal timber. from http://www.eia-global.org/forests_for_the_world/forests_for_the_world_reports.html

Gorta, Angela. (1998) "Minimising corruption: Applying lessons from the crime prevention literature", *Crime, Law and Social Change* Vol 30, 67 – 87.

Green, Penny, Tony Ward & Kristen McConnachie (2007), "Logging and Legality: Environmental Crime, Civil Society, and the State" *Social Justice*, Vol 34 (2), 94-110.

Khatchadourian, R. (2008). "Stealing the forests." The New Yorker. New York. **84**: 64-73. (October 6, 2008)

Magrath, W. B., R.L. Grandalski, G.L. Stuckey, G.B. Vikanes & G.R. Wilkinson (2007). Timber Theft Prevention: Introduction to security for forest managers. Washington, World Bank.

Naim, Moises (2005) *Illicit: How Smugglers, Traffickers and Copycats are Hijacking the Global Economy*, New York, Doubleday.

- Pye-Smith, Charlie (2006), *Logging in the Wild East: China and the forest crisis in the Russian Far East*. Royal Institute of International Affairs, http://www.illegal-logging.info/textonly/papers/Forest_Trends_China_Russia.pdf
- Schloenhardt, A. (2008). *The illegal trade in timber and timber products in the Asia-Pacific Region* Canberra, Research and Public Policy Series no 89, Canberra, Australian Institute of Criminology.
- Seneca Creek 2004. *'Illegal' logging and global wood markets: the competitive impacts on the US wood products industry*. Seneca Creek Associates, LLC Poolesville, Maryland USA, & Wood Resources International, LLC University Place, WA USA
- Soreide, Tina (2007), *Forest concessions and corruption*, U4 Issue 3:2007 <http://www.cmi.no/publications/file/?2818=forest-concessions-and-corruption>
- Transparency International (2008) *Frequently Asked Questions about Corruption* http://www.transparency.org/news_room/faq/corruption_faq#faqcorr1 (accessed May 16 2009)
- Vandergert, P. & J. Newell (2003), "Illegal Logging in the Russian Far East and Siberia, *International Forestry Review* Vol 5 (3), 303- 306.
- White, Rob (2003), "Environmental Issues and the Criminological Imagination" *Theoretical Criminology*, Vol 7 (4), 483-506
- White, Rob (2008), "Environmental Harm and Crime Prevention", *Trends and Issues* No 360, Canberra, Australian Institute of Criminology
- World Bank (2006), Strengthening Forest Law Enforcement and Governance: Addressing a Systematic Constraint to Sustainable Development. Report No. 36638-GLB, Washington, World Bank.