25 success stories

Illustrating ITTO's 25-year quest to sustain tropical forests




INTERNATIONAL TROPICAL TIMBER ORGANIZATION

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Twenty-five success stories

Illustrating ITTO's 25-year quest to sustain tropical forests

The International Tropical Timber Organization (ITTO) is an intergovernmental organization promoting the conservation and sustainable management, use and trade of tropical forest resources. Its 60 members represent about 85% of the world's tropical forests and over 90% of the global tropical timber trade. ITTO develops internationally agreed policy documents to promote sustainable forest management and forest conservation and assists tropical member countries to adapt such policies to local circumstances and to implement them in the field through projects. In addition, ITTO collects, analyses and disseminates data on the production and trade of tropical timber and funds projects and other actions aimed at developing industries at both community and industrial scales. All projects are funded by voluntary contributions, mostly from consumer member countries. Since it became operational in 1987, ITTO has funded over 1000 projects, pre-projects and activities valued at around US$350 million. The major donors are the governments of Japan, Switzerland, the United States, Norway and the European Union.

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Main photo: Nicolás Kingman. Insets, from left: Othniel Yila, Rubén Guevara/ITTO, Polycarpe Masupa/ITTO, Sarawak Forestry Department/ITTO.

Back cover photo: Twenty-five children celebrate the ITTO success story. Photo: Sarawak Forestry Department/ITTO

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Message from the Executive Director

ITTO was established in 1986 under the first International Tropical Timber Agreement (ITTA).[1] Since then it has always been at the forefront of international efforts to encourage the sustainable use and conservation of tropical forests.

ITTO develops international policies on the sustainable management, use and trade of tropical forest resources. Importantly, it also funds projects and activities that are implemented in ITTO member countries by governments, civil-society organizations and the private sector. It is able, therefore, to help its member countries turn good policies into action.

This publication marks ITTO's 25th anniversary, which by coincidence but quite fittingly falls during the United Nations-mandated International Year of Forests, by presenting 25 success stories. By no means are these the full extent of ITTO's success, and nor are they necessarily better than many other of the Organization's projects and activities. They are intended to show the breadth of ITTO's work and to tell, in a simple way, the Organization's 25-year story.

This story is, I believe, one of considerable success. ITTO has been influential out of all proportion to its size. It has developed international norms that are now reflected in many national policies and practices. It has brought more transparency to the trade, and it has advocated and encouraged community development and reforms in governance and forest law enforcement. It has tackled issues that have been controversial and potentially divisive, and it has done so effectively by providing an environment in which countries can work constructively with each other to resolve differences amicably.

ITTO's enviable reputation in the international forest policy community has not been gained through bluster or grandstanding. It has been gained from the commitment, hard work and inspired thinking of its

members and the Organization's ability to put policy principles into practice at the ground level. Here I pay tribute to, and warmly thank, the many partners with which ITTO has worked, including the organizations that have implemented ITTO's projects so effectively and the donors who have made it all possible.

One of the striking things about the success stories presented in this document is how much has been achieved at such a low cost. Projects with budgets often well under US$1 million have brought about far-reaching changes, not just in the project area but also more widely. Undoubtedly one reason for this is the dedication, enthusiasm and innovative thinking of project implementers. Another is empowerment: ITTO projects have been good at unlocking the potential of forest-based communities and other stakeholders. Many of the lessons learned from these success stories have been incorporated in the design of ITTO's pilot thematic programmes, a new funding window for member countries through which ITTO's successes should continue into a second quarter-century.

The success stories presented in this document show that ITTO can be, and is, an effective catalyst for sustainable development. It is my hope that member countries continue to support ITTO in its mission to assist people to develop their local economies by using their forest resources efficiently and sustainably.

Emmanuel Ze Meka

1 The ITTA was first agreed in 1983. When that agreement expired it was succeeded by a second negotiated agreement in 1994, which in turn is due to be succeeded by a third (2006) agreement.

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When ITTO came into being in 1986 there were virtually no international policies on forest management, tropical or otherwise. For 25 years the Organization has been working to fill this void, playing a catalytic role with its far-reaching policy development agenda.

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In 1989 the Government of Guyana designated 372 000 hectares of near-pristine rainforest as the Iwokrama Forest with the aim of demonstrating SFM for both conservation and timber production. ITTO's interventions have been crucial in bringing this vision to reality.

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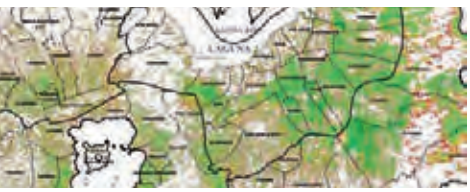

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An ITTO project in the Brazilian Amazon has greatly improved the skills available for high-quality reduced impact logging and raised public awareness about the importance of good forest management.

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An ITTO project helped Thailand's rubberwood industry to get organized and to improve its collaboration and productivity.

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One of the keys to improving forest management in Central Africa is growing the skills base. Two ITTO projects are making a substantial contribution to this by supporting members of the Forestry Schools in Central Africa Network.

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An ITTO project in Colombia's San Nicolás valleys has helped to change the culture of decision-making and is providing a model for how communities can gain access to funding for climate-change mitigation and other ecosystem services.

1 Assessing progress towards SFM

When ITTO came into being in 1986 there were virtually no international policies on forest management, tropical or otherwise. For 25 years the Organization has been working to fill this void, playing a catalytic role with its far-reaching policy development agenda.

Arguably ITTO's most important policy work has been to develop criteria and indicators (C&I) for monitoring, assessing and reporting on the implementation of sustainable forest management (SFM). ITTO created the world's first set of seven SFM criteria, specifically for tropical forests, in 1992. Since then, the ITTO C&I have continued to be refined and improved, and the most recent version was published in 2005.

An ITTO C&I training field trip to the Maluku-Siforco landing, Congo River, Democratic Republic of the Congo. *Photo: Juergen Blaser/ITTO*

Eight regional processes, as well as various certification initiatives, have developed C&I since the early 1990s. In almost all cases they have used the ITTO C&I as a starting point, reference document or inspiration.

By identifying the main elements of SFM, C&I provide a means of assessing progress towards it. Many ITTO producer member countries have adopted the ITTO C&I or developed their own sets based on the ITTO C&I. They use them in monitoring, assessing and reporting on forest management at the national level and for fulfilling their international reporting obligations.

A field trip during ITTO C&I training, Liberia. *Photo: Juergen Blaser/ITTO*

For example, most Central and West African countries have adopted *Principles, criteria and indicators for the sustainable management of African natural tropical forests* (the 'ATO/ITTO PCI'), a regional set of C&I developed jointly by ITTO and the African Timber Organization and published in 2004. In Gabon the ATO/ITTO PCI have been harmonized with the standards set by the global Program for Endorsement of Forest Certification Schemes. In Ghana, the ITTO C&I and the ATO/ITTO PCI have been used in the Forestry Commission's forest management manuals and guidelines, providing a cornerstone for natural forest management there.

ITTO has provided considerable training to assist in the uptake of C&I, both for national-level monitoring, assessment and reporting and in forest operations on the ground. For example, a joint ITTO/ATO project provided training to over 500 government officials, company executives, forest operators and community leaders in all African ITTO producer member countries on applying the ATO/ITTO PCI in the field and using them as a basis for national-level monitoring, assessment and reporting. ITTO also funds and coordinates regional and country-level training workshops in ITTO producer member countries in Asia and the Pacific and Latin America and the Caribbean to increase the uptake of the ITTO C&I in forest management.

A field trip during ITTO C&I training, Venezuela. *Photo: Juergen Blaser/ITTO*

Bringing about change in policies and field practice is a long and inevitably arduous process, but it is happening. Evidence for this can be found in ITTO surveys of the status of forest management in ITTO producer member countries conducted in 1988, 2005 and 2010, the latter two of which were based on the ITTO C&I.

The 2010 survey found a considerable increase in both the number of countries submitting data and the quality of data submitted. Overall, a comparison of the three surveys shows that forest policies in the tropics are evolving in line with ITTO's policy development work and that forest management is improving, with the area of forest under SFM increasing from almost zero in 1988 to 36 million hectares in 2005 and 53 million hectares in 2010.

Most of the improvement in forest management in ITTO producer member countries is due, no doubt, to the efforts of the countries themselves and the hundreds of thousands or millions of forest stakeholders who are striving to improve both forest management and their forest-based livelihoods. Nevertheless, ITTO's work to develop globally applicable C&I and to survey forest management on this basis is also having an effect. For example, Jose Carlos Fernandez, the Head of International Affairs in the Mexican National Forestry Commission, says the survey has value for his country because it:

- Provides international accountability on progress towards SFM.
- Helps to stimulate cooperation between countries and trigger policy innovation.
- Promotes common approaches, such as towards the role of tropical forests in climate change.
- Provides an incentive to improve performance and to address outstanding challenges.

A working-group meeting during ITTO C&I training, Democratic Republic of the Congo. *Photo: Juergen Blaser/ITTO*

"C&I are perhaps the greatest innovation to emerge in the context of the paradigm shift from sustained-yield forestry to managing forests as ecosystems for multiple economic, social and environmental benefits. Based on ITTO's pioneering work in the early 1990s, C&I have made it possible for stakeholders worldwide to understand, describe and measure SFM and laid the foundation for forest certification, a powerful market tool in today's many green consumer markets. Forest-related C&I have served as models for elaborating indicators for water, rangelands, commodities and mining. They form the basis of current efforts by the International Energy Agency and the Food and Agriculture Organization of the United Nations to develop standards for woodfuel production, and they have the potential to foster REDD+ carbon accounting systems that recognize a wide range of forest values, not just carbon storage. Inspired by ITTO's early leadership, the impact of C&I has been far-reaching."

