The impacts of unregulated forestry production in Honduras

Filippo Del Gatto REMBLAH-COSPE

Conclusions

- It is estimated that 75-85 per cent of the broadleaf timber extracted from the forests of Honduras on an annual basis is removed illegally. This amounts to between 125,000 and 145,000 cubic metres. When it comes to conifers, clandestine logging of between 350,000 and 600,000 cubic metres accounts for 30–50 per cent of the total annual supply. The total market value of the illegal timber involved is estimated at US$55–70 million.
- This constitutes an enormous loss to the Honduran economy. For example, the direct annual fiscal/financial losses to the governments from just three sources (production taxes, income tax, and the waste of public investment) amount to between US$11 and 18 million. The overall total, once you factor in the indirect losses, may well be several times that figure.
- From a governance perspective, unregulated logging increases the likelihood of patronage systems as well as corruption within government; it impairs the effectiveness of public bodies charged with forestry-sector administration; and it undermines the fundamental principles and operational basis of the Honduran Social Forestry System.
- Unregulated forestry production undermines the key livelihood assets of the poor. In remote rural areas it also contributes, through its links with other criminal behaviour—drug-trafficking, livestock rustling, the trade in wild animals and in arms, robbery, and so on—to the growth of a pervasive climate of illegal activity as well as to an upsurge in conflicts and violence.
- In supporting unfair competition, it undermines all the efforts to introduce proper forest management by hugely reducing the economic viability of such initiatives. It also contributes to the deterioration of forest resources and to a corresponding loss of environmental services.

Introduction

The Poverty Reduction Strategy Paper (2001) identifies deforestation as the number one environmental problem in Honduras, and stresses four main causes: (i) land-use changes in forest areas; (ii) fuelwood consumption; (iii) forest fires; and (iv) uncontrolled logging. Of the four, uncontrolled logging is without doubt the least studied and the least understood. Despite its very serious implications, we do not know nearly enough about how it operates, why it occurs and what its internal dynamics are. From a legal point of view, uncontrolled logging can be defined as logging carried out without authorization or without respecting what authorised, that in the present paper is termed unregulated forestry production. It is a complex issue and has any number of ramifications, but it (i) causes enormous economic losses at a national level; (ii) undermines the formal mechanisms put in place to ensure proper governance; (iii) impacts on the rural poor; (iv) strongly discourages efforts at sustainable forest management; and (v) contributes directly to the deterioration of national forest resources. This paper attempts to explore some of these impacts.

1. What is unregulated forestry production?

It is common in Honduras to speak of 'illegal' exploitation and forest resource use, as a way of distinguishing this activity from legally approved forestry operations. But a distinction of this sort does not seem to reflect the actual situation out in the forest. In practice, it seems far more as though legal production and the criminal exploitation of forest resources are the two extremes of an unbroken chain in which it is extremely difficult to make clear-cut distinctions between one activity and the next. In other words, the forestry production chain often consists of a mix of illegal and illegal activities, no matter where you look and whom you are looking at. Notwithstanding this initial observation, it is both possible and helpful to group forestry production into three broad categories:

(i) legal production: that is, forestry operations carried out in accordance with approved forest management criteria, under controlled conditions, within the law as it now exists, and with forestry-use permits that are issued and/or renewed at regular intervals;

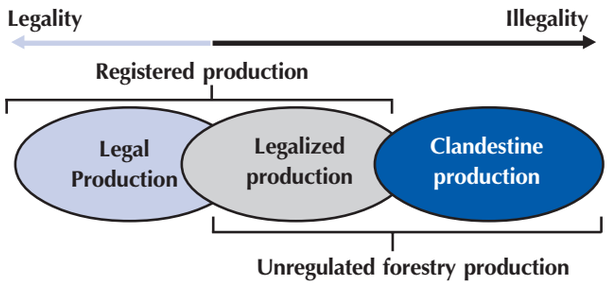
(ii) what is known as legalized production: that is, operations which are not, strictly speaking, illegal (because those involved have the necessary papers and permits, pay taxes, and are part of the official statistical database held the forestry authorities), but in practice flout the law and ignore regulations—either deliberately and as a result of careful planning (so-called 'timber laundering') or, as often is the case, because of the sheer difficulty of complying with all the legal requirements (especially the high official and hidden costs of negotiating a way through endless and complex bureaucratic red tape); and

(iii) clandestine production: that is, operations that are right outside the law, beyond state control, pay no taxes whatsoever, and do not figure in any of the official records.

