

Chapter 8

Conclusions

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In this report we have assessed the literature on illegal logging and related timber trade and attempted to provide a scientific analysis of the current state of knowledge. **Illegal logging and related timber trade are complex and multi-faceted phenomena.** The term “illegal logging” is very broadly used to include not one but rather a multitude of activities, which could also be termed “illegal forest activities”. These activities include violations of public trust (i.e. paying bribes or using violence for personal gain), violations of property rights (public, communal or private) and violations of regulations (notably, related to forest management, timber processing or finances/taxes).

Definitions of illegal logging are manifold and methods to measure it vary. **For the purpose of this report, we define illegal logging and related timber trade as “all practices related to the harvesting, processing and trading of timber inconsistent with national and sub-national law”.** This broad definition includes three dimensions of illegal forest activities: 1. “illegal forest conversion” as the act of clearing forest land that is in violation of land use laws and regulations, and/or without required licences; 2. “informal logging” which captures forest harvesting that is carried out often by small, unincorporated enterprises. This type of logging may, by definition, result in illegal activity when laws require incorporation, registration and/or licences for timber extraction. And 3. all other forms of illegal forest activities, including illegal timber trade.

Illegal logging has recently been recognized as a form of transnational organized crime which has triggered increased support for internationally-concerted interventions. Evidence suggests that very different types of actors are involved, with overlaps and collusions between legal and illegal entrepreneurs, corporations, “traditional” criminals, as well as state actors and agencies. In some parts of the world, organized forest crime may be extremely violent and has also been associated with the financing of wars and conflicts.

By its very nature, illegal logging is difficult to quantify and monitor over time. While different studies

present alarming figures, with current information and knowledge, a direct comparison across geographies and time is difficult because of divergent definitions, assumptions and methodologies. It is not always clear which method has been used by existing studies to quantify illegal logging and related timber trade, and different illegal forest activities may be measured by different assessments further leading to difficulties in quantifying and comparing assessments over any given period of time. As a result, quantification is necessarily approximate, but current estimates place the extent of the annual global market value of illegal logging and related timber trade at anywhere between USD 10 billion and USD 100 billion.

Quantification is further complicated when domestic timber markets are included in the equation, because historically these markets have not been as regularly and extensively monitored as international ones. **Existing data however, underscore that domestic markets account for the largest share of consumption of illegally- and informally-produced wood and wood products;** in fact, estimates suggest that only a small percentage reaches international markets. Generally, hardwood is more likely to be illegally harvested and traded than softwood. Illegally-produced wood products (except for lumber) are more likely to be illegally traded than legal wood products. Plywood has the highest percentage of illegal production and trade, and almost all illegal hardwood plywood is exported. Global markets involve producer, pass-through, processing and consumer countries. Domestic, regional and global markets of legal and illegal wood products are interlinked, creating additional difficulty in monitoring and resolving illegal logging and related timber trade.

A handful of countries are dominant in illegal logging and related timber trade. China has become the world’s largest importer and exporter of wood products and, both China and India have recently overtaken the EU, the USA and Japan as main importing countries. As of 2014, the dominant producing countries of both legal and illegal tropical timber were Brazil, Indonesia and Malaysia. Japan remains the largest importer of plywood from tropical hardwood. In terms of exports, Southeast Asia



Large-scale timber trafficking from Indonesia to Malaysia in the interior of Borneo. Meranti timber that was illegally logged in Indonesia's Betung Kerihun National Park is waiting to be trafficked to nearby Malaysia (Sarawak).
Photo © Tim Boekhout van Solinge (2005)

accounts for over half of illegal roundwood and sawnwood exports (with Myanmar and Laos playing a major role). In South America, Brazil accounts for the vast majority of illegally-sourced and exported roundwood and sawnwood, with the USA, the EU and China being the main destinations. Exports of roundwood and sawnwood from Cameroon, the Democratic Republic of the Congo and the Republic of Congo have grown, with China surpassing the EU since 2012 as the largest importer from the Congo Basin. In Oceania, Papua New Guinea has become a major player. **However, illegal logging is not limited to tropical forest regions: it appears as well in temperate or boreal forest regions, with Russia for example, having emerged as the main source of illegal timber from temperate and boreal forests.**

Understanding the drivers of illegal forest activities is necessary to identify effective governance responses. Often, the drivers for illegal logging, forest degradation and deforestation overlap. Forest lands in rural regions are modified by complex interactions of social, economic, political, cultural and technological processes at the local, national and global levels. At the core lie land users influenced by the economic and cultural contexts in which they live, fostered by poor governance. Power imbalances among economic actors lie behind many decisions for illegal land uses, and frequently it is economic and political elites that reap the most benefits.

Contested and conflicting land tenure are profound drivers of illegal logging, forest degradation and loss. Although 86 percent of the world's forests are publicly owned, in practice, globally, around 60 percent of land and resources are managed on the basis of customary rules, of which less than a fifth is formally recognized. Many timber producing countries in the tropics have started investing in the clarification of land tenure to minimize land conflicts, enhance the interest of land users in more

sustainably managing their resources, and to facilitate the control of forest activities. **Another significant driver of illegal logging is road construction, which is central to most countries' model of economic development.** In forest regions, such roads are frequently built to service large agri-businesses resulting from forest conversion.

Corruption, deficient regulations and inadequate law enforcement, limited financial incentives, overregulation, ignorance of customary forest users' potential and a short-term focus on economic growth from an urban perspective have all signified that efforts to date to curb illegal logging have been met with limited success. While this may yield profits in the short term (for select groups), these illegal forest activities often occur in countries that are rich in forest resources but with weak institutions, depriving them from long term economic prosperity and frequently infringing on human rights.