Stephanie Caswell, former US State Department official, key player in the ITTO and Montreal C&I processes and current ITTO reviewer of the impacts of C&I worldwide

"WWF-Carpo, through it's active participation in Phase II of the ITTO/ATO project 'Promoting the sustainable management of African forests', recognizes its relevance and the results that have been achieved, particularly in respect of the development of principles, criteria and indicators adapted to specific contexts and training in the use of these tools to conduct forest audits. This initiative ... opens the possibility of a genuine collaboration in the context of the third phase of the project, including activities relating to the organization of pilot forest audits using the tools and skills from the project."

Suparna Biswas, National Director, World Wide Fund for Nature (WWF), Gabon

C&I trainees visit a furniture-making factory in the Petén, Guatemala. *Photo: Juergen Blaser / ITTO*

2 Iwokrama Forest

In 1989 the Government of Guyana designated 372 000 hectares of near-pristine rainforest as the Iwokrama Forest with the aim of demonstrating SFM for both conservation and timber production. A research station was constructed in 1994, and in 1996 the government passed the Iwokrama Act, an important aspect of which was that the indigenous communities inside and around the forest retained their traditional user rights.

An Amerindian man paddles his canoe in the Iwokrama Forest. *Photo: Iwokrama*

Although ITTO is just one of many partners involved in the Iwokrama Forest, its interventions, in two project phases, have been crucial. The first phase, which was approved by the International Tropical Timber Council in 1997, assisted in the participatory formulation of a management plan for the forest. The second helped to put the management plan into action in a way that generated revenue, provided local employment and training, and demonstrated the potential for delivering lasting ecological, economic and social benefits to local, national and international communities.

The Amerindian communities living in and around the Iwokrama Forest participated in decisions related to the two projects and were beneficiaries of training in a number of forest management disciplines. A large proportion of the permanent staff at Iwokrama's field station and at the joint-venture timber operation is derived from these Amerindian communities.

Today, the Iwokrama Forest is demonstrating how tropical forest management can conserve the environment, provide benefits for local communities, and contribute to national development. The entire forest has been declared to be of high conservation value and is certified by the Forest Stewardship Council; 108 400 hectares of the area is subject to timber harvesting and the remainder has been set aside for its conservation functions. Iwokrama is increasingly popular as an ecotourism destination as its reputation for forest conservation and the engagement of indigenous communities grows.

"During my visit to Guyana ... I was deeply impressed by Iwokrama's innovative and unique work. The Centre seeks to show how forest-rich but economically poorer countries can conserve, and yet also use sustainably, their tropical forests in ways that contribute substantially to local and economic development, while respecting the way of life of those living in these unique and precious environments."

HRH Prince Charles, Royal Patron of the Iwokrama International Centre

"We in Guyana applaud the progress the Iwokrama International Centre has made over the last twelve months. Its new financial stability, its new science program—with its emphasis on climate change impacts—and its evaluation of the contribution of ecosystem services to the Iwokrama Forest and the well-being of local communities have all given the Centre a new direction and profile of great relevance and assistance to my Government's initiative for the creation of a low carbon economy."

HE Bharrat Jagdeo, President of Guyana

"I am particularly pleased that Iwokrama was able to fit into, to understand, respect and appreciate our culture."

Mr Sydney Allicock, Amerindian community leader, Surama Village

Project IDs	Period	Total ITTO contribution
PD 10/97 Rev.1 (F); PD 297/04 Rev.3 (F)	1998–2009	US$1.48 million

Implementer	Donors
Iwokrama International Centre	Japan; Korea; Switzerland; Norway; USA; Friends of Iwokrama

Sunlight bursts through the canopy in the Iwokrama forest. *Photo: Iwokrama*

"I have been privileged to participate in the work of Iwokrama and to observe the impact of the Programme on the lives of people. At Conservation International, we are interested in working with a range of partners to understand, support and develop the methods and techniques that maintain natural capital that underpin healthy and sustainable economies. Iwokrama's work provides rich experiences from which we can all learn, and it remains an important partner in understanding techniques for the sustainable management of forests especially as the international community is developing a robust REDD+ mechanism that works for local people and for national development in highly forested developing countries."

Dr David Singh, In-country Director of Conservation International, Guyana

A participatory workshop during planning for the Iwokrama forest. *Photo: Iwokrama*

3

Women in Ghana

Women in Africa have little decision-making power or control over forest resources and their forest rights are often limited to usage rights over non-timber forest products. On the other hand, empowering women has been shown to help their communities to rise out of poverty.

Recognizing this in the early 1990s, ITTO teamed with the December 31st Women's Movement and the Ghana Forestry Department to convene a workshop on women and forests. This led to the development of a project in the highly degraded Worobong South Forest Reserve designed to increase the involvement of women in forestry through the establishment of timber plantations and agricultural inter-crops.

The ITTO project helped to reduce the firewood-collection burden of local women by providing a new, closer and community-managed resource. *Photo: Juergen Blaser/ITTO*

According to an ex-post evaluation of that project in 2002:

> *"The most visible impact is the creation of assets which did not exist before. It is also the harvests from intercropping, and the gathering of firewood which is already alleviating the burden of firewood collection for women in the Volta region. What is certain is that the time spent by women on firewood collection will be reduced in the future."*

The promising results of that project motivated the December 31st Women's Movement to propose a follow-on project with the aim of reforesting an important part of the Worobong South Forest Reserve through the effort of local communities, with a special emphasis on women's roles. The Forestry Department agreed to release 1200 hectares of the reserve to the December 31st Women's Movement to undertake the reforestation project.

By the time the project was completed, about 320 hectares of degraded land had been planted with teak and *Cedrela odorata* and another 350 hectares of agroforestry plantation had been established with a range of tree species and agricultural crops of the farmers' choice.

According to the ex-post evaluation of this project, the beneficiary population, especially the women, was exceptionally enthusiastic about the initiative, even after project completion, and continued to pursue activities started by the project. Gender-sensitization workshops, among other processes, helped to create awareness in the communities about the importance of involving women in project activities, decision-making and income-generation related to natural resource management.

Project IDs	Period	Total ITTO contribution
PD 119/91 Rev.1 (F); PD 27/94 Rev.2 (F); PD 49/98 Rev.1 (F)	1992–2004	US$1 505 957

Implementers	Donors
Forestry Department (Ghana); 31st December Women's Movement (Ghana)	Japan; USA; Norway

Local women at work in their community nursery in the Worobong South Forest Reserve. *Photo: Polycarpe Masupa/ITTO*

The struggle to improve the rights and status of women in forest communities in Africa is a long way from being won. Nevertheless, ITTO has shown a long-term commitment to gender equity and has a demonstrated capacity to work effectively on this issue.

At a conference convened by ITTO and partners in Cameroon in 2009 (see success story 23), a group of African women formed the Women's Network for Community Management of Forests. This network is now a member of ITTO's Civil Society Advisory Group, helping to bring the voices of African women to international attention.

"ITTO support for this project provided skills for women in forestry communities to undertake nursery management, species selection, woodlot management and harvesting of non-timber forest products to support livelihoods. Women are the key to SFM in many of these communities. The project and its outputs will serve as a model for the entire ECOWAS region."

Ms Sherry Ayittey, Minister of Environment, Science and Technology (former Chairperson, December 31st Women's Movement), Ghana

4

Dipterocarp plantations in Indonesia

For decades, Indonesia's forests have been subject to pressures that have resulted in widespread degradation and deforestation. Although the country has more than 3 million hectares of forest plantations, few consist of indigenous timber species, despite the conservation advantages that would accrue from their use.

Line-planting of dipterocarps in logged-over forest, Indonesia. *Photo: Juergen Blaser/ITTO*

The Government of Indonesia has recognized the need to improve the productivity of highly degraded forests and the potential for establishing commercial timber plantations stocked with indigenous species on such lands. Indonesia has many native species of the family Dipterocarpacae that grow quickly and produce valuable timber. Much work still needs to be done, however, to improve the effectiveness and sustainability of dipterocarp plantations—such as by addressing the lack of a continuous supply of seeds and seedlings due to irregular flowering and the short fruit viability period of many species.

An ITTO project screened 64 potential dipterocarp species; tested the best-performing species in plantations using a split plot design; and developed techniques for the mass production of seedlings.

The project successfully:

- Selected the three best-performing *Shorea* species as the basis for producing planting materials for large-scale commercial plantings in Indonesia.
- Tested and selected superior mother trees within each species for the on-going improvement of planting stock.
- Established three nurseries for the production of planting materials.
- Developed an innovative silvicultural system and planting model, which is being used by private and public-sector companies for large-scale planting in logged-over forests.
- Produced a financial and economic analysis of the new forest rehabilitation model to guide future investment in plantation establishment and the development and refining of government policy in the sector.