There are significant overlaps between these three broad categories. The first two are lumped together in the official records, both figuring as activities that are registered. And yet the label unregulated forestry production covers both legalized and clandestine activities, since neither involves compliance with the regulatory framework that is in place (see Figure 1).

Figure 1 shows, for example, that even some of the best cases of forestry production and management in Honduras (legal production) do not always manage to be 100 per cent legal. Usually, this is down to excessive red tape and the institutional weakness of many of the bodies involved. Both these factors make it extremely costly to comply with the law, forcing producers to fraudulently legalise illegally cut timber, or even avoid the law entirely, in order to reduce costs.

Figure 1. Legality and illegality in forestry production in Honduras



Both clandestine and fraudulently legalised production create an uneven playing field for sustainable forest management. They both threaten the survival of some of the most valuable timber species and contribute to the degradation of forest resources nationally. When it comes to lost tax revenues, clandestine production has a much more significant impact, since legalized operators normally do pay taxes on what they take from the forest and on what they produce from it.

2. Clandestine forestry production: how much of it is there?[1]

Legalized production is lumped in with legal production in all the official statistics, whereas there is no data on clandestine forestry production. Estimating the amount of clandestine production is difficult,, since all the statistics held by the bodies concerned (AFE-COHDEFOR, the Central Bank, and the National Statistics Institute) cover registered operations only and are insufficiently detailed for them to be cross-checked usefully against any other sources of information. To reach some kind of plausible estimate we have compared results from two indirect procedures. The first of these involved inspecting timber-finishing enterprises (both primary and secondary) and comparing their company records with the stocks of wood in their timber-yards (a study referred to by Jiménez, 2000). The second, developed specifically for this paper, involved making an estimate of national timber consumption and comparing it with the quantity of raw material offered for sale.

A comparison of the results obtained by these two methods suggests that clandestine production of broadleaf timber runs to some 125,000–145,000 cubic metres annually, or roughly 75-85 per cent of the total quantity of such timber consumed. The same method produces figures for timber derived from conifers of 350,000 to 600,000 cubic metres, or 30-50 per cent of the timber offered for sale each year. Figure 2 shows these results in graphic form.

As can be seen, most conifer production comes from authorized operations. This is a positive finding, but we should not forget that a significant percentage of registered production may involve timber that was originally logged illegally and then 'legalized' in a number of possible ways.

