Developing a sustainable trade

An ITTO project in the Brazilian Amazon succeeded in its aim of increasing trade in sustainably produced timber, but it could have done better

by
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ITTO PROJECT PD 7/94 REV.3 (M, I): 'Information and technical assistance for production and trade of tropical timber' was submitted to ITTO by the Government of Brazil in 1994 and, after revisions, was approved and financed in 1997. It set out to increase the trade in sustainably produced timber between companies in Brazil and consumers in selected countries, thereby contributing to socioeconomic development in the Amazonian state of Para. Actual implementation started in January 1999 and was completed in June 2002.

This article summarizes the findings of an ex-post evaluation of the project that was carried out by the author in 2005.

Basic methodology

The project was implemented by the Timber Industries Association of Belem, Ananindeua and Marituba (SINDIMAD) in cooperation with the Brazilian Institute for the Environment (IBAMA). ITTO's financial contribution was US$1.03 million, while the contribution of the Government of Brazil was US$127 000.

On the basis of the project document, SINDIMAD prepared a work plan, which it submitted to ITTO in June 1998. Following feedback from the ITTO Secretariat, the work plan was revised to include a detailed schedule of activities, the identification of responsibilities, and annual budgets. Tenders were then called for a company to implement the planned activities and the company STCP (*Engenharia de Projetos Ltda*) was eventually selected.

Selection of participating companies

The project developed basic criteria for the evaluation, classification and selection of five companies that would participate in project activities. Companies should:

- be affiliated with SINDIMAD and/or the Association of Industrial Timber Exporters of Para (*Associação das Indústrias Exportadoras de Madeiras do Estado do Pará*—AIMEX);
- be an exporter of sawnwood;
- have a sustainable forest management plan approved by IBAMA with a minimum duration of three years;
- be willing to implement the recommendations of the project team;
- provide logistical support during field data-gathering activities; and
- join the project through a commitment agreement.

Technical assistance

Table 1: Number of participants in technical assistance and training

COMPANY	Management & control system	Band saw doctoring & sharpening	Maintenance & operation of wood-drying kilns	Forest operations	TOTAL
CEMEX	–	4	3	28	35
CIKEL	–	5	9	22	36
Juruá	–	6	2	–	8
MADESA	3	6	5	22	36
Porto de Moz	5	9	4	–	18
TOTAL	**8**	**30**	**23**	**72**	**133**

The companies eventually selected to participate in the project were: CIKEL—*Brasil Verde Ltda*; CEMEX—*Commercial Madeiras Exportaçao SA*; MADESA—*Madeiras Santarém Ltda*; *Porto de Moz Ltda*; and *Juruá Forestal Ltda*.

Technical assistance and training

STCP designed and applied a technical assistance and training program that was implemented by the five selected companies in the areas of management planning, the identification of species, low impact logging, log yards, industrial technology, wood drying, value-added processing equipment, the development of new products, and international trade.

Each thematic area was developed on the basis of a business assessment, and the contents and field and industrial work methodologies were developed after consultations with each of the five companies. *Table 1* shows the training courses that were held, the technical assistance provided and the number of participants from each company. *Table 2* shows the studies undertaken to support industrial processing technologies and the development of innovative approaches for four of the five companies.

Marketing

STCP produced a website and newsletters on the industry and markets, including statistics on the trade of timber through the ports of Belem, Santarem and Breves. Trade missions were undertaken to key markets. A mission to the US coincided with the 44th International Wood Products Association Conference which was held in Tucson, Arizona, in April 2000. Four representatives of each timber company attended this event as well as a representative of SINDIMAD and a market consultant. As a result of the mission, CEMEX sold 980 m^3 of kiln-dried surfaced-four-sides (S4S) flooring and decking products with a total value of US$500 000. A mission was also undertaken to Europe in May 2002. Finally, the project convened an international conference on tropical timber in Belem in October 2002, with the participation of 252 timber trade executives and forest management experts from eleven countries. The conference provided an excellent opportunity to discuss achievements and lessons learned through the project.

Impacts on participating companies

CEMEX

CEMEX operates in the Tapajós National Forest (see *TFU* 15/4) and in 14 000 hectares of community forests. The project assisted it as it reorganized its personnel and carried out operational planning, road opening and tree-marking activities.

At the industry level, the company was able to improve its bandsaw sharpening techniques, tune bandsaw pulleys and lower the angles to reduce undulations, thereby increasing efficiency and reducing waste. It improved its sawmilling process by using tooth locks and saw-setting and by tensioning and sharpening blades.

The company did not get involved in the development of new species or value-added products, nor did it participate in marketing aspects of the project.

From 1980 to 1994, 90% of the company's work involved sawnwood production, but it has now moved to the production of finished products, particularly flooring, decking and sheathing boards (tongued and grooved). Currently, the value-added given to flooring involves the application of seven coats of lacquer using Italian technology. Previously, a total of 15 000 m³/year was produced in four 6-hour shifts. Today the company only works at 33% of this capacity, producing 5000 m³/year, but the price of these value-added products has risen to US$1100–1600/m³ free on board (FOB). The company's main markets are the US and Canada.

CIKEL

This company achieved FSC certification in 2001 for 240 000 hectares of its forests. The cutting cycle is 25 years and the yield 20–25 m³/hectare, with a transport distance of 60–100 km along its privately owned road. Timber is sawn on-site in the forest.

Certification has produced a 20–30% increase in the price obtained by the company for sawnwood products in the markets of Belgium and the Netherlands, but certified timber does not command a price premium in the UK or the US. About 90% of its sawnwood is exported to Belgium and the Netherlands, with the remaining 10% going to the US.