Social, economic, political and environmental impacts of illegal logging are multifaceted, intertwined and dependent on diverse pathways. Attributing specific impacts to illegal logging is challenging, in part because of the similarity of impacts between legal and illegal logging. Illegal logging and related timber trade are perceived to have particularly negative impacts for the environment and lead to significant state revenue losses. However, not *all* impacts may be negative, at least from the perspective of specific stakeholders or when considering only a short-term timeframe. For example, illegal logging may allow local people to generate some urgently needed income from the local forests. In other cases, it may provide capital that may translate into productive investments and social services, as might be the case for illegal forest conversion into more profitable land uses.

The impacts of illegal logging can be direct, indirect and cumulative, and often establish causal relationships among each other which are difficult to disentangle. Furthermore, these impacts often interact with factors **outside the forestry sector such as agribusiness and farming that may amplify their effects.** While direct impacts are easier to observe and measure, indirect impacts are less evident. Cumulative effects are more difficult to determine due to time lags and more complex causal relationships between direct and indirect impacts, as well as other contextual factors.

Social impacts from illegal logging are mixed. Smallholders, indigenous people, landless and traditional communities may benefit from conducting timber extraction against given national regulations as it provides them with an additional source of much-needed income and resources. At the same time, illegal forest activities practised by others (e.g. by timber companies or criminal networks) tend to put pressure on local actors to operate in unequal markets.

Economic impacts of illegal forest activities include distortions in timber markets with subsequent negative effects on price definition and benefit distribution, and undervaluation of the available timber stocks. While illegal logging contributes to generating jobs and income - a portion of which is spent locally - illegal logging operations tend to offer lower remunerations to workers. Illegal

forest activities also lead to significant revenue losses for the state and result in the depletion of timber stocks, further reducing the economic attractiveness of managing the remaining forests vis-à-vis other land uses. In addition, illegal logging constitutes a high risk to investors.

Political impacts include weakened political systems governing forests by perpetuating corrupt behaviours and practices, fostering a vicious cycle of poor governance (corrupt individuals gain power through illegal revenues and then may support poor governance to maintain revenues and acquire more power). In addition, illegal logging contributes to an increased misappropriation of public resources.

Environmental impacts of illegal logging can be significant, but are difficult to separate from those of legal logging, even more so because illegal logging cannot be equated with unsustainable forest management per se. However, environmental impacts that can be attributed to illegal logging - in particular to illegal forest conversion - include a rapid loss of carbon, biodiversity loss and an increase in water runoff and soil erosion.

Different impact trajectories and pathways shaping specific impacts can be differentiated: 1. **Large-scale illegal logging** - practised by companies with legal access to forests but that contravene regulations in multiple ways - leads to larger interventions in forests with important short-term revenues, but also high state losses and forest degradation. 2. **Small-scale and artisanal production**, produce impacts that are difficult to generalize since these are a very heterogeneous group of actors (with different management practices, operating at different scales and levels of intensity), generating short-term economic benefits and a slow process of forest degradation. 3. **Illegal forest conversion to agriculture** produces highly variable impacts depending on whether conversion is to develop large-scale plantations or more traditional small-scale farming systems. Ultimately, illegal forest conversion is likely to produce significant negative impacts on

forest goods and services, while having both negative and positive impacts on local people's livelihoods and food security.

Several international, regional and national policy responses such as FLEG - "Forest Law Enforcement and Governance" - FLEGT - "Forest Law Enforcement, Governance and Trade" - or domestic legislation in consumer countries forbidding the importation of illegal timber in key markets (including the USA, the EU and Australia) **have been designed to tackle illegal logging and related timber trade**. They include legal arrangements in consumer countries, between producer and consumer countries, land tenure improvements and tax reductions. Training and capacity building, including in the use of forest information systems based on remote sensing, are also important tools to tackle illegal logging. Global certification initiatives and carbon markets have been promoted as means of encouraging legal exploitation. **While the economic implications of these policies have triggered responses in some producer countries, their effects are often muted as the majority of illegal timber is traded domestically. Furthermore, legality verification with limited geographical scope, where effective, might re-route illegal timber to less regulated markets.**

The enforcement of policies aiming to combat illegal logging and related timber trade creates diverse problems. In some cases the complexity of compliance and verification procedures of legality verification procedures impacts negatively on small scale loggers, and/or undermines rights of indigenous communities and other less powerful members of society due to their limited capacities to understand and follow these procedures. In addition, poor enforcement is frequently an issue, in part because of capacity, technical, logistical or other reasons. Timber commodity chains still lack transparency and traceability for guaranteeing timber legality. Technological tools, such as from timber forensics, can contribute to timber verification and the detection of illegal timber. In addition, **the role of criminal timber networks is often underestimated.** Ultimately, to tackle criminal timber networks and to limit their crime opportunities, international (and bilateral) police and justice cooperation is needed. While to date, criminal investigations have been rare, when they have happened they have yielded positive results, thereby, suggesting that more (bilateral) criminal investigations are needed, as in other areas of serious and organized crime.

Understanding the complexity of illegal logging and related timber trade certainly seems key for developing effective governance responses. The causes and consequences of the different dimensions of illegal forest activities, namely "illegal forest conversion", "informal logging" and "other illegal forest activities", vary a great deal. Additionally, it is necessary to understand whether organized crime is involved in illegal forest activities, particularly in illegal forest conversion and other illegal activities. In contrast, informal logging might result from undermining rights of indigenous communities, unclear tenure rights, and complex compliance and verification systems. In fact, illegal forest activities might be the only



Rainforest destruction in Thailand from aerial view.
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