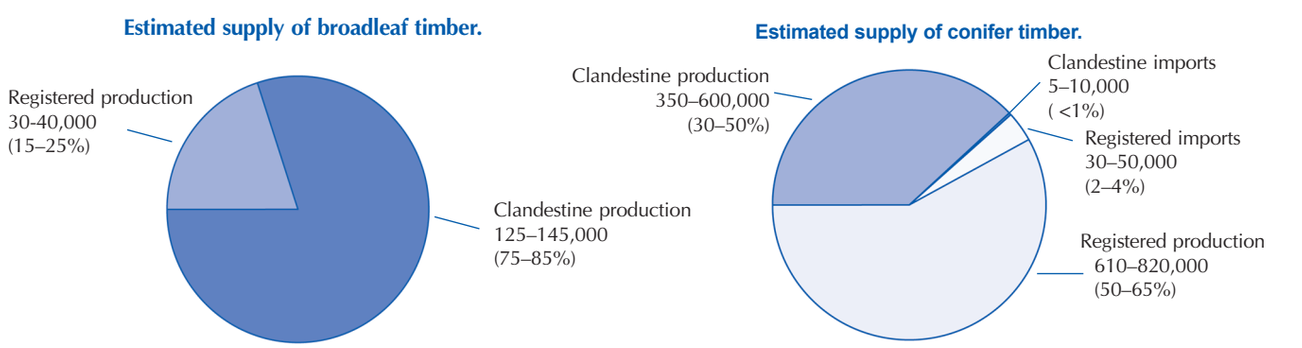
3. Economic impacts

Gross market value

To be in a position to estimate the economic scale of clandestine logging we have first to calculate the gross market value of the quantities of timber estimated above. To do this, we have taken the FOB (Free On Board) price of Big-leaf mahogany (Swietenia macrophylla), Spanish cedar (Cedrela odorata), and pine (Pinus spp.), since these prices represent the most realistic estimate of the gross market value of the three timbers (that is, the import price that would have to be paid were they not produced in Honduras—a figure less subject to price distortions caused by illegally produced timber). However, for non-traditional broadleaf woods there are no registered FOB prices (since there is no established international trade in these timbers), and so we have used the sale prices set by COATLAHL, a co-operative typical of the national picture as a whole.

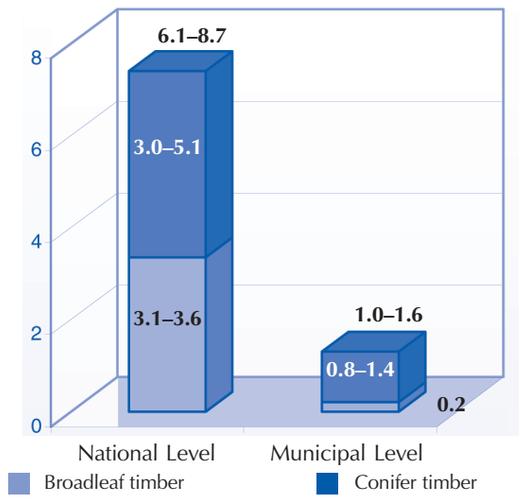
The market price of 125,000-145,000 m³ of broadleaf timber, given the proportional distribution of the three species involved, is roughly US$30 million. That of 350,000-600,000 m³ of timber derived from conifers is US$25-40 million. The total gross market value of clandestine timber production in Honduras can accordingly be estimated at US$55-70 million.

Figure 2. Estimates of clandestine broadleaf and conifer timber logging in Honduras, based on the average obtained from the two indirect methods used (in m^3 of roundwood per year).



Note: Neither authorized nor undocumented imports of cut broadleaf timber have been included. Such marginal imports doubtless exist, but, for the purposes of these estimates, the quantities involved are assumed to be relatively small and unlikely to involve any necessary adjustment to the overall figures used to estimate the quantity of timber offered for sale.

Figure 3. Unpaid national and local production taxes (millons of US$).



Losses in state income and wasted public expenditure

One of the impacts of illegal logging that is most commented upon is its cost to the public purse. The sums involved are significant, though difficult to put a precise figure on. The losses which are perhaps the easiest to estimate with some degree of confidence are those derived from unpaid taxes on forestry production and extraction. Calculations suggest that these may run to between US$6.1 million and US$-8.7 million annually in the case of the national exchequer and between US$1million and US$1.6 million in respect of local taxes (see Figure 3).

Figure 3 does not take account of other important direct losses, such as: (i) the fall in auction prices; (ii) sales taxes; (iii) income taxes; and (iv) export tariffs. Such losses are difficult to calculate, but probably run to several million dollars. To take just one example, annual income-tax losses alone probably total US$0.8–2.1 million.

All these potential public revenues are factored into the above estimate of the gross market value of the illegal timber trade. Since they are not collected by the State, they constitute extra profit for traffickers. In addition, there are direct public revenue losses that are not factored into our calculation of the total market value of the illegal trade in timber. Among these are: (i) the public funds 'wasted' on sustainable forest management programmes which fail to produce the results expected because of the negative impacts of illegal logging; and (ii) increased state expenditure on trying to tackle the problem (field monitoring activities, bureaucratic expenses, taking cases to court, and so on). State expenditure on increased enforcement is hard to calculate, but it is possible to make a rough estimate of wasted public funds (both national and international). This may well be of the order of US$3–6 million annually.