Juruá Madeiras Ltda

This company was certified by the FSC between 1999 and 2003 as a result of the implementation of another ITTO-financed project. Today, 60% of the timber it exports is certified. The company owns 42 000 hectares of forest under a 25-year management plan; they yield an average of 22 m³/hectare. The company works with 50 species, 25 of which are exported as decking, flooring and kiln-dried panels. About 90% of its production is processed timber with an average FOB price of US$666/m³.

MADESA

This company, which has a 50 000-hectare forest, benefited a great deal from the project in terms of forest management. Felling techniques were greatly improved, and the practical knowledge transferred in planning, harvesting and technical field assistance was well targeted.

The company works with 17 species, including ipe, jatoba, masaranduba and angelim vermelho. It was previously producing 45 000 m³ of timber per year, but under the sustainable forest management regime this has been cut to 25 000 m³/year, 80% of which is processed into products such as kiln-dried S4S boards and decking.

Porto de Moz Ltda

This company started forestry operations in 1976; it has 205 000 hectares of forest and harvests 19 800 m³/year using 8–9 species. It previously harvested an average 22 m³/hectare, but this has increased to 30–42 m³/hectare as new species have been marketed, with the net result of increasing profitability. The company produces sawnwood, decking and flooring, which it exports to the US, Europe and the Caribbean.

The company received training in road planning and building techniques. It incorporated a greater number of species into its production process and prepared the technical documents required to obtain approval for its management plans.

At the industrial level, the company received assistance in sawmilling and wood-drying techniques, and production controls and cost structures were improved; it also addressed technological problems associated mainly with *Vochisia* species. In 2005, the company was selling decking and flooring for US$850/m³ and US$1200/m³, respectively.

Analysis

The selection process for participating companies was adequate because it gave favourable consideration to those companies that had the best integration of forest management, value-added processing industries and presence in international markets. However, a greater

Added intelligence

Table 2: Studies undertaken in four of the five companies

COMPANY	PROJECT
CEMEX	Study on the production of edge glue panels Data for the production of activated carbon Study on the generation of energy from biomass gasification Data on thermoelectricity costs and investments
CIKEL	Study on the economic viability of thermoelectricity Technical data for the production of activated carbon Technical information for the 3-ply flooring production unit
Juruá	Basic sawmilling project Study on the generation of energy from biomass gasification Data on thermoelectricity costs and investments Information on support programs for tourism and financing sources
Porto de Moz	Basic project for the implementation of a new sawmill Study on the generation of energy from biomass gasification

effort should have been made to ensure the participation of a larger number of industrial companies in the project's training program.

The capacity of SINDIMAD to implement the project was hindered by a lack of integration among the different business groups and because it did not clearly define a wider participation strategy. Many companies chose to keep away from the project.

Because the selected companies did not have direct co-financing obligations, they did not show great interest in being active partners in project implementation and were rather the recipients of technical assistance, training and the development of studies. Therefore, the project should not be replicated in the future without major modifications (see below).

Impacts and effects

The overall project objective was achieved, as more than 30 000 m^3 of timber were traded, a significant percentage of which was certified by the FSC as from responsibly managed forests.

However, SINDIMAD did not manage to secure the wide support of its membership and therefore the project beneficiaries were limited to the companies selected. The project was unable to reach a greater number of companies, thus limiting the impact of the technical assistance and training services provided.

Market information should have been more detailed and more and better business rounds should have been organized. There was a lack of interest among timber importers in participating in the project, thus losing a valuable opportunity to consolidate the trade of lesser-known species in international markets.

The project did not manage to implement a market information system for the identification of business opportunities.

The training and technical assistance program developed by STCP was well designed and implemented. The program directly benefited the five selected companies in the areas of: management plans, identification of species, low impact logging, log yards, industrial technology, timber drying, value-added processing equipment, the development of new products, and international trade.

The studies undertaken on the development of technologies for value-added timber products, the generation of energy from biomass, and production costs were all relevant and helped improve business efficiency.

Project design

The original project design was not well conceived, as the expected project outputs had a very wide scope in relation to forest management, the timber industry and the promotion of international trade, and also because the initial emphasis was on mahogany (later changed to a range of lesser-known species). The project should have focused on achieving the technological development of industrial companies associated with SINDIMAD by providing direct technical assistance to the industry, promoting higher-value-added products, and conducting business meetings between producers and buyers directly linked to the international trade. The project should have ensured the involvement of a greater number of companies, even those not participating directly in the forest management activities of the selected companies.

The selected timber companies did not contribute significantly to the costs associated with the project. A greater financial commitment from participating companies would have ensured greater 'buy-in' from them and a firm and steady commitment to achieving the project's goals.

The project's logical framework should have established verifiable indicators more clearly and included improved means of verification and assumptions. Moreover, the project should have established closer contacts with other ITTO-supported sustainable forest management projects implemented in the region to avoid the duplication of effort. In particular, it could have better integrated the production chains of timber from well-managed forests that was being exported to international markets.

What could have been done better

The project should have provided more technical assistance and less personnel training, as this would have been more suitable for the development of production activities at the managerial, supervisor and machine-operator levels. The project did not establish a sustainability strategy, particularly in the areas of marketing, technical assistance and training.

In addition to its work plan, the project should have developed an internal methodology for the follow-up and evaluation of the technological and trade promotion services provided to producers.

An integrated business rounds strategy should have been developed to boost the share of timber from Para in international markets.

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