According to an ex-post evaluation conducted in 2010, four years after project completion, these outcomes are sustainable because the partners—private and public-sector companies, Gadjah Mada University and the Government of Indonesia—are continuing to work together to further develop the program. The three identified *Shorea* species are still being planted widely using the silvicultural approach developed by the project. Moreover, the species and progeny trials are functional and

Project ID	Period	Total ITTO contribution
PD 41/00 Rev.3 (F,M)	2002–2006	US$461 212

Implementer	Donor
Faculty of Forestry, Gadjah Mada University (Indonesia)	Japan

Dipterocarp forest, Indonesia. *Photo: Manfred Mielke, USDA Forest Service, Bugwood.org*

well-maintained and are being used for research, learning and teaching. The nurseries are operational and well maintained and are being used for research and to produce planting materials, and there is a clear commitment, including a financial commitment, by companies to the ongoing adoption of project outcomes.

5

Mangrove conservation

Mangrove forests are highly productive, host a rich diversity of species, and provide human communities with a range of important services. They are used widely in the tropics for timber and fuelwood, they protect coastlines against erosion and storm surges, and they constitute essential breeding grounds for many fish species. Yet they are under threat from degradation and conversion to other land uses.

Colombian mangroves. *Photo: John Leigh/ITTO*

Recognizing both the threats faced by mangrove forests and their ecological, economic and cultural importance, ITTO has developed a strong program in mangrove conservation and management.

Under two phases of an ITTO project in Colombia, for example, more than 50 mangrove restoration sites were established to compare the survival and growth of mangrove species; community nurseries began producing seedlings and refining planting techniques; and monitoring systems were established to record growth conditions. Communities trained by the project in mangrove husbandry embarked on pilot projects to replant mangroves on degraded lands, reopen silted channels and re-establish fisheries, and a process was instigated to revive ancestral knowledge on mangrove forest harvesting. The project also generated new information about mangrove ecosystems. For example, wildlife surveys revealed several species that had not previously been recorded on the Colombian Caribbean coast—including some that were new to the country and some that were possibly new to science.

The project assisted in several reforms undertaken by the Ministry of Environment related to mangrove management. Indicators for the assessment of sustainable mangrove management were developed and applied, and a zoning plan for the country's Caribbean mangrove resources was created. This zoning plan involves five departments and about 38 000 hectares of mangroves, of which about 28% was designated for preservation, 29% for restoration and 43% for sustainable use. Local people who formerly made their living by cutting mangroves were employed to assist in restoration, and a sustainable-use demonstration area created by the project in a 6000-hectare mangrove forest remains a valuable asset today. A program to protect the caimán (*Crocodylus acutus*), a species listed as vulnerable on the IUCN red list of threatened species, remains in place and is serving as a model for similar programs elsewhere in Colombia and the region.

Today, while Colombia's mangrove forests continue to decline in some areas, there have been localized increases in others, and the ongoing efforts to manage mangroves within a comprehensive zoning framework are helping to turn the tide. In 2007 the project coordinator, Dr Heliodoro Sanchez, was the inaugural recipient of IUCN's Kenton R. Miller Prize for Innovation on National Park Sustainability for his work on mangrove conservation.

"It is the most important restoration project that has been implemented in Colombia and all of Latin America to restore a mangrove ecosystem."

Carlos Castaño*, Colombian Vice-Minister of Environment, anthropologist and former director, Colombia National Parks

Project IDs	Period	Total ITTO contribution
PD 171/91 Rev. 2 (F); PD 60/01 Rev.1 (F)	1995–2004	US$1 485 706

Implementers	Donors
Ministry of Environment (Colombia); National Corporation for Forestry Research (Colombia)	Japan; USA

A community workshop discusses the costs and benefits of mangrove restoration. *Photo: John Leigh/ITTO*

"[Heliodoro Sanchez] found a way to work with unemployed rural fishermen in the wetlands of northern Colombia ... He created a social environment in which people who seldom work with outsiders were willing to work with him on this project. They pooled together their know-how and his science and technology to create an approach to restoration that actually works, testing different options and finally coming up with a method that would enable the mangrove ecosystem to once again be restored."

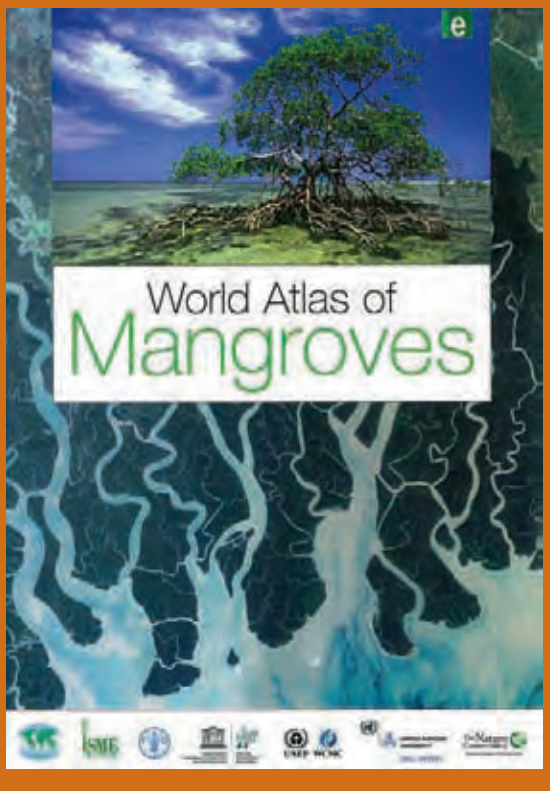
Kenton R. Miller*, conservationist and former director general of IUCN

"Heliodoro's work has been extremely important to Colombia in different ways. The mangroves and their conservation become one of the primary forms of generating wealth for many local communities. Conservation of nature becomes a positive message in a Colombia that in its rural areas has many conflicts and difficulties and lacks many resources."

Julia Miranda*, Director of National Parks and Protected Areas

* Comments taken from a video production on the Kenton R. Miller Prize.

As part of its efforts to promote improved mangrove management, ITTO funded and helped steer the production of the 2010 publication, *World Atlas of Mangroves*, in partnership with a number of other organizations. According to Achim Steiner, executive director of the United Nations Environment Programme, this magnificent book "should change the way we view, and manage, mangroves for the benefit of coastal peoples and biodiversity world-wide". The journal *Human Ecology* called it "a classic masterpiece" and the *International Forestry Review* "an invaluable sourcebook for any national or international institution concerned or charged with the sustained use and protection of mangroves".



6

Transboundary conservation in the Condor

The Condor Mountain Range is part of a set of sub-Andean cordilleras. The region is especially important for its biodiversity because of the high levels of endemism and because it is a conduit for the movement of species between the Andes and the Amazon. There are also rich indigenous cultures in the region that share the same language roots but have been divided for many years by an often-disputed political boundary. In effect, the Condor has been cut in half politically for much of recorded history.

ITTO projects have promoted the conservation of the area's natural resources since 2000. In Peru, a national park was created (88 500 hectares), and the Wampis communities gained legal control over their lands and natural resources (100 000 hectares). In Ecuador, 1000 families in 47 Shuar communities forged their collective lands into a single territory (200 000 hectares) for conservation and wise use, which they now govern. In addition, the Government of Ecuador declared three new protected areas (31 000 hectares). The region is now an integrated unit of state protected areas and indigenous community territories in which natural resources are used sustainably and conserved.

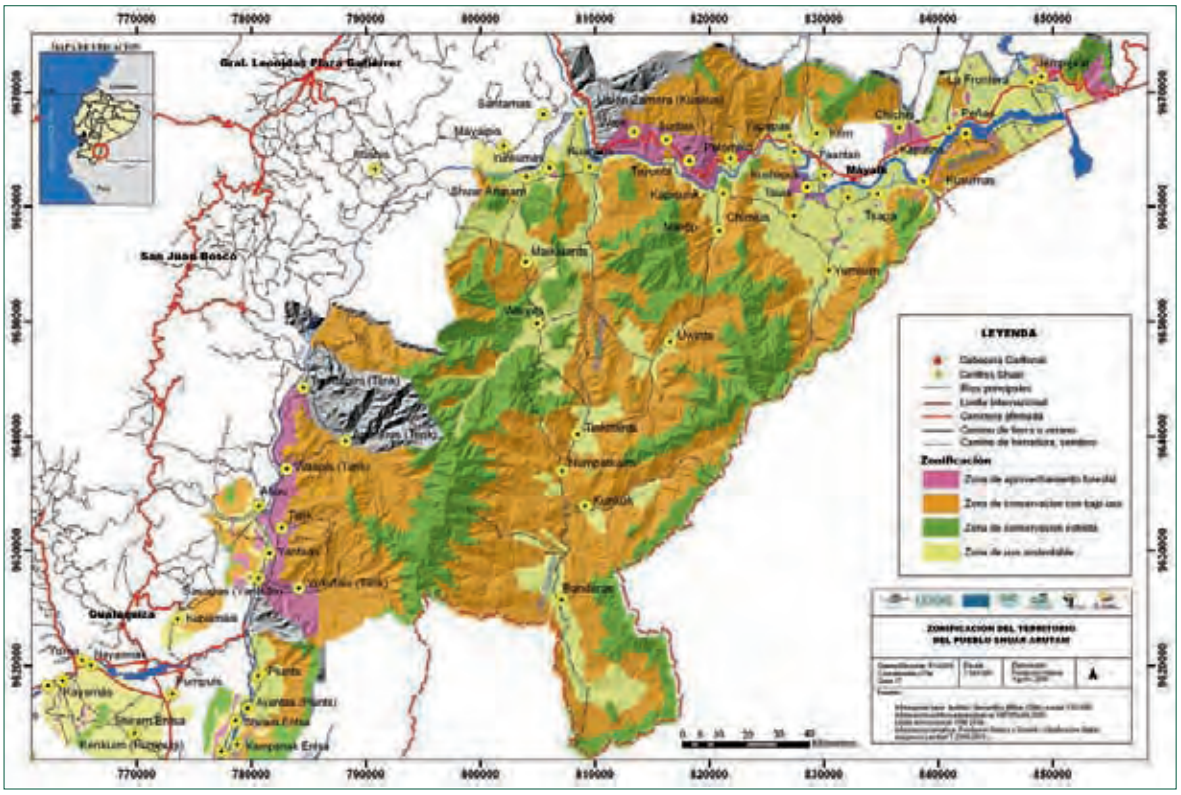
The creation of the protected areas and peace parks has led to major changes in both local communities and governments. The two national governments realized that to achieve their conservation goals a multidimensional political space was needed for negotiation and cooperation. For local indigenous peoples, the political space created by the initiative helped them to organize themselves. It triggered the bi-national integration of previously separated communities and empowered them to gain greater control over the resources, including (in Ecuador) in areas previously open to mining concessions.