Taking all these factors into consideration, then, our estimate of the annual cost to the exchequer arising from three factors alone (unpaid production taxes, unpaid income tax, and wasted public expenditure) amounts to US$11–18 million (see Table 1).
The value of these losses is even more impressive when one compares them with the annual national budget of certain state institutions. For example, the upper limit of the range is higher than the AFE-COHDEFOR annual budget (US$16.1 million in 2003) and just about the same as the total combined 2003 budget of the Institute for the Child and the Family (US$6 million), the National Children's Endowment (US$ 3.2 million), the National Basic Produce Supply Agency (US$5.1 million), the Institute for Anthropology and History (US$ 1.8 million), and the National School of Forestry Sciences (US$2.4 million).[2]

Table 1. Summary of the national annual losses arising from four factors in Honduras ($US millions)

Loss	Amount
• State taxes on production and extraction	6.1 – 8.7
• Local taxes on production and extraction	1.0 – 1.6
• Income tax	0.8 – 2.1
• Public expenditure 'wasted'on sustainable forest management initiatives	3.0 – 6.0
TOTAL	**10.9 – 18.4**
ESTIMATED RANGE	**11 – 18**

Indirect losses

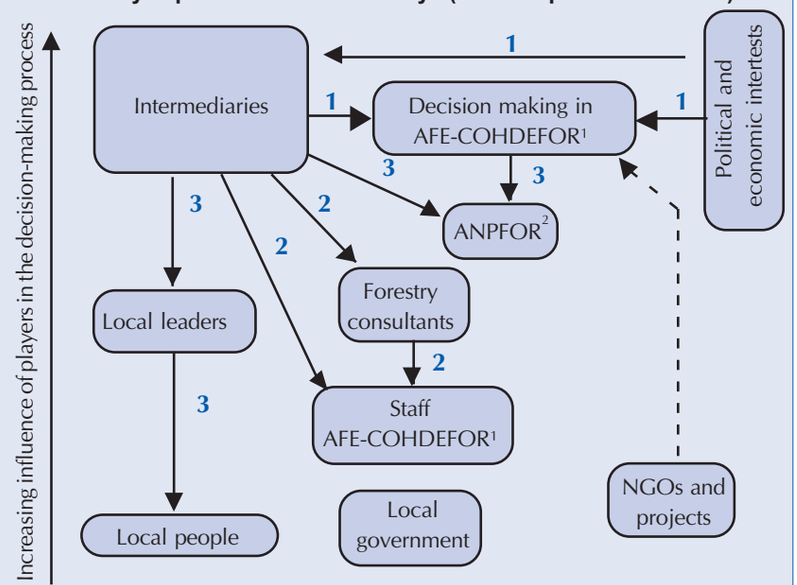
The estimates given above are only partial, based as they are on three direct economic impacts only, and yet they calculate the annual loss to the public purse at between US$11 and US$18 million. On top of that, there are other losses to the nation as a whole, which go far beyond these economic statistics. These include the:
(i) cost of forest degradation and the consequent loss in environmental services;
(ii) loss in biodiversity;
(iii) economic costs of social conflicts generated by unregulated production (conflicts that on occasion flare into open violence); and
(iv) losses incurred by private-sector investors in forest management initiatives as a result of the prevailing climate of insecurity.
Though the calculation of such costs is a complex process, it may well be that they amount to several times the estimated losses to the exchequer.

4. Impacts on governance

Arguably the most damaging and lasting impact of all arising from unregulated logging is the way it affects governance. One way of looking at this is to study the ways it distorts the roles of key players in the chain of production. Among the typical features of this distortion, we have:

- intermediaries and timber merchants who have a disproportionate voice at several levels in the decision-making process, often because they enjoy the backing of influential power groups;
- government bodies that are weakened and rendered incapable of carrying out their allotted tasks, often because they are hostage to outside interests;
- local people who, apart from a few élite groups, are transformed into simple day-labourers or, even worse, into defenceless spectators; and
- local authorities who find themselves marginalized.

