

# CENTRAL AFRICAN REGIONAL PROGRAM FOR THE ENVIRONMENT

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Issue Brief #18

## #18 — Sustainable Timber Challenges and Potential Solutions

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### Key Concepts

- As timber companies are often both de jure and de facto regulators of resource use over the majority of the forest estate in Central Africa, attempts to "green" logging practices have the potential to generate significant conservation payoffs.
- Making concession renewal conditional on forest certification is a powerful, no-cost tool for governments to promote better management of logging concessions.
- Forest certification is not a blueprint, applied without modification to all logging concessions; rather, it is a process of negotiation and compromise, designed to optimize

the social, economic and ecological benefits that can accrue from forests.

- The process of sustainable forest management certification not only establishes minimum standards needed to monitor performance and compliance, it explicitly characterizes what we are willing to forgo to generate a sustainable stream of specific values from the forest.

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## What Is Sustainable Forest Management?

There is growing acceptance that forest resources should be managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations. Though crop and livestock production continues to be the most significant cause of forest degradation and loss, concerns about sustainable forest management (SFM) have focused primarily on logging that has the most widespread impacts on the forest. Increasingly consumers are demanding that their purchases of wood products will not contribute to forest destruction but rather help to secure forest resources for the future. In response to these demands, international organizations like the Forest Stewardship Council (FSC) have established forest management principles and criteria, and a process for concession certification. The process is designed to ensure that wood production is sustainable and that logging practices (1) comply with national and international laws, (2) do not infringe on indigenous people's rights, (3) respect local community concerns and worker's rights, (4) help maintain the forest's multiple values, (5) minimize environmental impacts, and (6) set aside forest patches of high conservation value. Globally, over 18 million ha of timber production forests are FSC-certified.

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## The Role of SFM Criteria and Indicators

The Montreal Process, Forest Stewardship Council, and the Center for International Forestry Research have established economic, social and ecological principles, criteria and indicators to guide development of national and site-level plans to conserve and sustainably manage forests. The challenge that all face is that most uses of forest resources tend to undermine or preclude other uses (e.g., logging and nature tourism are largely incompatible in the same time and space), and though criteria may be exhaustive they are seldom mutually exclusive (e.g., practices that satisfy ecological criteria may not be economically viable or socially desirable). Sustainable forest management is, consequently, a relative concept that in practice will be based on the perceived values of, and desired benefits from, a given area of forest. Most important, SFM is a process of negotiation and compromise, designed to optimize the social, economic and ecological benefits that can accrue from forests. The use of criteria, indicators and thresholds is an essential component of the SFM process, because it not only establishes minimum standards needed to monitor compliance, it explicitly characterizes what we are willing to forgo to generate a sustainable stream of specific values from the forest.

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## Challenges to SFM in Central Africa

Promoting SFM in Central Africa faces many challenges because of perverse policies, inadequate law enforcement, and the nature of biologically diverse old-growth forests. Unlogged forests in Central Africa contain valuable timber trees that are often over 400 years old. As few would argue for a 400-year harvesting cycle, logging in the region is likely to follow a two step process: (1) low impact harvesting of old-growth trees and (2) sustainable production of wood products within logged-over forests. Though SFM principles may be applied in both cases, the former is a one-time "gift of nature" and is clearly not sustainable.

An example of perverse policies in the forest sector is the log export ban in Cameroon that was made effective January 1999. This policy led to a boom in mill construction, which on the surface may appear a positive outcome in that it would increase the level of employment in the logging sector, and would add value to timber. The latter, at least, has not been the case. By 2001, annual processing capacity in Cameroon will have reached 3 million m<sup>3</sup>. The official estimate of sustainable timber production is 3.3 million m<sup>3</sup>, assuming a yield of 15 m<sup>3</sup>/ha. But the industry claims that only 10 m<sup>3</sup>/ha is possible, a figure confirmed by API-Dimako, the French research project. This lower estimate translates into a maximum sustainable timber production of 2.2 million m<sup>3</sup> - a level that is almost 30% less than the installed processing capacity. Overcapacity in timber processing in Indonesia constituted a massive incentive to harvest as much timber as quickly as possible, as sawmills are only economic if they are running close to full-capacity. Processing overcapacity in Cameroon risks an equivalent "green rush".