A Shuar family in their forest. *Photo: Nicolás Kingman*

This process has reversed the deterioration of the environment and local communities, and a number of indicators, including community health, are improving. On the Ecuadorian side, the Shuar people negotiated, with the national government, the creation of a fund in exchange for conservation, which is now helping to finance a range of development processes. Community monitoring systems, zoning and management plans have helped to achieve a significant decrease in deforestation in the area, and local hunting and fishing are more productive and sustainable. The process of impoverishment has also abated in favour of integrated development models in which forests play a pivotal role. The relationship between the Shuar and Wampis has been rehabilitated: families once separated by the international border are now able to meet, and both sides support an integration policy agenda that is being negotiated with the governments of the two countries.

Project IDs	Period	Total ITTO contribution
PD 2/00 Rev.2 (F); PD 3/00 Rev.2 (F); (PD 237/03 Rev.4 (F); PD 238/03 Rev.4 (F)	2000–2011	US$2 558 803

Implementers	Donors
Ministry of Environment (Ecuador); National Institute for Natural Resources (Peru) ; Fundación Natura; Conservation International	Japan; USA



Under the projects, the Shuar territory has been zoned for a number of land uses.

"Three years after completion of the project, the Shuar Arutam people are maintaining the governance model established during the project. The fundamental elements of this system are: an indigenous government that administers its territory; the conservation of 160 000 hectares of tropical forest; and the sound management and use of the tropical forest resources in the greater part of the 47 communities involved."

Santiago Kingman, Fundacion Natura, Ecuador

"There is absolutely no doubt that what the projects did ... was correct; now, even if international support ceases, if there is money or if there is no money, we are going to maintain our objectives. Young people are now involved in this government. They listen eagerly to the experience of the founders, who are watching constantly the direction of their territory, its forests and its people."

Bosco Santiak, Shuar leader

7

Assessing restoration needs in forests

The development of a powerful but easy-to-use planning tool under an ITTO project is enabling forest managers to make greater use of satellite image data analysis to plan forest restoration and other operations.

Produced by a team coordinated by the Japan Overseas Forestry Consultants Association with funding from ITTO, this 'semi-expert' system for analyzing satellite imagery—called the forest canopy density (FCD) mapper—is a forest-planning tool that can be used for monitoring, mapping, environmental assessment and watershed management.

One of the attractions of the FCD mapper is its simplicity: planners with minimal skills in image analysis can accomplish tasks that were formerly impossible without the help of highly trained experts. The forest canopy density of a study area is computed using four main indices—for vegetation, bare soil, shadow and heat. Using satellite images the program calculates the density of the vegetation, including grassland and forest but excluding bare soil. Grassland is then separated from forest using a scaled shadow index, and the forest canopy density is calculated for each pixel of forested land.

The information thus derived can assist forest managers to:

- Prioritize sites in need of restoration.
- Prepare budgets and cost estimates depending on the type of restoration treatments to be applied.
- Determine the area of healthy, partially degraded or severely degraded forests within a forest area.

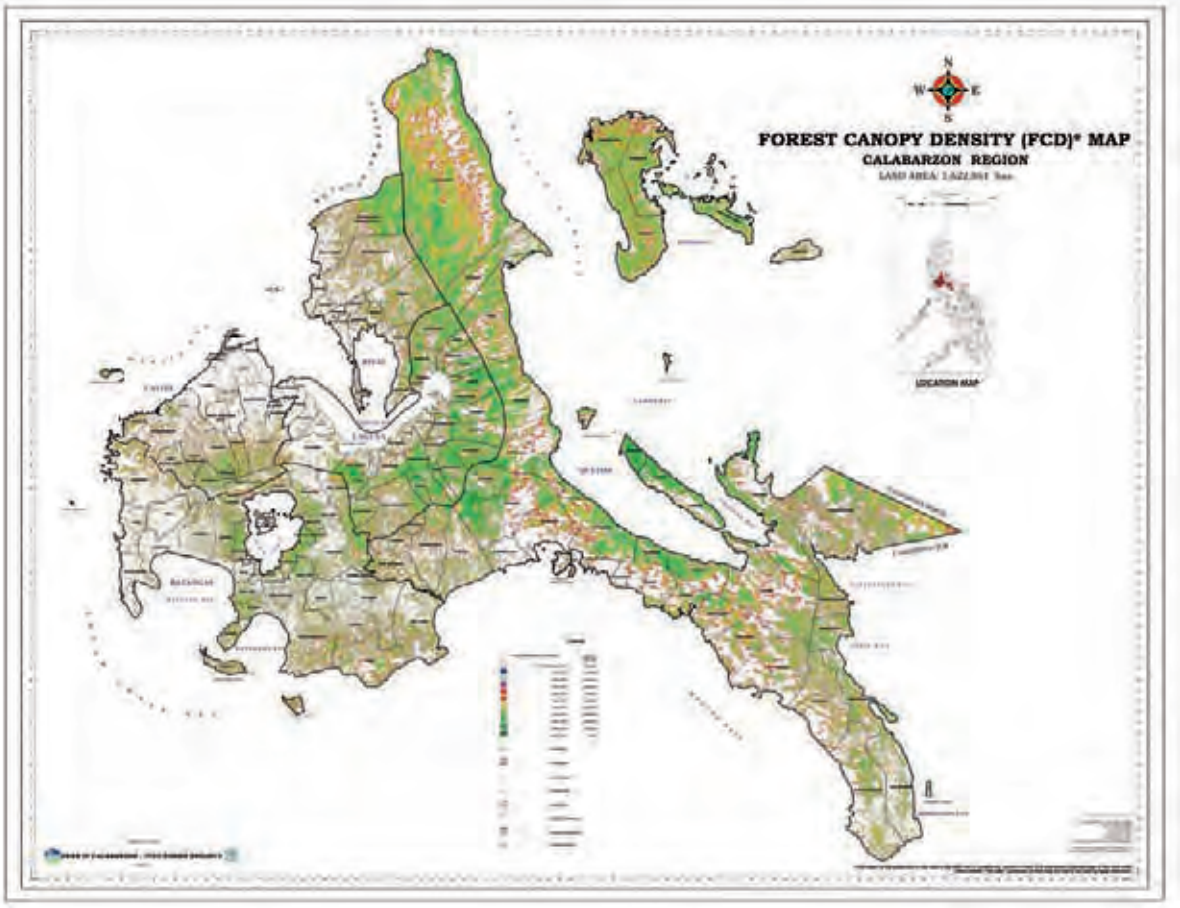
The FCD mapper also has potential for detecting change in logged-over forests that are redeveloping a canopy and for distinguishing forests with a discontinuous canopy, such as plantations, from native forest. It may also be useful for detecting illegal logging and illegal forest conversion.

The FCD mapper has been used in India to identify degraded and fire-affected forest, and in studies to identify illegal logging. In the Philippines, forest density maps created using the FCD mapper are being used by a number of agencies for identifying the extent of forested and non-forested, degraded and deforested areas and in land-use planning. Philippine institutions making use of the FCD mapper include the Department of Environment and Natural Resources (DENR), the National Economic Development Authority, the Philippine Coconut Authority, the Regional Risk Reduction Development Management Council, and local government units down to the barangay level.

The software may also have applications in climate-change mitigation—such as for identifying and delineating suitable areas for forest-based carbon sequestration through forest restoration. For example, it was used recently in a study to assess the forest carbon potential of riverine forests in the Khata corridor and Lamahi–Mahadevpuri Complex in western Nepal. Using the FCD mapper and ground-truthing, researchers were able to estimate the carbon stock in 1999, 2001 and 2006.

Project IDs	Period	Total ITTO contribution
PD 32/93 Rev. (F), PD 13/97 Rev.1 (F), PD 60/99 Rev.1 (F)	1994–2004	US$1 810 431

Implementer	Donors
Japan Overseas Forestry Consultants Association	Japan; Korea; Switzerland; USA; Australia



Forest canopy density map of the Calabarzon region, Philippines, courtesy DENR.

"The FCD map is the first map data generated in the Philippines where you can instantly learn the extent of the forest/tree crown cover by barangay, municipality, province and region. Since the FCD map can be overlaid with other map data such as the extent of coconut trees planted, it can be easily understood also that not all areas with high crown density are trees. The FCD serves as a reference/guide to the extent of tree cover, which the public and decision-makers can easily comprehend as to concerns of restoration, protection, rehabilitation and conservation."