Figure 4. The power of influence in forestry exploitation in the Sico-Paulaya Valley (Colón)



[1] State Forestry Administration - Honduran Forestry Development Corporation
[2] National Association of Broadleaf Forest Producers

Figure 4 attempts to represent, in diagram form, this distortion of roles and the resulting relationship between élites consisting of key players. It is based on forestry exploitation in the Sico-Paulaya Valley, in the Colón Department, over a two-year period (2000–2001). The graphic shows the relative influence enjoyed by the different players in the decision-making process (the most powerful appearing at the top of the graphic and those with less power shown correspondingly further down) as well as the principal interactions between them (indicated by arrows).

Although Figure 4 relates to only one specific case-study (the Sico-Paulaya Valley in 2000–2001), it helps us—by outlining the different levels, players, and processes involved—to understand the various factors that can affect governance.

Institutional vulnerability at decision-making level (arrows marked '1')—The clearest sign of institutional weakness among the public bodes involved in the decision-making process is their vulnerability to pressure from those with an interest in promoting and sustaining unregulated logging. Data collected for the present study confirms anecdotal evidence that unregulated logging helps to sustain patronage systems and corruption inside the various government bodies responsible for ensuring compliance with the regulatory framework governing forestry activities, and that it has a direct effect on decision making. The upshot is that decisions are taken which benefit the few at the expense of the wider community, a state of affairs which in turn has negative repercussions for the whole network of 'regulations' and 'values' in the Honduran forestry sector.

Pressures on the administrative and regulatory process (arrows marked '2')— Unregulated logging affects decisions taken at the highest level. It also impacts on the implementation of those same decisions at a lower level, especially given the power of intermediaries and traders who have the capacity to cut through red tape and bias monitoring operations in their favour. This capacity is sometimes linked to the payment of 'sweeteners', but, when it comes to monitoring, there is also a deeper cause, and that is the vulnerability of any system of monitoring based on inspections carried out in remote and difficult areas by officials who are often on their own and find themselves faced with a decision about whether or not to accept the version of events presented to them by powerful intermediaries and/or timber merchants. It is extremely difficult for inspectors to speak out against the powerful interests involved. In situations like these, a government officer is often highly vulnerable to pressure and bias when he comes to report on the quantity of timber taken, the species involved, the exact location of the logging, and so on.

The 'capture' of organizations within the Social Forestry System (arrows marked '3')—The power of timber merchants is not restricted to government bodies; it can be seen even more forcibly at the community level. In practice, outside traders often manage to use the organizations affiliated to the Social Forestry System in order to gain access to those parts of the forest where resources are particularly valuable. The first step in infiltrating themselves into the system is usually to bribe the leaders of local organizations and local communities and then to use them to exert pressure on the other members or local inhabitants. They are so good at infiltrating these organizations and communities (largely thanks to their financial capital) that they quickly seize hold of decision-making at every stage of the production process (institutional management, production, and marketing) and even find themselves on occasion as (self-)elected directors of local organizations. Backhanders, patronage and intimidation are commonly employed to secure the best results. In situations like this, the 'regulations' and 'principles' of the Social Forestry System are openly flouted and the community rights of the many are highjacked to serve the personal interests of a handful of outsiders.

Nor are the regional and national associations of Social Forestry System organizations immune to infiltration of this kind. It is often important to obtain the backing of such associations to furnish a 'political' justification for the choices made by the bodies responsible for taking decisions. It is accordingly a key objective of groups with an interest in illegal logging to ensure that they can influence these associations (which they usually do, in the case of a community, by putting pressure on its leaders).

