

## REGIONAL PAPERS

# Illegal logging in the Asia-Pacific region: an ADB perspective<sup>1</sup>

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### UNDERSTANDING THE ILLEGAL LOGGING SYNDROME IN ASIA-PACIFIC

Illegal logging here is taken to mean any felling and extracting of logs from forests that is not in conformity with an approved management plan, or is not officially licensed or permitted in any other way by a forest authority in accordance with operations that are permitted under prevailing forest laws. The latter may include harvesting of trees for land clearance for other economic purposes. The perpetrators of illegal logging according to this definition could be: (i) companies holding concessions that harvest outside the approved harvesting blocks, or harvest trees that are restricted in some way due to species or size class; or (ii) they could be organised gangs that enter forest where other parties hold concessions or harvesting permits; or (iii) they could be individuals or groups from local communities that harvest trees for their own use or for sale without any form of permit or license. Regarding the latter type of illegal logger, there may be some dispute about the legality or illegality of their actions where the community have been free in the past to harvest the forest on land that they consider to be traditionally theirs, but these “user rights” have been nullified by changes in the law or by concessions being awarded to third parties. The second category is often organised by ‘rent seekers’, usually in powerful positions, and they may exercise intimidation in order to recruit labour. Where there is poverty and lack of job opportunities it is easier to recruit labour for illegal logging.

Such illegal logging is found mainly in those countries in the region that have, or had, extensive areas of natural forests and where the enforcement of law is poor. Poor law enforcement is often a result of lack of resources that can be applied in the extensive and remote areas where natural forests are found, but there are cases of illegal logging even in plantations in densely populated and well-policed areas. Following the East Asian Economic Crisis in 1997, when

unemployment in some countries increased dramatically, the prevalence of the latter type of illegal logging also increased. However, poverty, unemployment and poor law enforcement are only part of the problem operating on the supply side. The demand side also offers considerable incentive to logging illegally. In many countries, wood-processing capacity has been expanded with little regard for the forest resources’ capacity to supply raw material sustainably.

The Asia-Pacific region as a whole has a substantial supply deficit of both logs and forest products, compared with demand, and relies on imports into the region for about 20% of consumption. However, the officially published figures on production, imports and exports from which apparent consumption can be calculated for many countries suggest a major under-recording of one or other component of the balance equation. This is understandable because the official figures take no account of either illegal logging or of smuggling of logs between countries, which is related to illegal logging and is known to take place between several countries. The magnitude of the discrepancy is staggering. Total recorded log production in the region, including industrialised countries, was about 283 million m<sup>3</sup> in 2000, according to FAO statistics (FAO 2000). In the same year, reported volume of the products made from those logs (sawnwood, wood-based panels and pulp) would have required around 440 million m<sup>3</sup> (rwe – round wood equivalent) when converted at the prevailing average conversion rate (FAO 2000). Thus there was an

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apparent deficit of about 160 million m<sup>3</sup> of logs. Some of this can be explained by errors in recording and by changes in the stock of logs held in the processing chain and by possible recycling or utilisation of residues. However, the bulk of it must represent illegally felled logs, perhaps as much as 120 million m<sup>3</sup> or about 45% of the recorded production. This possible total for the region is consistent with known volumes of illegal felling in several countries.

In addition to this imbalance in the primary processing of the logs produced, there is a major discrepancy between the reported production of paper and the apparent consumption of pulp. The total production of paper in the region was around 87 million tonnes in 2000, while the apparent consumption of pulp was only around 20 million tonnes. With average production of 1.8 tonne of paper from 1 tonne pulp, even allowing for the use of non-wood raw material for pulp and recycling of paper, there is still a large discrepancy some of which must be due to under-recording of pulp production since trade statistics are normally reliable. It is hard to believe that there may be 20–40 million tonnes of unrecorded pulp production in the region, but if there is it adds a further 100–150 million m<sup>3</sup> to the apparent log deficit.

When similar log supply-demand balances are constructed for individual countries in the region a similar picture emerges for most of the developing countries. Data on the domestic consumption of wood products is generally lacking but in some countries where studies have been carried out it appears that actual consumption is greater than that implied from the balance between domestic production and net trade. The difference is generally met either from illegal logging in the country concerned or by smuggling imports of either logs or finished products. There is therefore little doubt that large-scale illegal logging is going on in several areas within the region and that it is a major contributory factor to the degradation and eventual destruction of large areas of the region's natural forests.