Dr Merlinda Manila, DENR IVA Philippines

8

Improving forest law enforcement in Congo

Image of northern Congo courtesy Google Earth

An increasing number of tropical-timber consumers want to ensure that they do not inadvertently encourage illegal or unsustainable forest operations. They seek assurance, therefore, that the wood products they buy were obtained from legal and sustainable sources.

The Republic of the Congo has a significant timber export trade and is vulnerable to moves in importing countries to ban timber that may have been produced illegally. An ITTO mission to Congo in October 2001 identified a lack of information about what was happening in the forests, limited human resources, and illegality as obstacles to SFM. The country's Ministry of Environment and Forests was struggling with paper-based maps that were mostly out of date, and there was a lack of clarity on the total area available for logging, the total allowable cut and the actual area and timber volume harvested per year.

In 2004 an ITTO project implemented by the World Resources Institute in cooperation with the Congolese Ministry of Forest Economy (MEF) was initiated with two main aims: to establish a system for collecting accurate geographic data on forest companies and logging areas; and to develop capacity to use forest-related information and information management technologies (including a computer-based geographic information system—GIS) to improve forest law enforcement. As part of this it aimed to provide training to local staff in the use of GIS-based law enforcement monitoring tools. Overall, the aim of the project was to contribute to SFM in Congo by encouraging the systematic application of the forest law.

When the project ended in 2007, a GIS tool for monitoring forest concessions was fully functional and departmental staff had been trained in its maintenance and use. An interpretation of satellite imagery to identify areas where logging had taken place had been mostly completed, and a first series of interpreted images had been produced. Indicators for identifying forest concessions failing to respect the forest law had been created and organized in a database, and the MEF had a well-equipped remote-sensing and GIS laboratory. Awareness had been raised among MEF executives of the potential of these tools to facilitate their work and the more effective application of the forest law. At project completion, therefore, Congo was equipped with powerful tools and qualified technical personnel to oversee forest operations in the country.

This was impressive, but it was crucial that the progress that had been made was continued after project completion. The ITTO project provided the foundations for the implementation of a support project financed by USAID to continue the remote-sensing and GIS activities and to publish Congo's first interactive forest atlas, which greatly facilitates public access to information on Congo's forests.

Photo: Susan Minnemeyer/WRI

Project ID	Period	Total ITTO contribution
PD 176/02 Rev.1 (F)	2004–2007	US$577 676

Implementers	Donors
World Resources Institute (USA) ; National Centre for Forestry and Fauna Inventory and Management (Republic of the Congo)	Japan; Switzerland; USA

Photo: Susan Minnemeyer/WRI

"The ITTO project has made a significant contribution to the sustainable management of the forest resources of the Republic of the Congo by strengthening the capacities for systematic application of the forest legislation and by securing broader access to international timber markets. Access to reliable and up-to-date data on the forest sector, as well as an improvement of capacities and effective actions to monitor logging activities, as promoted by the project, are essential components of greater transparency and better governance. The image of the Congo, and of the forest products which the country produces, is enhanced at the international level and the confidence of the timber importers is maintained through the ready availability of such information. Thanks to the information generated, the senior decision-makers and the various stakeholders can henceforth easily access and process the most recent and relevant data relating to the monitoring of the forest activities as well as view, and as required produce, maps."

Benoit Mertens and **Pierre Méthot**, World Resources Institute

Photo: Juergen Blaser/ITTO

"The project made ... an excellent contribution to the mapping of the country's natural forest resources and progress towards sustainable forest management."

Ex-post evaluation

9

Disseminating information

For 25 years, ITTO has played an important role in spreading the word about SFM, encouraging the development of sustainable forest-based industries, and bringing transparency to the tropical timber trade, all key objectives of the Organization and enshrined in its governing agreements.

ITTO's flagship publication, the *Tropical Forest Update*, was first published in 1991 with the brief to promote tropical forest conservation and tropical forest-based sustainable development. Since then it has advocated improvements to all aspects of forest management, publicized examples of best practice, and promoted policy reforms to address issues such as forest tenure and rights, biodiversity conservation, forest law enforcement, climate change, industry development, forest certification and investment. The hard-copy version of the *TFU* is distributed to more than 15 000 subscribers in English, French and Spanish, and it is also a popular download on the ITTO website.

The ITTO Market Information Service (MIS) has been in operation since 1992. It publishes the *Tropical Timber Market Report* every two weeks with the aim of improving transparency in the international tropical timber market. The report provides market trends and trade news from around the world, as well as indicative prices for over 400 tropical timber and added-value products.

"The TFU is very useful newsletter. It has provided a good selection of articles on salient and relevant topics during the approximately ten years I have been able to read it. Reviews of books and announcements of conferences have also been useful. In my previous capacity as a university lecturer I occasionally utilized its articles as sources of information or material for classroom work. For an adviser to the Government of Finland, the TFU continues to provide useful news, information and insights."

Vesa Kaarakka, Ministry for Foreign Affairs, Finland

"The TFU is a highly relevant source of information for tropical forest managers, industry and trade. It is also relevant to policy formulators, international organizations, consumers and other stakeholders. The TFU has helped to disseminate information involving technology and policy work developed by

ITTO, based on projects and other activities, and this has contributed to improved practices related to forest management and the production of timber and non-timber products in tropical countries. The TFU also helps to promote sustainable trade and to facilitate and enhance cooperation between producers and consumers of tropical forest products."

Ivan Tomaselli, President, STCP Engenharia de Projectos Ltda, Brazil

"I am a conservation biologist and working as Conservator of Wildlife for the Wildlife Department of Khyber Pakhtunkhwa Province in Pakistan. I am using the information published in the TFU for education of myself and updating myself on the activities being carried out for sustainable management of the tropical forests. I am always waiting for receipt of the newsletter to know the latest on the subject."

Safdar Ali Shah, Conservator of Wildlife, Northern Circle, Pakistan

"The way I see it, the TFU is one of the most important and reliable sources of information about SFM in the tropics. As a tropical forester (graduated in Mexico) I consider a part of my job to increase awareness of SFM in tropical forests among Polish foresters, media and NGO workers."

Marcin Makocki, Poland

"The TFU has been a highly useful source of information for us in general and in particular sections on market developments as our company works on trade development for tropical timber and investment promotion. The TFU has also helped us to explain our customers about the problems and challenges in tropical timber supplies and sustainable management of forests in developing countries. For this purpose the information on projects and policies has been useful. We have also benefited from TFU information on certification and procurement policies which directly impact our own work. We hope we can continue to receive TFU also in the future."

N. H. M. Roux, Ecosys Sarl, France

"The TFU has helped me in many ways. I am a forester but for some years I had been working in community relations at high-altitude areas where no natural forest exist. Thus, the TFU helped me to keep abreast of the facts and trends on technology, policy, business and community forests around the world. During the past year and a half, I returned full-time to forestry. In particular, as Executive Coordinator of the new National Forest Conservation Program to Mitigate Climate Change, I read TFU in more specific terms, i.e. I learn about who is doing what and where in terms of forestry, in particular in community forestry. On the other hand, the studies reported by the TFU are very useful to place specific activities (local, subnational and national) in a global context. A good example is the new study by ITTO on the status of forest management in the world and the challenges still facing the governments and development agents. I truly appreciate receiving the TFU and thank you for it."

Héctor Cisneros, Peru

"I know from experience just how well accepted and useful the MIS is and has been over the years. There isn't anywhere else you can find such comprehensive world coverage for the trade all in one place every couple of weeks. I believe that is a major strength of the MIS, and indeed of ITTO itself."

[**Name withheld**], United Kingdom

"The MIS is informative and relevant to our plywood and panel-products industry."

Mok Chee Keong, Executive Secretary, Malaysian Panel-Products Manufacturers' Association

"MIS [provides an] extremely useful service to buyers and sellers of tropical timber around the world."

B. H. Patel, Chair, Chemical and Allied Products Export Promotion Council, India

"Your MIS has greatly improved my awareness of market expectation and demand. Recently I have been able to push the boundaries for higher premiums by disintermediation by source countries, thanks to reading related and relevant articles in the MIS."

Uluibau Tabete, plantation mahogany exporter, Fiji

"We have been receiving your fortnightly ITTO market report for some years. It is excellent."

DN, New Zealand

"We find [the MIS] the most useful information we get from anywhere."

RB, Brazil

Fuelwood gatherers in India. *Photo: Juergen Blaser/ITTO*

10

Four biodiversity projects, four successes

ITTO has supported biodiversity conservation in many ways, including by financing projects to assist in the management of protected areas. Four biodiversity-related projects were the subject of a thematic set of ex-post evaluations in 2010 by a team headed by renowned forest conservationist Jeffrey Sayer. The set comprised:

- The second phase of a project in Indonesia to improve the management of Indonesia's Betung Kerihun National Park, which is situated on the border with the Malaysian state of Sarawak, and to develop a model for managing a transboundary conservation area with Sarawak's Lanjak Entimau Wildlife Sanctuary (see success story 17).
- A project to support Sarawak's Pulong Tau National Park, with the aim of initiating a process for the sustainable conservation management of the park and to improve cooperation between Sarawak and Indonesia on the conservation of the transboundary ecosystem of Pulong Tau and Indonesia's Kayan Mentarang National Park.
- A project designed to improve the system of protected natural areas of the Tambopata Reserve Zone and Bahuaja National Park in Peru and the Madidi National Park in Bolivia.