5. Social impacts

Impacts on the assets of the rural population (social, human, natural, financial, and physical)

Case studies carried out under this project show that unregulated forestry production eats away at the key assets upon which the poor depend for their livelihood. The infiltration of communities by individuals and interests with links to illegal logging often causes a sharp fall in the positive social capital enjoyed by poor

Box 2. Few improvements in financial and physical assets in Sico-Paulaya

The production of around 11,000 m³ of mahogany in the Sico-Paulaya Valley over the two-year period 2000–2001 brought the people of the valley an income of some US$1.2 million by way of wages and profits. Yet the impact on their financial and physical assets was fleeting and insignificant:

- a good portion of the income (at least 50–60 per cent of it) was grabbed by those with power and influence and there was very little left (possibly as little as 25–30 per cent) for the poorest members of the community;
- on top of that, the much smaller amounts of money that did find their way to those on the very edge of society were either long delayed, or came in the form of sporadic and part payments instead of a regular income stream that would have allowed them to plan for their future and to invest, and thus made little effective contribution to their financial assets;
- the two years of intensive activity in 2000 and 2001 were followed in 2002 by a spell of very low production; after a few months of practically zero activity, little or nothing was left of the money they had put by over the previous two years, either in cash or in terms of liquid assets (livestock, jewels, and so on), and, by the same token, there were only limited improvements in their physical assets (tools and equipment, etc.);
- even worse, several chain-saw operators and local organizations ended the period significantly in debt or with money owed them that they could not collect (from a few tens of dollars to several thousand).

communities, weakens their organizations, reduces participation, paralyses the decision-making process, and causes mayhem in local social institutions. Such developments often go hand-in-hand with an increase in negative social capital: spreading distrust, inciting conflict, and concentrating monopoly power in the hands of small élite groups, usually consisting of a few local leaders and one or two outside intermediaries. These groups not only have come into existence in order to carry out unlawful activities of their own but they also openly aid and abet the criminal behaviour of others. Unlike legal operators, illegal chainsaw gangs are often rivals. The result is that each of them tends to operate as a separate 'cell' in competition with the others and they do not share information and advice about markets, costs, where the trees are, the use and maintenance of chainsaws, and so on. This has a detrimental effect on the human capital involved. Selective and unsustainable logging of the most valuable forest resources clearly damages the natural capital of the local population, by eroding the economic viability to them of sustainable forest management, as well as by rendering their financial and physical capital more uncertain, restricted, and temporary, since theoretically significant sources of potential income for local people are highjacked by the local élite groups and outside interests (see Box 2).

How a climate of widespread illegal activity in remote rural areas can affect development

In remote rural areas, illegal logging tends to have links with other apparently unconnected criminal behaviour, such as drug-trafficking, livestock rustling, the trade in wild animals and in arms, robbery, and so on (see Box 3).

Box 3. Illegal logging and organized crime

The two years 2000–2001 witnessed a surge in criminal exploitation of the forest in the Sico-Paulaya Valley, in the Colón Department. The leading timber purchaser during that same period—a man deeply involved in organizing and funding that exploitation—was arrested at the end of November 2002 on a charge of being the boss of the criminal gang responsible for a chain of robberies in the north-east of the country. A raid on an unregistered sawmill owned by the accused uncovered illegal timber, highjacked lorries and trucks, stolen goods and firearms—*prima facie* proof of the links between illegal logging and organized crime.

The sense of community responsibility is damaged and the climate of criminal behaviour nurtures an 'uncivil' society, based on a set of values, norms, and behaviours that turn a blind eye to criminal activity and even act as a stimulus to it. The result is a climate of lawlessness in which:

- community forest care and management systems are weakened, leading to what is effectively as 'open access' situation;
- faith in public institutions is lost;
- respect for the law becomes an option one can ignore when one chooses; and
- disputes arise and violence becomes common (see Box 4).

The 'criminalization' of the poor

A further significant impact of unregulated logging is the 'criminalization' of people living near the forest. Firstly, they are accused of being responsible for the illegal activities taking place in their area, an accusation that is often an ideal way of masking the involvement of others or diverting attention away from it. Many who depend upon the forest for their livelihood and have tried in vain to comply with the legal framework governing forestry activity find that clandestine operations are now their last resort. A good example of this is the COATLAHL co-operative, many of whose ex-members now work in illegal production, having no alternative way to make a living (see Box 5). Illegal logging is, then, the final stage in an irresistible downward spiral for many poor producers, who as a result find themselves 'criminalized' as 'outlaw' players.