Illegal logging adversely impacts in many ways on the performance of the sector. One is through its effect on the resource, through raising the harvest above sustainable levels, and thus reducing the potential future output. This effect is partly a direct impact on the removal of part of the growing stock, and partly due to the damage caused to the residual stand. Usually illegal logging takes place in forest already logged once by concessionaires, where the illegal loggers have easier access to the forest. This additional logging after a few years, damages the young regeneration growing in the gaps created by the initial logging, and therefore affects the longer-term productive potential. A second impact is the effect on log prices, since no royalties or taxes are paid the logs are usually sold at a price below the world market price into the domestic market. This has a number of consequences. While this may have the advantage of supplying cheaper wood products for domestic consumers, it encourages wasteful use and stimulates demand that would otherwise be constrained by price. It also has the effect of depressing wages in the sector because of the need of legal operators

to compete on price for the logs they produce and stimulating concessionaires to lobby for low or reduced royalties and taxes, so that they can compete with the illegal operators. Finally, there is loss of revenue for government, both in the short-term and in the longer term from the reduced productivity in the future. The current average of total government revenue from royalties, levies and stumpage fees is around US\$20 per m<sup>3</sup>, and so the aggregate annual loss of revenue to governments in the region maybe as much as US\$2.5 billion. The amount of revenue that government receives from the forest has an impact on its perception of the economic contribution from the sector, and if revenue is small the sector may be considered to have little importance.

These negative impacts are only partly offset by the income generated for those engaged in the illegal logging, but generally this is minimal, because rent seekers and protection racketeers take much of the profit, and the loggers themselves receive only a very basic wage, as well as having to work in very dangerous and unhealthy conditions. The benefits of income generation would be far greater if the illegal loggers were able to participate legally and earn a fair wage as well as having their health and safety taken care of. If logs were sold at the world market price, and the rent extracted from the illegal loggers was done away with, the wages and working conditions for those currently engaged in illegal logging could be greatly improved. The additional government revenue could help to fund the provision of public services and so contribute towards the reduction of poverty.

Table 1 is based on a study in Indonesia, and is merely indicative because log prices and costs vary appreciably from time to time and place to place, but it shows that the income derived by the illegal loggers is very much lower than that of the labourers in the legal operations. This is partly due to the more labour intensive methods used which mean that productivity is very low, but partly due to

**TABLE 1** *Comparison of the breakdown of harvesting and extraction costs for commercial and illegal operations, based on data from Indonesia 1998*

Item	Legal operations	Illegal operations		
Market price of log (US\$/m <sup>3</sup> )	90	40		
Costs	Extraction	47	20	
	Labour	4	1.6 md	3.5
	Capital	17	9.5	
	Fuel	7	7.0	
	Roads	1	–	
	Management	18	–	
Profit after tax or captured rent	23	20		
Government revenue incl. corp. tax	20	–		

Source: Indonesia-UK Tropical Forest Management Project (1999)

exploitation by the rent seekers who can always find someone else willing to work for wages well below the legal minimum. The lower capital cost for the illegal loggers is partly due to the use of much less and much smaller equipment, which is normally hired, but it does not reflect the full cost of the capital employed, because it takes no account of the depreciation. Thus, the owners of the equipment do not accumulate the financial resources to replace the equipment and its productivity is therefore also low.

Illegal logging is very bad for both the sector and for the national economies in those countries that are plagued by the problem and strong measures are needed to try and bring the problem under control and eliminate the practice as soon as possible.

#### DIAGNOSING THE SEVERITY OF THE DISEASE

Like treating any disease the first step is a correct diagnosis of the causes and extent of the problem so that the cure will tackle the root causes and not just the symptoms. In most countries in the region, which are affected by illegal logging, it is acknowledged that it is taking place but there is little data or information about the full extent either geographically or quantitatively. There is rarely information about the numbers of people involved, the organisers or the end-users of the logs harvested. Development of a strategy for dealing with illegal logging therefore, generally has to start with a full assessment of the scale and extent of the problem. This needs a two-pronged approach. First at the macro level a survey of the size and distribution of processing capacity is required. Frequently, responsibility for forest resources and for industrial processing of the products lies with different departments. Responsibility for the processing industry may in turn be split between large processors, which are the responsibility of central government while small and medium enterprises (SME) may be handled by a special department or may be delegated to local government. This fragmented policy and planning arrangement, in which different agencies and departments deal with demand side (such as setting up wood processing plants, export quotas etc.) while the supply side is managed by foresters, contributes to unrealistic and unsustainable supply expectations that results in over-exploitation.

Also at the macro level good and timely data on the actual authorised annual production of logs and their geographical distribution will give a first indication of regions where the installed processing capacity is widely different from the production. It will also indicate whether or not there is an overall imbalance, after allowing for some reasonable under-utilisation of capacity. If the recorded supply is less than about 60% of capacity, the question must be asked, why has some capacity not been closed down? The answer may be historical, and enterprises with old equipment may be able to operate profitably with low utilisation capacity. It may also be because logs can be

transported from elsewhere in the country from regions where there is a surplus of supply over demand. Should neither of these possibilities be the answer, then there is a *prima facie* case for assuming that some illegal logging or smuggling of logs is taking place.

The second prong of the approach is at the local level and this will generally be more difficult and may even be dangerous, since parties involved in illegal logging are unlikely to take kindly to an investigation. Any investigation needs to be done by independent individuals or organisations, since government and law enforcement officials may have a vested interest in the activity. The local level investigation involves the collection of information on logging activities, on the local processing capacity and activities, and on the transportation of logs and products. It is generally not possible to conduct structured interviews, since these alert people to the investigation and hence may prompt responses designed to mislead or deceive. It therefore requires a very informal sampling of individuals from local communities. With sufficient interviews it is possible to build up a picture of whether or not illegal logging is taking place, who is involved, and what is happening to the products. It is important to seek multiple sources, and to cross check data on logging, processing and transport for consistency.

