Brazil's mission to achieve SFM

An ITTO mission to diagnose Brazil's efforts for achieving sustainable forest management recommends that ITTO focus its assistance on strategic interventions

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Management puzzle: Brazilian foresters contemplate the task of achieving sustainable forest management in the Tapajos National Forest in the lower Amazon. ITTO project PD 68/89 Rev. 1 (F) is supporting the implementation of a forest management plan there. *Photo: J. Leigh*

IN 2001, the Government of Brazil requested ITTO to send a diagnostic mission to assist it in achieving ITTO's Objective 2000. The mission that was subsequently dispatched to Brazil in 2001–02 aimed to: i) identify the most determining obstacles to the realisation of sustainable forest management (SFM) in the country; ii) regroup these constraints in order of importance; and iii) recommend a series of measures aimed at lifting these constraints, and estimate their cost where possible. This article summarises the mission's findings.

Critical factors for SFM

Permanent forest estate

The total forest area of Brazil covers 5.44 million km², which is 14% of the world's forests, 30% of the world's tropical forests and 61% of South America's forests. Brazil is a forest-rich country with 3.2 hectares of forest per inhabitant. However, 70% of Brazilians live in regions suffering the severe consequences of almost complete deforestation. This explains the high concern among Brazilians about deforestation and the strong influence on forest policy of environmental non-governmental organisations (NGOs).

In the Amazon, a total of 370 million hectares can potentially contribute to the permanent forest estate, mainly through legal reserves and indigenous lands (totalling 200 million hectares), although their current contribution to timber production is marginal. On the other hand, the share of conservation units designated for sustainable use—comprising national forests (FLONAS), environmental protection areas, extractive reserves, etc—is less than 10% of the total potential permanent forest estate, covering an area of 34 million hectares.

For timber production, the sustainable-use conservation units will be strategically highly important. However, current procedures for establishing sustainable use in FLONAS are not adequate and need special provisions guaranteeing long-term access to the resource and its sustainable management. The process of defining such procedures is being supported by a recently approved ITTO project (PD 142/02 REV. 1(F)).

Deforestation

The gross deforestation rate in the Amazon averages 2 million hectares per year, having varied between 1.1 and 3 million hectares over the past 20 years. The National Institute for Space Research (INPE) estimated that deforestation decreased from 1.82 million hectares in 2000 to 1.52 million hectares in 2001, a reduction of 13%. The main reasons for the apparent drop are thought to be:

- the improved effectiveness of control;
- the Law on Environmental Crimes (Law No 9605) passed in 1998 and its respective decree (No 3179) issued in 1999, which established much higher penalties for deforestation than in the past;
- the upholding of provisional measures to maintain the forest cover of legal reserves in dense forest areas at 80%; and
- the country's macroeconomic situation and limitations in access to credit for landowners.

Biological diversity

Brazil possesses the richest biodiversity in the world thanks largely to the Amazon forests. However, the potential contribution of biodiversity to the country's socioeconomic development is not yet realised, and adequate protection and sustainability of utilization are not yet in place. The current policies and programs are comprehensive and well designed but lack sufficient implementation.

Culture and customary rights

The maintenance of cultural values and customary rights in the Amazon is part of SFM. The demarcation of indigenous lands is a first step and needs to be followed by support for the sustainable livelihoods of indigenous communities.

Tourism and recreation

Tourism, particularly ecotourism, in the Amazon region has the potential to generate income for local people and revenue for forest resource conservation and management. This potential is still largely untapped and unevenly distributed. Environmental and social precautions should be adopted in ecotourism development to ensure compatibility with SFM.

Carbon emissions and sequestration

The Amazon Basin contains one of the planet's largest stocks of terrestrial carbon. Deforestation releases this stock and contributes almost half of Brazil's total carbon emissions.

The role of the Amazon forests in the global carbon cycle is a compelling reason for their conservation and sustainable use. It also underlines their global importance: broadening the scope of eligible activities for the Clean Development Mechanism of the Kyoto Protocol could mobilise significant additional international financial resources for forest conservation, management and use.

Protection and control

The alarmingly high estimated level of illegal logging (up to 75% of the total timber supply in the Amazon in the early 1990s) created awareness among government agencies of the need to step up control and enforcement efforts. Such efforts are hampered by the vastness of the area, the lack of transport infrastructure, and the large number of actors involved. Nevertheless, current estimates of the volume of illegal operations are significantly lower than those of the early 1990s.

The apparent progress being made in reducing illegality does not mean that sustainability has improved. The ready supply of timber from conversion areas does not have to carry the costs of SFM and therefore distorts timber markets, making it difficult for producers who comply with legal requirements to compete and undermining their efforts to move towards SFM.