Box 4. Disputes and violence in Sico-Paulaya

The sharp rise in production in 2000–2001 in the Sico-Paulaya also saw local people in the valley accusing one other of having 'grassed' to the relevant authorities about illegal logging. Accusations are often accompanied by threats. The upshot was an increase in the number of people purchasing firearms for personal protection—even poor local people, who had to invest a considerable portion of their assets to do so. On occasion, these disputes flared into open confrontation. The most common way of damaging one's 'enemy' was to steal his timber, but in the Tulito sector illegal chain-saw operators even went so far as to burn down the house of a local who tried to stop indiscriminate and illegal mahogany logging in the area. In this same sector, conflicts over illegal logging led to a murder in 2003.

Box 5. The case of the COATLAHL co-operative

The COATLAHL co-operative was set up in 1977. For more than 15 years it was a profitable organization which regularly distributed a share of the profits to its members. Things changed in the early 1990s with the passing into law of the 1992 Agriculture Modernization Act, which made it compulsory in all cases to draw up a forest management plan. Production costs soared accordingly, while efforts to reduce illegal logging came to nothing. The situation deteriorated even further in 1996 in the wake of AFE-COHDEFOR Resolution GG-486-96, which imposed a huge hike in the tax paid on each broadleaf tree felled. This change, together with other factors such as the 200 m^3 ceiling on the quantity of timber that could be extracted legally and the depletion of the most profitable timbers have made competition with illegal timber less and less sustainable. The end result can hardly come as a surprise: the co-operative is on the verge of bankruptcy; the number of affiliated groups has dropped from 13 in the early 1990s to 7 today; membership has plummeted by nearly 75 per cent (with many ex-members now involved in illegal activities); and production has fallen by over 80 per cent.

6. Impacts on forest management initiatives

Clandestine logging enjoys several 'advantages' over forest management: (i) there are no State or local taxes to pay on extraction and production; (ii) there is none of the costly and time-consuming business of negotiating the maze of red tape involved in legal compliance (costs inflated thanks to an often inefficient bureaucratic machinery); (iii) there are no management costs; and (iv) one is free to concentrate on exploiting the most profitable forest resources (those which fetch the highest prices in the market-place or are easiest to extract). Legalized logging, although it pays most of the taxes and incurs costs as a result of complying with bureaucratic procedures, has much lower management costs and, above all, is free, in the same way as are clandestine operators, to concentrate its attention on the most profitable forest resources. On the other hand, although the hidden costs associated with illegally felled timber are often higher (these hidden costs also apply, though at a lower level, to legal timber), these higher costs are amply compensated by their not having to pay some or all of the other costs described in this paper.

The net balance is that the production and transport costs associated with illegally felled timber are significantly lower than those incurred by legal operations. The margin of difference varies from one instance to the next but, on average, the savings range between 20 and 40 per cent of the official price of the timber in question. That kind of saving clearly allows operators to sell their product, when they have to, at a lower price and/or with a higher profit margin. Besides that, market saturation due to illegal timber brings down the price of the raw material and has a knock-on effect on the end purchase price. What is clear is that the legal timber trade cannot compete under market conditions such as these. Forest management becomes financially unsustainable and such initiatives are abandoned (see Box 5). That there is consequently no legal timber on offer in the market-place simply creates a vacuum that is filled by illegal timber. This then becomes the main (and often the sole) source of supply. In such circumstances, the market price of illegal timber can be the same, more or less, as that of legal timber, given that there is now no competition from the latter. Given that production costs are much lower, traffickers can increase their profits, just as they can by not paying taxes.

Box 6. The mahogany situation in Honduras

This is a species with a long history of unregulated logging, going back at least until the 19th century. None the less, this has become a really significant problem over the last few decades. The probability is that the quantity of mahogany extracted from Honduran forests in recent years (if we include both registered and clandestine operations) has been running at between 30,000 and 50,000 m^3 a year, and during that time there has been little or no attempt to manage these activities in a responsible manner. The implications for the survival of the species are extremely serious. Estimates suggest that mahogany has almost entirely disappeared in Honduras outside protected areas (save perhaps small amounts in the Sierra del Río Tinto, in the Colón Department), and that even what is left inside the protected areas is under threat.