#### IS THERE A CURE FOR THE DISEASE?

Having established the existence and scale of the problem it is important to publicise as widely as possible the findings, so that those involved and the public at large are aware of the damage that is being done both to the forests and to the national economy. Publicity should also be given about the basic requirement to maintain growing stock in the forest to ensure future growth. Illegal loggers often do not understand concepts of sustainability and the damage done by overcutting. This may begin to act as a deterrent to new participants and may shame some of the existing perpetrators to give up, before they are exposed. However, addressing the fundamental causes will be the main approach to stamp it out as completely as possible. There is no one cause of illegal logging, and hence no single solution. The issues of supply-demand balance, establishment of rights of ownership and use of forest resources that can be upheld in courts of law, and social problems of poverty and under or unemployment all contribute and need to be addressed.

The way in which levies, royalties and taxes are levied on forest production often contribute to illegal logging indirectly by distorting the market and promoting inefficiency. In most countries in the region, these instruments used to capture the economic rent are based on the volume extracted rather than on the rental value of the land under forest. This encourages highly selective logging by concessionaires and very high levels of waste, because only the best logs and the best parts of logs are extracted. In some countries it is estimated that 1 m<sup>3</sup> of

wood is left in the forest for every 1 m<sup>3</sup> extracted. Were this waste utilised it would reduce any imbalance between supply and demand, and would provide additional employment in harvesting without increasing the intensity of harvesting. This would make it possible for some of those engaged in logging illegally under present rules to be able to continue earning a legitimate living, without contributing to the degradation of the resource.

Rental payments for forest concessions based on the area and productivity of the forest would put greater onus on concessionaires to control illegal logging and to utilise as much as possible of the volume that needs to be removed to maximise future growth. If they have paid a substantial rent for an area of forest they would have an interest in maintaining its value, rather than abandoning areas that have been logged, and throwing up their hands at illegal loggers, or even sneaking in for an extra harvest when log prices go up. Modern technology using satellites makes it much easier to monitor where logging is taking place and its intensity, and companies caught practicing logging that is too intensive would no longer have the excuse that illegal loggers were to blame. Performance bonds have been proposed in some countries as an added incentive to protect and manage the forest resource sustainably.

Long-established communities located in or around forest areas may well have been conducting low intensity logging in an area of forest for many years. If their activities are suddenly made illegal, because a third party has been awarded harvesting rights, it is understandable that they will have little respect for the law. It is therefore desirable that concessionaires be required to incorporate any traditional harvesting activities into their management plans, and either employ those individuals who have been involved in the past, or treat them as sub-contractors. Where concessions have not been awarded or have been cancelled, then management of the resource by local communities needs to be investigated.

The crucial step in the process is to exclude the rent seekers and to devise instruments that make it unattractive for them to be involved, while at the same time finding ways to avoid making illegal the activities of local communities and poor people who would otherwise be unemployed. In this way the forests will contribute positively to the reduction of poverty, rather than being abused and having the wealth that they represent being destroyed. ADB's role in many DMCs in the region is increasingly assisting with reform of the policy and regulatory framework for the forest sector, among other things to tackle the problem of illegal logging wherever it is occurring. ADB's policy for forestry is currently in the final stages of a review. The revision process puts emphasis on improving the performance of the forestry

sector in DMCs and stressing its contribution to poverty reduction.

The proposed policy emphasises the provision of support to DMC governments for strengthening forest governance and improving resource security through the promotion of reviews of regulatory regimes, with particular reference to land-use and tenure. It will also promote the analysis of the supply-demand situation for forest products as well as appropriate pricing policies. ADB will also strive to ensure greater stakeholder participation in the process of identifying, promulgating and implementing needed reforms, and this may include the promotion of existing and new user groups and associations. The emphasis in the new policy on poverty reduction will mean that where possible the management of forest resources and the establishment of new plantation resources will seek the participation of the poorest communities. A review of existing forestry projects has shown that local community participation with clear arrangements for benefit sharing brings major improvements in income and a greater appreciation of the value of forest resources amongst the participants.

At the Regional level some bilateral initiatives between governments and private sector organisations and companies have already been concluded that involve ADB Member countries, to monitor trade in illegally felled logs and to take steps to exclude them. This will be a useful contribution, but needs to be extended to all major consumer and producer countries in the Region. Here ADB has an important role to play both as a facilitator of multi-lateral discussions on the subject that could lead to agreements on action in the future and in promoting harmonisation of forest sector policies among DMCs to include trade issues. As a basis for any such discussions better information, such as discussed above, is required so that consumer countries can be made aware of the impact that their trade policies have on the forests of other countries. This is linked to the national forest policy, especially for those countries with a deficit of forest resources compared with their demand.

More information on ADB's Regional Study on Forest Policy and Institutional Reforms can be found at <http://www.adb.org/projects/forestpolicy>.

## REFERENCES

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