The magnificent northern royal flycatcher (*Onychorhynchus coronatus mexicanus*) in the Bagre Highlands Corridor, Panama. *Photo: Fundación Natura/ITTO*

- A project aimed at ensuring the sustainability of forest ecosystems and biodiversity in the Bagre Highlands Corridor in Panama and the consolidation and integration of a regional system of protected areas in the Darién area through conservation, protection, development and the sustainable use of natural resources.

On the impact of these projects on biodiversity conservation, the evaluators noted that:

> *"... the fate of biodiversity is closely linked to the state of the forest and in all four project areas the serious threats to the forests that existed at the time that the projects were initiated have been countered. Illegal activities and forest loss have in all four locations been brought under better control in the project areas."*

According to the evaluators, the projects also made significant progress in securing community participation in protected-area management. The Betung Kerihun and Tambopata–Madidi projects were especially innovative in promoting the domestication of valuable tree species in agroforestry systems in communities close to the protected areas. Ecotourism has been promoted in Betung Kerihun, Tambopata–Madidi and Pulong Tau and has considerable potential in the Bagre Highlands Corridor. One of the most important aspects of the latter project was the extent of participation by local indigenous communities, who have embraced the process of conservation and sustainable use of natural resources.

Overall, the ex-post evaluators concluded that:

> *"All four projects provided impacts that exceeded what one might have expected from the level of resources provided. They have achieved this because they attracted major support from the host governments and from international conservation organizations. The fact that they were implemented relatively*

Project IDs	Period	Total ITTO contribution
PD 14/00 Rev.5 (F); PD 17/00 Rev.3 (F); PD 44/00 Rev.3 (F); PD 224/03 Rev.1 (F), plus an earlier phase of PD 44/00 Rev.3 (F)	2002–2007*	$3 174 702*

* Not including the earlier phase of PD 44/00 Rev.3 (F).

Implementers	Donors
National Association for Conservation of Nature (Panama); SERNAP; Conservation International; National Institute for Natural Resources (Peru); Park Management Unit of Betung Kerihun National Park (Indonesia); Worldwide Fund for Nature Indonesia; Sarawak Forest Department (Malaysia)	Japan; USA; Switzerland; Norway

Measuring forest parameters in the Bagre Highlands Biodiversity Corridor. *Photo: Fundación Natura/ITTO*

The domestication of valuable tree species in buffer-zone agroforests was an important feature of the Betung Kerihun project. *Photo: WWF Indonesia/ITTO*

slowly over a long period of time also worked in their favour. Many protected-area projects supported by other donors have short time horizons and seek to provide simple technical solutions quickly. All four of these ITTO projects had modest budgets compared to similar projects supported by bilateral and multi-lateral donors. The ITTO projects were much less dependent upon international technical experts than many similar projects. This may be part of the reason that they progressed slowly but built solid foundations and contributed successfully to local capacity enhancement needs.

"Significant improvements in sustainable forestry and conservation programs have occurred in the period since the projects were initiated. ITTO cannot claim sole responsibility for these positive impacts but it has certainly been a major contributor. In each case it appears probable that the level of activity of the other external and national organizations operating in these areas would have been significantly less had ITTO not been present. The positive impacts came from the convening power of ITTO and from its influence on the policy discourse in the countries concerned. The practical interventions on the ground did not in themselves bring about radical changes but they gave ITTO the legitimacy that it needed to have a policy influence. These activities helped engage local people in the discussions about the areas and to ensure that their interests were taken into account. ITTO could not be accused of the Indonesian term NATO (no action–talk only) which is used in a derogatory way to apply to much work of external advisers. ITTO engaged with the problems and justified its place at the negotiating table."

11

An alternative to ranching

The rubber-tappers (*seringuieros*) who live in the Brazilian Amazonian state of Acre once earned their living by harvesting latex from natural forests. But, as latex prices declined, they needed ways to add to their income. One option was to clear the forest for cattle-ranching, but the Government of the State of Acre was determined to adopt a development model based on sustainable forest use and conservation. An ITTO project to test this model was formulated, submitted to ITTO, and approved and funded in 1991.

The project was executed by the State of Acre Technology Foundation (FUNTAC) in the Antimary State Forest, a former rubber-tree forest estate. Critically, longstanding land-tenure issues in the forest were resolved under the project, including through the granting of legal rights to *seringuieros* to participate in the management of the forest and to benefit from its use. The project helped to improve social services and infrastructure such as those associated with primary and secondary education, health, communication and roads. It also established a system for the sustainable commercial production of timber, in which a large share of the revenue is paid to forest inhabitants, and introduced techniques for the industrial processing of non-timber forest products such as rubber, copaiba oil and forest seeds with the objective of adding value to them.

The project has helped to improve education for local children. *Photo: Rubén Guevera/ITTO*

A *seringueiro* in the Antimary State Forest and rubber extracted from the forest. *Photo: Rubén Guevara/ITTO*

Under the project a multiple-use forest management plan was formulated and is now being implemented, and a system for the participation of the local community in decision-making was established. A cooperative for the marketing of rubber, Brazil nut, timber and agricultural products was set up and is now in operation, and timber harvesters were trained in reduced impact logging techniques.

According to an ex-post evaluation of the project conducted in 2009, the project is a landmark in the western Amazon in promoting the rational use of forest resources and development policies based on sustainable forest production as part of a single integrated land-use policy. The evaluators found that the project was pivotal in the creation of new mechanisms by the Acre government to facilitate development, taking into account the need to both improve socioeconomic conditions and ensure forest sustainability. The Antimary State Forest project has also generated wider interest among

Project ID	Period	Total ITTO contribution
PD 94/90 Rev.3 (I)	1993–2004	US$1.875 million

Implementer	Donors
Technology Foundation of the State of Acre (Brazil)	Japan; Switzerland

A brazil-nut harvester scales a tree in the Antimary State Forest. *Photo: Rubén Guevara/ITTO*

social scientists, environmentalists, researchers and academics, for whom such an initiative offers invaluable lessons in rural development, poverty eradication and natural resource conservation.

"The Antimary State Forest project shows that it is possible to put into place, in a remote forest, a sustainable forest management regime. The timber industry is playing a crucial role in this, but equally important is the fact that the communities living in the Antimary forest are the biggest beneficiaries of the regime. ITTO has played an essential catalytic role in bringing the idea of sustainable forest management to reality in the Amazon. The Antimary project is a wonderful example of how a project that has been well-conceived and funded by ITTO can be turned into broader public policy, because it has happened in Acre state."

Senator Jorge Viana, former governor of Acre

12

Planting indigenous species in Bali

To encourage farmers to use local tree species in their agroforestry plantings, the Bali provincial government used an ITTO project to establish seed orchards for three indigenous species (*Alstonia scholaris, Planchonia valida* and *Dysoxylum densiflorum*) at Ekasari village in west Bali. This was the start of the provincial government's Bali Greening Program, which aims to rehabilitate the province's degraded forests using indigenous species. While the seed orchards were established successfully, by 2006 the program had had only limited success in convincing farmers to plant indigenous seedlings.

A second phase of the ITTO project was therefore conceived to encourage greater uptake by farmers of tree species indigenous to the island. The project:

- Encouraged research to develop new methods and techniques for the germination and propagation of a variety of Bali's indigenous species.
- Updated the provincial land-use map to identify areas suitable for plantations.
- Stimulated interest among farmers in east, north and west Bali in planting indigenous species on their farms, and produced and distributed more than 1 million seedlings to kick-start uptake.
- Transferred knowledge to farmers through training and workshops in planting the indigenous species.
- Established more than 2600 hectares of farm-based plantations using local agroforestry approaches.

An ex-post evaluation in 2010 found that the project has had a significant impact at the provincial level on the re-introduction of indigenous species to degraded forest and in fostering awareness among farmers of the economic, environmental and cultural benefits of indigenous species. The project also helped to increase the capacity within the province to develop high-quality planting materials for local indigenous species.

A Balinese craftsman carves a local species, crocodile wood (*Zanthoxylum rhetsa*), which is now being replanted on the island. *Photo: Hwan Ok Ma/ITTO*

The evaluators reported that field visits, discussions and interviews with a wide cross-section of the project's stakeholders confirmed the project's significant and important impacts across the province. Overall, the evaluators concluded that the initiative's outputs were likely to be sustainable.

Seedlings of a local species ready for planting in farmer woodlots and agroforestry areas. *Photo: Hwan Ok Ma/ITTO*

Project IDs	Period	Total ITTO contribution
PD 137/02; PD 386/05 Rev.1 (F)	2003–2009	US$858 950

Implementers	Donors
Bali Provincial Forestry Service; Regional Tree Seed Centre	Australia; Japan; Korea

A seedling of a local tree species that farmers are now starting to replant on the island. *Photo: Hwan Ok Ma/ITTO*

"In my opinion, one of the astonishing impacts of ITTO project PD 386/05 is the continued strong interest of farmers in planting of Bali indigenous tree species under agroforestry systems, for at least two good reasons: that the trees can be harvested in five to six years time and sold at the local market at an attractive price; and that the system allows for inter-cropping of cash crops, which generates lucrative, periodic income. Thanks to the ITTO project for training the farmers on tree-planting and cash crop-raising techniques and on how to efficiently utilize scarce land so that agroforestry system has now become the common practice of land use in the village."