7. The impact on forest resource conservation

Unregulated logging tends by its very nature to be highly selective. As a result, it can have a huge impact on the conservation of particular species. A good example would be the case of mahogany (see Box 6). Pines are also cause for concern. Many pine forests in Honduras today have a much smaller volume of standing timber than they should have according to official figures, sometimes as little as half as much. A number of informants have suggested that one cause of this depredation is illegal logging.

None the less, the greatest environmental impact of unregulated logging is probably an indirect one. Selective logging of the most valuable forest resources greatly reduces the economic viability of forest management. The climate of insecurity and the many disputes that arise as a result of these practices also reduce the potential for other sustainable uses of the forest (such as ecotourism). The result is a powerful economic incentive to convert forest areas to other land uses, especially livestock farming. In sum, unregulated logging is often the first step in a downward spiral towards resource deterioration and deforestation. As such, it contributes to the loss of environmental services and the consequent loss of opportunity for the poor to earn a livelihood through mechanisms that ensure they are paid for maintaining those services.

8. Conclusions

This brief analysis of the impacts of unregulated logging makes it plain that the problem must not be underestimated or ignored. We urgently need to find ways to help cut back such activities and head off their consequences. To do this we need close collaboration between government bodies and the many players in society at large (private enterprises, communities, NGOs, the churches, and so on). It is also a problem that cannot be tackled at a local and national level only: what is needed is a consistent approach that covers the entire region, possibly under the aegis of the Central American Commission for Environment and Development (CCAD). We shall also need the co-operation of importer countries and the donor community.

Unregulated logging and responsible forest management are clearly incompatible: where the one flourishes the other withers on the vine. But it is not sufficient to assume that efforts to reduce unsustainable forest extraction will automatically guarantee forest conservation or the sustainability of the forest economy. Efforts to reduce the scale of the problem must be part and parcel of a wider strategy of initiatives and actions designed to promote sustainable development in the forestry sector in Honduras.

References

Jiménez, R.A. 2000. Sistema nacional de control de productos forestales. Administración Forestal del Estado–Corporación Hondureña de Desarrollo Forestal (AFE-COHDEFOR), Tegucigalpa, M.D.C., Honduras (unpublished internal paper)

La Prensa, 7 December 2002 (page 12). San Pedro Sula, Honduras.

Tiempo, 27 November 2002 (page 10). San Pedro Sula, Honduras.

Tiempo, 28 November 2002 (page 10). San Pedro Sula, Honduras.

Footnotes

1 This section and Section 3 on economic impacts, which follows, are summaries of two other papers: Unregulated forestry production in Honduras. What is it? How widespread is it? What is the cost? (Del Gatto and Richards, 2003); and The cost of illegal logging in Central America. How much are the governments of Honduras and Nicaragua losing? (Richards, Del Gatto and Alcocer, 2003). Both are available on the Internet at: www.talailegal-centroamerica.org.

2 Source: La Prensa (7 December 2002). Exchange rate: US$1 = 16.85 Lempiras.

This *policy brief* was written by Filippo Del Gatto with help from Adrian Wells, Michael Richards, Ibis Colindres and Arnoldo Contreras-Hermosilla. It is based upon an assessment of unregulated logging in Honduras and Nicaragua financed by the UK Department for International Development (DFID), the World Bank, and the Canadian International Development Agency (CIDA). The study was carried out by the Honduran Broadleaf Forest Management Network (REMBLAH) under the auspices of the State Forestry Adminstration—Honduran Corporation for Forestry Development (AFE-COHDEFOR) and the Honduran Federation of Agroforestry Cooperatives (FEHCAFOR); coordinated by the UK Overseas Development Institute (ODI); and supported by the Technical Support Unit of the UN Food and Agriculture Organization (FAO).