Moreover, policies that mandated concessions to transform a portion of the logs as a tool to increase jobs have merely resulted in the establishment of a large number of highly inefficient sawmills that add little or no value to the logging section. For example, if a sawmill requires 10 m<sup>3</sup> to produce 3 m<sup>3</sup> of sawnwood worth \$450/m<sup>3</sup> for a total of \$1,350, and the wood could have been sold as unprocessed logs for \$200/ m<sup>3</sup> for a total of \$2,000, this represents a negative value-added of \$650 or \$65/m<sup>3</sup>. Positive value-added will only be achieved if present processing efficiency doubles and/or higher value products such as plywood are produced.

High domestic log demand provoked by the log export ban, delays in concession allocation following the failure of the 1997 auction, and the fact that logging stops during the rainy season because of the poor quality road network these factors have kept domestic log prices high. In the absence of a sufficient control in the forest, high demand and reduced legal supply have resulted in widespread illegal logging. In one 2,500 ha vente de coupe, over 12,000 ha were actually logged. Policies that favor inefficient processing, such as taxing processed wood leaving the mill rather than logs entering the mill, also work against SFM.

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## Disincentives to Sustainable Timber Production Planning

Contrary to popular perception, API-Dimako has shown that preparing an SFM plan is cheap at U.S. \$5/ha. This is less than 1% of the market value of logs. Yet, implementing SFM is financially unattractive, because mills are starved of logs (and thus insensitive to sustainability considerations), and because illegal logging undermines any attempt at better management. As the perceived benefits are minimal, encouraging companies to adopt SFM requires incentives (e.g., policies that encourage efficient use of the raw material) and regulations (e.g., dissuasive sanctions in the case of unnecessary forest damage). Policy sequencing is also important. If processing capacity is allowed to expand irrespective of the sustainable yield, concern over the future state of the resource is dwarfed by the immediate need to feed the mills.

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## **Present Logging Practices Do Not Reflect the Biology of High Value Tree Species**

SFM also faces technical challenges associated with the low growth rate of many high-value species, and the need to create large clearings for regeneration to occur. Because of high transportation costs and low processing value-added, current harvesting is very selective, with insufficient canopy opening to allow the regeneration of commercial species. The need for large clearings is supported by several facts. The bell curve diameter-size distribution of many species suggests that they are not regenerating within mature stands, and that regeneration was more rapid in the past, possibly due to widespread human disturbance. In fact, carbon dating and archeological evidence show that much of this "primary" forest was under agricultural use hundreds of years ago. The current abundance of medium-and large-size commercial species is attributable to rapid forest colonization after human population levels collapsed.

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## **Key SFM Principles for Central Africa**

To address the specific challenges of sustainable timber production in Central Africa, it may make sense to broaden SFM to include the following principles:

- First, harvesting and processing should be as economically efficient as possible. The purpose is not only to extract the maximum value per ha of forest, but also to stimulate economic and technical innovations that might have spillover effects in other sectors. According to one mill owner, average mill efficiency could easily rise from 30 to 40 %, and by investing in dryers and finishers, it could reach 65 %. Similar opportunities exist in the forest, where secondary species such as frake and tali could be incorporated into plywood.
- Second, the forest should be left in as good condition as possible. This may require the creation of larger openings and/or enrichment planting and/or implementation of reduced-impact logging. The latter has been shown to be profitable in Brazil, and IFIA, the Paris-based industry association, is interested in testing reduced-impact logging in Central Africa.

- Third, an area tax should be set that encourages active loggers to concentrate production, thereby reducing pressure on the remaining forest where other environmental services (e.g., NTFP, carbon storage, biodiversity) would be maintained.
  - Finally, a portion of forest taxes should be invested in the research, training, and monitoring needed to manage the forest for a long-term revenue stream.
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## Moving Toward SFM in Central Africa

Central African governments have currently neither the capacity nor the credibility to control forest management. So what options are available to encourage better management of logging concessions?