Made Sumite, Head of the Pajarakan village, Buleleng District, Bali

A line planting of local species in degraded Balinese forest. *Photo: Hwan Ok Ma/ITTO*

13

Improving management of CITES-listed timber species

ITTO has been working with the secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora for many years. In 2007 the two organizations commenced a major joint activity—the ITTO–CITES Program for Implementing CITES Listings of Tropical Timber Species—with the aim of ensuring that international trade in CITES-listed tropical timber species is consistent with their sustainable management and conservation.

Specifically, the program is assisting national authorities to meet scientific, administrative and legal requirements for managing and regulating trade in *Pericopsis elata* (afrormosia) in Central Africa, *Swietenia macrophylla* (bigleaf mahogany) in Latin America, and *Gonystylus* species (ramin) in Southeast Asia. The main range states exporting significant volumes of these species are Cameroon, Republic of the Congo and Democratic Republic of the Congo in Africa; Indonesia and Malaysia in Asia; and Bolivia, Brazil and Peru in Latin America.

The program has helped range states to carry out non-detriment findings and establish export quotas for the listed species, and in several countries it has provided training and other capacity-building on topics such as wood identification, timber-tracking and conversion factors. The program also facilitated the re-commencement of trade in *Pericopsis elata* and *Prunus africana* (the bark of which is used in the manufacture of prostate cancer medicine) following trade suspensions in several African countries due to non-compliance with CITES regulations. It assisted in the removal of Peru from the CITES significant trade review process by helping to improve the management of mahogany there (including the establishment of conservative export quotas), and it continues to help countries to improve the management of their listed species, with the ultimate objective of having them removed from the CITES appendices.

Members of a small Peruvian community stand in front of a specimen of mahogany (*Swietenia macrophylla*), a species listed in CITES Appendix II. *Photo: Rubén Guevara/ITTO*

The program is also assisting countries to generate information to support proposals for the CITES listings of other species of concern. For example, it produced a market and supply study on *Cedrela odorata* (an Appendix III-listed species) to support countries considering a possible Appendix II listing through CITES.

"The ITTO–CITES program is a leading international example of highly effective inter-agency cooperation between an organization with an implementation mandate and a convention secretariat. As a direct result of this close cooperation, we have strengthened capacity in eight of the main exporting countries of timber products to more effectively implement CITES. The proven 'on the ground' effectiveness of this joint program means that there is a high and increasing level of demand for joining and participating in it. We look forward to continuing with this wonderful program into the future and to using this very positive experience to further contribute towards the sustainable use of forests worldwide."

John Scanlon, Secretary General, CITES Secretariat

Implementers	Donors
ITTO and CITES Secretariats; CITES Management and Scientific Authorities in target countries	European Commission; USA; Switzerland; Norway; Germany; Japan; New Zealand; private sector (Abbott Solvay; Indena; Euromed)

A specimen of *Periscopsis elata*, a species listed in CITES Appendix II. *Photo: Steven Johnson/ITTO*

14

Guyana's Forestry Training Centre

Guyana's Forestry Training Centre Incorporated (FTCI) was set up with ITTO assistance in 2002 with a primary focus on vocational training in reduced impact logging (RIL).

An initial ITTO project created a fully functional training centre with the capacity to address the training requirements of large logging enterprises. Although training needs' surveys and various studies of the forest sector pointed to the need for vocational training in Guyana and elsewhere in the region, the overall response of the sector to the start-up of FTCI's training program was sluggish, with few logging enterprises making provision for training in their budgets. Training fees were based more on what enterprises could afford to pay rather than on the actual cost of training.

A follow-up ITTO project enabled the FTCI to consolidate its training niche and to add capacity for training small-scale loggers and operators in community-based forest enterprises. The training environment changed dramatically over the course of the project, which greatly helped its success. New regulations required large companies to submit inventory data for the blocks to be harvested before their annual plans of operations were approved. The Guyana Forestry Commission (GFC) also set stricter forest management prescriptions for growth and yield as well as procedures for the determination of the annual allowable cut at the concession level. At the same time, the Government of Guyana, the GFC and donors were starting to make funds available to support community-based forestry initiatives, and the communities themselves were beginning to take more interest in the conservation and sustainable use of their forest assets. The FTCI has helped to catalyze relationships between donors and communities to address their mutual concerns.

Successful FTCI trainees. *Photo: FTCI*

Today, the FTCI provides training services for forest operators; students; the staff of public agencies and NGOs involved in natural resource management; community groups; and workers in community-based forest enterprises. The FTCI offers hands-on training as part of its model logging operation and is also able to visit forest concessions and communities to conduct on-the-job training. According to an ex-post evaluation of the second project, the FTCI was important in promoting the Code of Practice for Timber Harvesting and demonstrating the feasibility of its prescriptions.

The FTCI has aligned itself with organizations such as the Iwokrama Forest (see success story 2), the University of Guyana, the GFC and the FAO Regional Office to implement a range of training initiatives. It is helping to build capacity in communities dependent on chainsaw milling and to address some of the strategic issues associated with the practice. It is also having a regional impact, conducting RIL training in Belize, Grenada, St Vincent and Suriname and hosting forestry classes from the University of Trinidad and Tobago.

"The project has made a positive contribution towards the introduction of RIL techniques locally and regionally through on-site and off-site demonstration operations. Gradually the acceptance and implementation of RIL and a demand for training in RIL is growing."

ITTO ex-post evaluation of ITTO project PD 68/01 Rev.2 (I)

Project IDs	Period	Total ITTO contribution
PD 68/01 Rev.2 (I); PD 333/05 Rev.2 (I)	2002–2009	US$789 607

Implementers	Donors
Guyana Forestry Commission; Forestry Training Centre Incorporated (Guyana)	Japan; USA; France

Trainees mark trees during FTCI training. *Photo: FTCI*

"We know the very real benefits properly trained and motivated employees can bring to any organization. I myself benefited from the 'Introduction to RIL' course that I underwent in 2006 and applied many of the ideas to my own logging operation, using effective planning to overcome terrain and equipment issues. Our company has also worked closely with the FTCI to introduce new technology to the chainsaw ripping industry here and also testing new products in the market—lately we have been using the FTCI to test prototype chainsaws on behalf of Stihl and also new chains that facilitate safer plunge-cutting techniques for felling. This has and will contribute significantly to safer felling practices in the industry, especially where older technology saws are being used. We have worked closely with FTCI to introduce the boardmill to chainsaw ripping to improve the quality of lumber, safety of the operation and the recovery of both grade and value from the logs. This has and will help bring chainsaw milling into line with the best practices in line with the new Code of Practice for Processing being introduced in Guyana. Farfan & Mendes Ltd was there in the beginning, has worked with the FTCI over the years and will continue to support and partner with it in the future."

Andrew Mendes, Managing Director, Farfan & Mendes Limited

"The course in reduced impact logging set a model for all involved in the logging business to follow. This model is vital to the timber trade as it relates to the protection of the environment and at the same time logging is being done in a sustainable way, and our forest resources are being preserved. Our community forest organization has benefited from training so that today we can do our own inventory within our state forest permission (concession). Training in the use of GPS and other facilities in the industry was given and we are aware that we are better off today than many years before. I commend ITTO for the sterling contribution they have made to the training centre and to Guyana as a whole."

Tasleem Drepaul, Forest Enterprises Limited

"From the inception, VWL's desire to utilize the services of FTCI was motivated by its effort towards forest certification. During its engagement, the company found that RIL practices provided effective control over all facets of its timber-harvesting operations and enabled the company to achieve higher levels of consistency between planned output and actual output and improvement of its financial sustainability. VWL believes that FTCI has been a blessing to the forestry sector. The company will continue to support FTCI and to optimize its services to the fullest extent possible."

Monty Niamatali, Variety Woods and Greenheart Ltd (VWL)

15

Information flow in the Philippines

Accurate, up-to-date data are essential for good decision-making in the forest sector but are rare in many tropical countries. In the Philippines, three ITTO projects carried out between 2002 and 2010 have greatly improved the quality and timeliness of information in that country's forest sector.

The first project assisted the Forest Management Bureau (FMB) to improve the collection, organization and analysis of forestry data pertinent to the FMB's mandate; ensure the timely flow of information within the organization to support policy decision-makers; and optimize the use of available people and technology within the Department of Environment and Natural Resources (DENR). It featured the development of a forestry information system (FIS).

The second project was designed to solve a problem in the Philippine wood-products industry by identifying bottlenecks and other problems in the flow of timber and timber products from their sources to end-users. Among its aims was development of a database of wood and wood products suppliers and end-users that could be accessed on the internet.

According to an ex-post evaluation of these two projects, both were executed in a professional and efficient manner, within budget and on schedule. The evaluators commented that the development and implementation of a national-level FIS had been sorely needed for a long time. Thanks to the two projects, the FIS "is now making a very significant improvement to operational management and longer-term development of the forestry sector of the Philippines".

Nevertheless, in 2006 the FIS was still largely in the pilot phase. It had several technical and methodological imperfections, and it had been installed in only two of the country's 16 regions. A third project was therefore approved and funded by ITTO in 2007 with the aim of improving the FIS and expanding it nationwide.