Mahogany

The criminal structures and procedures related to the illegal logging of mahogany are a cause of particular concern. Negative publicity about mahogany logging is undermining the reputation of the whole sector and influencing the image of all Brazilian native timbers in export markets. The current arrangements for regulating the logging and trade of mahogany are not achieving the government's developmental and environmental objectives and are in urgent need for revision. An integrated strategy to address illegal operations should be adopted. Its elements could include:

- a continuation of the high political priority being given to effective control and the establishment of adequate cross-sectoral cooperation and alliances between actors;
- strengthened control of forest management planning, harvesting and transportation to increase the risk for illegal operations;
- improved information systems with georeferenced, up-to-date data on the licensing of land-clearing ('licençamento rural'), authorized forest management plans and annual operational plans (POAs), and transportation licences (ATPFs);
- constantly updated, increasing penalties to increase the direct costs of illegal operations;
- reduced costs of transaction for legal operations;
- improved efficiency in harvesting and forest management operations;
- the promotion of markets for legally/sustainably produced timber which has been duly verified/certified;
- coordinated and concerted efforts of the federal, state and municipal authorities; and
- increased public transparency on the extent, impacts and implications of the problem for the market and operators, including public information on culprits and their methods.

Flow of forest produce

The current plantation forest estate will be insufficient to meet Brazil's growing demand for industrial roundwood; natural and planted forests in the Amazon could therefore play a major role in supplying the country's future timber needs.

Annual timber production (industrial roundwood) in the Amazon is estimated to be around 28 million m^3, but only a small part of it (7.1%) is reported to come from areas under approved forest management plans. Most of the rest is harvested from forest areas authorised for land conversion.

The main constraints to increasing the volume of timber from sustainably managed forests are: i) low-cost competition from timber harvested in forest conversion areas; ii) costly and time-consuming bureaucratic requirements for management plans; iii) a lack of qualified labour and training facilities; and iv) a lack of technical assistance on how to switch from unsustainable logging to SFM.

Industry and markets

A recent survey of the problems and constraints affecting the Amazonian timber industry suggests that the key limitation in sawmilling is the availability of raw material. The supply chain is fragile, subject as it is to disturbance factors such as variable weather (sometimes limiting timber transport), frequent changes in regulations and institutional responsibilities, a lack of security in some operating areas, the risk of land occupation, pressure from NGOs, etc.

Mill recovery rates have been improving slowly but they still fall short of the potential offered by the quality of the raw material. This suggests that either the shortage of raw material is not yet strong enough or the cost high enough to force the industry to optimise its recovery rates, or that the industry does not have the skills to do this.

Only a few (large and medium-sized) companies have direct channels of marketing, while small mills sell through intermediaries or work as subcontractors for larger companies. The planning horizon of many small companies tends to be short; oftentimes their entire strategy is based on itinerant production exploiting the short-term opportunities offered by the agricultural frontier. Such companies contribute little to sustainable development because of their predatory behaviour and their lack of respect for the law. A restructuring process is inevitable and will require investment; it will also mean the closure of many unviable mills.

In general, the Amazonian timber industry has a serious shortage of modern management skills and knowledge of efficient technologies. Many existing production units are characterised by low productivity levels and high costs, inadequate funds even for financing the necessary working capital, poor working conditions, and environmental problems associated with waste disposal, the control of oils and lubricants, etc.

Despite their inherent problems, small-scale sawmills can still play an important role in the future development of the Amazonian timber industry. This would also be socioeconomically desirable, as small mills can add value to resources in places where larger investments are unviable, and they are less capital intensive than larger units. With improved management and limited investment, small sawmills could achieve profitability.

Breaking the boom-bust cycle

There are differing views on whether SFM can be economically and socially viable in Amazonian conditions. Most of the logging in the Amazon has been an economic complement to agriculture. Logging operations have been concentrated on 'pólos madereiros' (timber production centres) in frontier zones such as the Paragominas region of southern Pará, central Mato Grosso and Rondônia, and newly consolidated frontiers in northern Mato Grosso, western Pará and the lower Amazon River. After the initial boom in an area, the frontiers gradually face severe wood shortages followed by the inevitable outmigration of the industry to new areas.

This boom-bust vicious circle can only be broken if the industry adopts a long-term view based on a form of SFM that offers a satisfactory financial return. This is a critical challenge for public policies.

Benefit-sharing and other social issues

The equitable sharing of forest-based benefits is constrained by a number of political and structural factors, including land tenure and access to capital, information and knowledge.

