The cost of SFM in Peru

Achieving TPP requirements in Peru will require improvements in all aspects of forest management

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Stacked: Peru's export sawnwood may be impacted by TPPs. *Photo: V. Espinoza*

The measures required to strengthen the national enforcement system in tropical timber producing countries depend on the current level of performance of the existing system. The situation varies widely: in some cases, small improvements may be sufficient but, in others, major legal and institutional reforms—which are time-consuming and costly—might be required.

The need for institutional strengthening may not be limited to the forest sector. The effective elimination of illegal logging and migratory agriculture could also require improvements in national policies and the judicial system as well as a clear understanding of the role of forests in socioeconomic development.

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As part of a larger ITTO-funded study (Simula 2010), a detailed examination of the improvements needed in the existing system of forest and timber control was carried out in Peru. It revealed that the cost of meeting the requirements of TPPs there is likely to be significant.

The cost of improving the national control system

The 584 forest concessions in Peru cover a total area of 7.6 million hectares; the average concession size, therefore, is about 13 000 hectares. In addition there are about 100 community forests with an average size of 10 000 hectares covering a total area of about 1 million hectares.

In the past, the national forest-related administrative and control systems have suffered from a range of problems, including the poor quality of annual operational plans in forest management units (FMUs), a lack of adequate human resources for field-level inspections, inadequate staffing of control posts in the timber transportation network, and the poor quality of information on timber use by industrial plants. In 2008 the budget of the *Dirección General Forestal y Fauna Silvestre* (DGFF), the agency responsible for forestry administration under the Ministry of Agriculture, was US$7.4 million (equivalent to US$2.10/m^3 of harvested logs or less than US$1/ha of concession area).

A series of changes has been made in the forest sector to improve the legal framework and enforcement system for ensuring that these concessions comply with the law. For example, DGFF is in the process of transferring, to regional governments, responsibility for the management and administration of concessions and harvesting permits in community forests.

OSINFOR (*Organismo Supervisor de los Recursos Forestales y de Fauna Silvestre*), a national body under the Ministry of the Presidency, supervises and monitors compliance with concession agreements and permits. In 2008, however, OSINFOR's budget was only US$0.5 million, which was insufficient for its proper functioning. In the period 2005–08 OSINFOR[1] was able to supervise 31% of existing FMUs; under this approach, therefore, it would take ten years to oversee the entire set of FMUs under concessions.

Clearly, improvements in the monitoring of compliance with forestry regulations are still needed. As implied in both Peru's new forest law and the Forestry Annex of the US–Peru Free Trade Agreement, an improved control system would include the following components:

1 Then under the Ministry of Agriculture.

- a national system of forestry information and control—SNIC—covering the management and use of forest resources, primary and secondary transportation, industrial processing, and the commercialization of forest products
- an adequately equipped control institution (OSINFOR).

The estimated initial investment in SNIC would be US$14.3 million (including US$4.2 million for forest inventories in new concessions) and its estimated annual operational cost would be US$4.2 million. The system would supply DGFF and OSINFOR with digitized and geo-referenced information for the monitoring and control of the production chain from the forest to the final destination (either domestic or export market).

The strengthening of OSINFOR would require an up-front investment of about US$1.4 million and there would be an additional annual operational cost of US$2.7 million. Considering the share of OSINFOR and SNIC activities related to timber production, these figures would translate to US$4.8/m³ for the initial investment and US$3.9/m³ for annual operational costs. The strengthening of OSINFOR has been under way since 2009, but significant additional budgetary and staff resources are still required to improve the administration of forests in Peru, including the enforcement system.

Cost implications for companies

The cost assessment presented in Table 1 was based on three actual cases representing large, medium-sized and small FMUs for a period of five years, which is the validity period of forest certificates. There are strong economies of scale, with a steep increase in cost when the size of the FMU falls to below about 10 000 hectares (see chart).