One approach, which Bolivia has adopted, is to make concession renewal conditional on forest certification. Concession renewal has been shown to be a powerful incentive that is easier to implement than performance bonds. Companies can choose to have their concessions certified by the government or by independent groups (e.g., SGS, Smartwood). Most favor the latter, because they are cheaper, quicker, and more credible. In Bolivia, the industry has adapted quickly to the new law: six forest management plans have been prepared and 1 million ha of forest will be certified by the end of 2000, making Bolivia number four in the world for certified wood after Sweden, Poland and the United States.

Since concession cancellation implies less tax revenue, governments would be under pressure to approve compliance. Tying concession renewal to certification, rather than promoting voluntary compliance, addresses the fact that a large and growing portion of Central Africa's wood exports go to non-certified markets in Asia. By requiring that all concessions in a country be certified, a government can give a competitive advantage to companies prepared to invest in better forest management. This should also apply to all countries in the region to avoid the possibility of cheaper and less sustainable practices in neighboring countries.

Tying concession renewal to certification should improve forest management inside the concession. But it will not address illegal logging outside the concession. It is therefore critical to implement mobile patrols, spot checks, satellite-based monitoring systems, and other measures to detect and suppress logging outside of approved concessions. Prevention of illegal logging is particularly important in Cameroon as higher area taxes may increase the profitability of illegal logging and accelerate forest degradation.

If this strategy were applied across the board, it would effectively exclude local businesses that cannot afford to prepare and implement forest management plans. Some governments have sought to promote local businesses by reserving part of the forest estate for their use. But protection from foreign competition has emphatically failed to improve the quality of their operations. Identifying ways to ensure that local businesses have access to financial and technical support, is a key to preventing well capitalized foreign firms from excluding them from the logging sector.



Tree cutting in northern Congo

<b>Table 1: Montreal Process Criteria and Indicators</b>	
<b>Montreal Process Criteria</b>	<b>No. of Indicators</b>
1. Conservation of biological diversity	9
2. Maintenance of productive capacity of forest ecosystem	5
3. Maintenance of forest ecosystem health	3
4. Conservation and maintenance of soil and water resources	8
5. Maintenance of forest contribution to global carbon cycles	3
6. Maintenance and enhancement of long-term multiple socioeconomic benefits to meet the needs of society	19
7. Legal, institutional and economic framework for forest conservation and sustainable management	20

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## **For More Information**

### **Technical Reports**

Mergen, F., and J. R. Vincent. 1987. *Natural management of tropical moist forests: Sylvicultural and management prospects of sustained utilization*. New Haven: Yale University, School of Forestry and Environmental Studies.

Putz, F. E., K. H. Redford, J. G. Robinson, R. Fimbel, and G. M. Blate. 2000. *Biodiversity conservation in the context of tropical forest management*. Washington, D.C.: The World Bank and Wildlife Conservation Society.

Seymour, F. J., and N. K. Dubash. 2000. *The right conditions: The World Bank, structural adjustment, and forest policy reform*. Washington, D.C.: World Resources Institute.

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## **CARPE...What Is It?**

### **Central African Regional Program for the Environment (CARPE)**

Launched in 1995, the *Central African Regional Program for the Environment (CARPE)* engages African NGOs, research and educational organizations, private-sector consultants, and government agencies in evaluating threats to forest integrity in the Congo Basin and in identifying opportunities to sustainably manage the region's vast forests for the benefit of Africans and the world. CARPE's members are helping to provide African decision makers with the information they will need to make well-informed choices about forest use in the future. BSP has assumed the role of "air traffic controller" for CARPE's African partners. Participating countries include Burundi, Cameroon, Central African Republic, Democratic Republic of Congo, Equatorial Guinea, Gabon, Republic of Congo, Rwanda, and São Tomé e Príncipe.

**Web site:**

<http://carpe.umd.edu>

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