The employment generated by the Amazonian timber industry is providing a lifeline for many local communities, particularly in pólos madereiros. The quality of employment is, however, far from satisfactory. The closer the industry is positioned to export markets and major urban markets in Brazil, the better jobs it can offer its workers. Productivity improvement will be crucial for the quality of employment.

Health and occupational safety in the commercial utilisation of the Amazon forests are major concerns for workers and rural dwellers. The industry lacks the awareness, skills and resources to make rapid progress in this area.

Interlinkages and priorities

The lack of progress towards SFM in the Amazon can be broken down into four main sub-problems:

- the abundant (but temporary) supply of low-cost timber from deforestation areas along the agricultural frontier, as well as from illegal logging;
- extensive degraded forests and lack of secondary forest management;
- the weak competitiveness of SFM; and
- the weak competitiveness of the tropical timber industry in general and of SFM-based industrial activities in particular.

Future strategic interventions can be grouped under three main fields:

- strengthening the policy and legal framework and improving existing instruments so that they are better geared towards promoting SFM and making it an economically viable proposition for landowners and forest managers;
- strengthening the competitiveness of SFM and the respective timber industry sector, particularly in the Amazon region and considering both export and domestic markets, by addressing the causes of high costs and inefficiency; and
- capacity-building among key actors and stakeholders involved or interested in SFM.

National forest program

The Brazilian government prepared and formally established a National Forest Program (NFP) in 2000, an overall objective of which is to promote sustainable forest development in a way that ensures the compatibility of resource use and the protection of ecosystems. More specifically, the NPF intends to:

- encourage the sustainable use of natural and planted forests;
- foster reforestation activities, notably on small rural properties;
- recover permanent preservation areas, legal reserves and altered areas;
- support traditional and indigenous populations that live in the forests;
- repress illegal deforestation and the illegal extraction of forest products; and
- prevent and contain forest fires and burnings.

Assessment

It is too early for a comprehensive evaluation of the Program's performance. Most of the actions taken so far have been studies, seminars, consultations and awareness-raising. It is now broadly understood that the NFP is not only a plan of, or for, the government, but is to be implemented jointly by all key actors.

More control: the diagnostic mission recommends tighter control of forest management planning, harvesting and transportation to increase the risk for illegal operations and to improve the image of legally harvested timber, such as this truckload of Brazilian mahogany. *Photo: J. Leigh*

Almost all the structural elements recommended by the Intergovernmental Forum on Forests (and its predecessor, the Intergovernmental Panel on Forests) can be identified in the Brazilian NFP. Brazil has succeeded in structuring and initialising an NFP process that:

- is fully under Brazilian leadership;
- outlines the broad spectrum of forest-related policies, facilitating the orientation of actors and the negotiation of their roles and responsibilities;
- provides a framework for international forest-related cooperation; and
- focuses on the broad participation of stakeholders.

The Brazilian NFP could be strengthened by:

- the drafting of a **National Forest Statement**, through a participatory process, to express the federal government's commitment to SFM;
- improving **coordination and participatory mechanisms**, including in conflict resolution, to broaden and strengthen stakeholder ownership and engagement in the NFP process; and
- establishing a comprehensive and effective **monitoring system** for the NFP to serve as a key management tool and to generate information for stakeholders on achievements and lessons learned.

Future ITTO support

Potential areas of future support to Brazil by ITTO were identified based on: the problem analysis; priority areas of intervention of the NFP; stakeholder views; and ITTO's comparative advantages and consideration of the support available from other sources. The following strategic areas of intervention have been suggested for future support, with a geographic focus given to Amazonian forests:

- support to NFP implementation and policy development, in particular to generate new information on and a broad understanding of viable options for adjusting and complementing the existing policy and legal framework for SFM;
- developing human resources in SFM with the aim of creating a critical mass of trainers, trained staff and workers with the skills needed to implement SFM;
- the rehabilitation of degraded lands;
- strengthening the control system of forest management and wood flows; and
- strengthening the competitiveness of the tropical timber industry, such as through an improved capacity for certification, improved management systems, improved market transparency, and export market development.

The thematic focus of the support program should be on strengthening the enabling conditions for SFM and capacity-building in the broad sense of these two terms. The support program has been prepared in a way that would allow its implementation through several individual projects and its scope should be periodically reviewed and revised.

In the long term, the total support from ITTO would need to be in the range of US$15–20 million. A less ambitious funding level could lead to a fragmentation of efforts and limited impacts.

This is a brief summary of the mission's report. The complete document, which includes details of potential ITTO support, can be found at www.itto.or.jp/inside/inside_ITTO.html, or obtained from: ITTO Information Officer (see contact details on page 2).

Reports of similar missions, to Central African Republic, Congo and Indonesia, are available from the same sources.