The total additional cost of implementing and monitoring sustainable forest management would be in the range of US$250 000 for large FMUs, US$170 000 for medium-sized FMUs, and US$80 000 for small FMUs. The unit costs during a five-year period would vary in the range US$5.3 to US$9.6 per hectare and US$2.5 to US$4.8 per m³. These estimates, however, refer to FMUs that operate under 'special' conditions, such as their very low social costs as a result of good relations with local indigenous communities, their involvement in joint ventures, and their accumulated experience in the export marketing of timber products. Under average Peruvian conditions, costs could be as much as 25% higher because of the need for improvements in control and supervision within the FMUs.

In Peru the main cost component of achieving compliance with the demands of TPPs is forest and environmental management, which includes the development of a forest management plan and the enumeration of commercial trees (together these represent more than one-third of the total cost in the first year).

Specific problems faced by large-scale concessions include a lack of technical and economic capacity to implement sustainable forest management, the insufficient integration of the indigenous population in the management of the forest enterprise, and the need for the revision of forest management plans and annual operational plans because of irregularities in inventories. The same problems (but with compounded relative impacts) are also typically encountered in medium-sized and small FMUs. The former are often owned by private individuals with limited knowledge of systematic forest management, and the latter are typically managed by communities with little experience with the formal procedures of production.

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At the national level, the total cost of implementing sustainable forest management by all FMUs was estimated to be US$27.6 million over a five-year period (in practice it would be phased in over a longer period as the number of participating FMUs increased). About US$23.4 million of these costs would apply to concession forests and about US$4.2 million to community forests. About 80% of the total cost would be for changes to forest management, while the remainder (US$5.9 million) would need to be paid to certification bodies.[2]

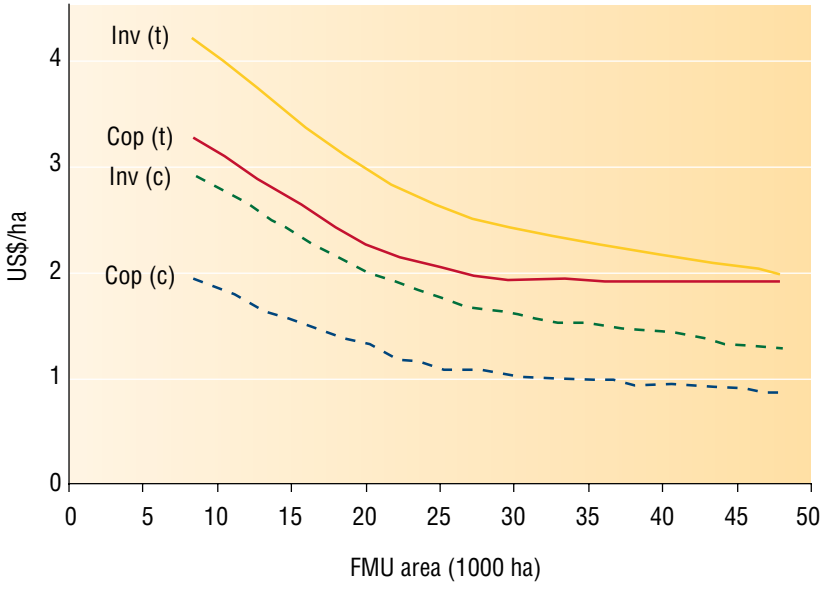
Chain-of-custody costs for sawmills

The costs of chain-of-custody certification in a typical small-scale sawmill were estimated to be about US$150 000 over a 5-year period (Table 2). For a sawmill with an annual capacity of 4500 m³ the additional cost of sawnwood would be US$6.61 per m³, US$1.13 per m³ of which would pay the direct costs of certification and the remainder would be spent on indirect

2 At present almost all certification in the country is carried out by SmartWood.

Bigger is better

Unit costs of certified sustainable forest management as a function of the size of FMU



Note: Inv = investment costs; Cop = operational costs; (t) = total costs; (c) = excluding the costs of forest management plan, annual operational plan and delimitation of the FMU.

Not cheap

Table 1. Cost of certified sustainable forest management by size of FMU, Peru (US$)

Component	Large (47 580 ha)		Medium (24 372 ha)		Small (8316 ha)	
	Initial investment	Annual operational	Initial investment	Annual operational	Initial investment	Annual operational
Forest and environmental management	60 380	27 620	39 680	16 710	20 550	6 620
Social aspects	6 000	3 370	3 500	2 070	3 000	1 570
Management systems	7 500	1 070	5 850	620	5 600	570
Subtotal	73 880	32 060	49 030	19 400	29 150	8 760
Direct costs of certification	18 900	6 400	14 900	6 400	5 580	2 060
Grand total	92 780	38 460	63 930	25 800	34 730	10 820
US$/ha	1.95	0.81	2.62	1.06	4.18	1.30

Note: Investment cost = first-year costs; operational cost applies during the subsequent four years.

Table 2. Costs of chain-of-custody certification of a sawmill* in Peru (US$)

Type of cost	1st year	Years 2–5	Total
Standard compliance implementation costs**	31 800	91 560	123 460
Direct costs of certification	6 200	19 200	25 400
Total	38 000	110 760	148 760

*Mill capacity = 4500 m³ per year.

**The main cost factor (73% of the total) is additional staff and organizational costs to meet the audit requirements of the chain-of-custody standard.

costs, mainly the additional staff that would be needed to record, monitor and report on stock movements, and improvements to information systems.

Apart from the 17 companies that currently have chain-of-custody certification[3], few sawmillers in Peru have the capacity to meet certification requirements. Nor does the sawmill case referred to above represent the average situation; in most cases, another 25% should be added to the cost of compliance. It is further estimated that a 10% premium on sale prices would be needed to make certification an economically viable proposition for Peruvian sawmills. Premiums lower than 10% tend to disappear in the supply chain without any benefit to the primary processor of rough-sawn lumber.

In Peru, certified FMUs or mills do not generally receive a premium for their certified products. In some minor cases, price increases of 5–10% have been obtained in EU markets, but increases have generally been less than 5% in the United States. The situation varies by country, the control of the supply chain, market segment and individual customer.

Community forests

The 16 certified community forests in Peru, which collectively cover 255 000 hectares, have all undergone a group certification process in which a 'forest manager' has acted as group organizer (private enterprises are employed as forest managers in around 70% of the total certified area). In combination with external aid, the group certification process has brought much-needed financial support and technical skills to bear and ensured markets for the products produced in certified community FMUs.

In addition to economic and employment benefits, community-forest certification has helped to protect FMUs from external illegal encroachment, which is common in many community forests. Moreover, indigenous communities have become better organized for forest production; this has had the effect of reducing conflicts related to the use of forests, which have been common in Peru in recent years. Strengthened community organization would also be necessary if communities were to enter the sawmilling business, and a successful enterprise would result in significantly expanded economic benefits for communities.

This experience in community-forest certification suggests that support programs for community forestry, at least in the case of Peru, would greatly benefit from strategies that include the implementation of sustainable forest management and its certification. Joint ventures between forest communities and forest industry or private investors with experience in the international marketing of timber could result in significant benefits for all parties.

Conclusion

The costs of complying with TPPs means that many forest product exports from Peru may be placed at a disadvantage in TPP markets, at least in the short- to medium-term. The government, private sector and external donors should make support for measures to allow compliance with evolving TPPs a priority.

Reference

Simula, M. 2010. *The Pros and Cons of Procurement: Developments and Progress in Timber-Procurement Policies as Tools for Promoting the Sustainable Management of Tropical Forests*. ITTO Technical Series #34. ITTO, Yokohama, Japan.

3 All certification figures given here are as of 2009.