Training in the forest information system.
Photo: DENR-FIS/ITTO

According to an ex-post evaluation of that project conducted in 2011, a fully operational FIS is now in place nationally, and the quality of data has improved considerably. The FIS has already identified overlaps and gaps in tenure titles and has been instrumental in identifying sites for the Upland Development Program and the National Greening Program. Most officers in DENR's regional, provincial and community offices now use the system as part of their normal activities by providing data for it and/or by extracting information from it. Forest-sector stakeholders outside DENR, such as NGOs and prospective investors, also now have access to better information.

"The Forestry Information System is a big support to us in terms of faster decision-making specifically in resolving forestry issues through the statistical and spatial data that it provides. FIS data can also easily point to open access forest areas which can be made available to investors as well as benchmarked for future forest management projects by government. Likewise, the FIS is a big help to our forestry planning and has supported us in pursuing some of our forestry legislative reform agenda."

Neria A. Andin, Director (OIC), Forest Management Bureau, DENR

Project ID	Period	Total ITTO contribution
PD 41/99 Rev.4 (M); PD 133/02 Rev.3 (M); PD 353/05 Rev.2 (M,F,I)	2002–2009	US$795 576

Implementer	Donors
Forest Management Bureau (Philippines)	Australia; Japan; USA

Keeping track of what is happening to Philippine forests is difficult, but the development of the FIS has made it easier. *Photo: Yahya Idiz iStockphoto*

"The FIS aims to establish a regional inventory of all projects being implemented within forest areas; gather, verify and digitally compile data and information referred to as environment and natural resources datasets; map all legal, regulatory and civil projects under the forest areas in digital format using GIS software; and have digital thematic maps for planning purposes. The FIS has played a big role in the preparation of digital maps which are used in the fulfillment of the DENR Secretary's vision and mission in monitoring developmental activities in the future using GIS mapping and the internet."

Benjamin T. Tumaliuan, Regional Executive Director, DENR—Cagayan Valley

"Today, the FIS-GIS has become a part of the forestry sector, providing a more trustworthy data reference for better decision-making in the forestry sector and is currently being updated and built up."

Joselin Marcus E. Fragada, Regional Executive Director, DENR—Bicol Region

Calibrating a GPS during training in the FIS. *Photo: DENR-FIS/ITTO*

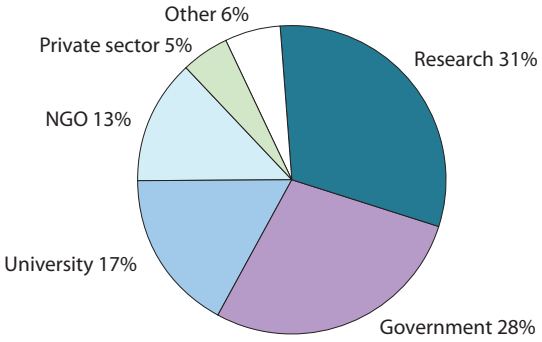
16

ITTO Fellowship Programme

ITTO offers fellowships to citizens of its member countries through the Freezailah Fellowship Fund. The aim is to assist the career development of young and middle-level professionals playing a role in the sustainable management of tropical forests, the efficient use and processing of tropical timber, and the collection and provision of information about the international trade in tropical timber.

Over the past two decades, the ITTO Fellowship Programme has awarded about US$6.6 million to more than 1100 people, including just over 300 women, from research institutes, governments, universities, NGOs and the private sector (see figure).

Background of ITTO fellowship awardees



In 2010 ITTO surveyed fellows (206 respondents) using a contribution analysis approach to assess the impact of its fellowship program. Among other things it found that:

- All fellows conducted their fellowships with clear objectives aligned with ITTO's objectives and priorities, and have continued to promote SFM after completing their fellowships.
- All fellowships were awarded in a fair and transparent manner.
- 'Brain drain' has not been a significant issue: 89% of fellows returned home immediately after completing their fellowship activities (10% are now undertaking PhD programs abroad). Six percent of fellows are working overseas for international organizations or global consulting companies.
- After completing their fellowships, 86% of fellows increased their productivity and performance in the institutions in which they work, and more than half have found positions relevant to the fellowship or have been promoted as a result of the fellowship. Most (90%) passed their newly acquired knowledge and experiences to others and continued to pursue their own professional and personal development.
- 82% of fellows developed new programs or innovative ways of working that led to more effective work performance at their institutions, and a majority (86%) strengthened their professional networks through their fellowships.
- 83% of fellows have applied the knowledge, skills and networks they gained from their fellowships to influence national forest and environmental policies in their home countries, and 44% are working on international forestry issues such as climate change and REDD.

Rabindra Roy from Nepal (second from right) completed his PhD studies as an ITTO fellow. *Photo: Rabindra Roy*

"The ITTO fellowship gave me a chance to pursue the career that I passionately love."

Myralyn Abasolo, Philippines

Dr Othniel Yila from Nigeria received his doctorate after benefiting from an ITTO fellowship. *Photo: Othniel Yila*

"The ITTO fellowship has had a great impact on my professional career and job performance. The technical document I produced [under the fellowship] has been of great use, not only in my country, but also in other nations, as I have received several requests for the publication, and it has been made available on our departmental website to facilitate dissemination to a wider audience."

Olufemi Shadrach Akindele, Nigeria

"My ITTO fellowship has also impacted communities through improved food security and livelihood as farmers diversify production by incorporating forest fruit trees and vegetables into farms."

Roseline Gusua Caspa, Cameroon

"My PhD program might have been difficult to complete without the fellowship. Also, when the report was published in the Tropical Forest Update, a number of local organizations that needed information on some properties of bamboo contacted me. I could not have made this impact without the fellowship."

Stephen Tekpetey, Ghana

"My ITTO fellowship is having longer-term impacts on my professional career. I am spending more time teaching at university and sharing international perspectives on conservation. I have also assumed a substantial role in a conservation research network and was recently appointed as chair of the Asia Pacific Chapter of the Association for Tropical Biology and Conservation. I was also recently appointed as a technical (scientific) advisor at the parliament."

Dr Mochamad Indrawan, Indonesia

"My two-year degree, which I completed with the support of an ITTO fellowship, helped me gain relevant technical knowledge on environmental issues. Most importantly, however, it opened my eyes to how fortunate I am to have the opportunity to dedicate myself to a career that aims to inspire people to change behaviour and to seek a more sustainable life in harmony with the environment."

Marisa Camilher Camargo, Brazil

"The ITTO fellowship was instrumental in the conduct of and the high technical level reached in my doctoral studies. It has allowed me to pursue career options more efficiently and with greater capacity, and to reach a high position in my field of work. So it has been invaluable both personally and professionally."

María Benitez Torres, Venezuela

Brazilian forester Danielle Celentano pursued a Master of Science degree as an ITTO fellow. *Photo: Danielle Celentano*

17

Lanjak-Entimau Wildlife Sanctuary

In 1992, ITTO financed a biodiversity conservation project to assist in the development of the Lanjak-Entimau Wildlife Sanctuary as a totally protected area. It was the beginning of a partnership between ITTO and the Sarawak Forest Department to improve the management of the wildlife sanctuary that lasted nearly 20 years.

Part of the process of improving management involved the development of transboundary links. In 1994, with ITTO support, the governments of Malaysia and Indonesia agreed to establish the first transboundary conservation area (TBCA) in the wet tropics—comprising the Lanjak-Entimau Wildlife Sanctuary in Sarawak and the Betung Kerihun National Park in West Kalimantan over an area of 1.2 million hectares.

Perhaps the most significant conservation aspect of the Lanjak-Entimau/Betung Kerihun TBCA is the presence of about 4000 orang utan (*Pongo pygmaeus*), a highly endangered species, making the TBCA the most important sanctuary for orang utan in Borneo. The area faces a number of management issues, including illegal logging, the high level of dependence of local communities on the forests for their livelihoods, industrial plantation development, and the collection and trade of protected species. While improving the day-to-day management of both protected areas is largely a matter for the individual governments and local stakeholders, improving transboundary cooperation has enabled the sharing of scientific knowledge and increased social and cultural exchange between communities on either side of the border, and it has improved control of incursions and other illegal activities.

Bird-watching as part of a community environmental awareness campaign near the Lanjak-Entimau Wildlife Sanctuary. *Photo: Sarawak Forestry Department/ITTO*

As a result of project work over a long period, much more is now known about the biodiversity on both sides of the border. The communities living near the Lanjak-Entimau Wildlife Sanctuary have reduced their dependence on forests as they develop livelihood activities such as fish-farming and the cultivation of local fruits. Increasingly, members of the local communities are volunteering as rangers because the benefits of maintaining a healthy, pristine forest reserve near their villages are becoming more apparent. This has improved both the management of the protected area and law enforcement, reducing pressure on the sanctuary's important biodiversity assets.

The success of ITTO's involvement in improving the management of the Lanjak-Entimau Wildlife Sanctuary, and its pioneering involvement in the creation of the Lanjak-Entimau/Betung Kerihun TBCA, has encouraged other initiatives. For example, it helped to inspire the development of the Pulong Tau–Kayan Mentarang TBCA, also between Sarawak and Indonesia, and several other TBCA initiatives across the three tropical regions. It has also served as a model for the Heart of Borneo initiative, which aspires to match the achievements of the Lanjak-Entimau/Betung Kerihun TBCA.

A new unit has been created within the Sarawak Forest Department to ensure the sustainability of initiatives such as the Lanjak-Entimau Wildlife Sanctuary, to promote community participation in protected-area management, and to improve the livelihoods of the rural populations. The idea for this unit arose from the work carried out in the

Project ID	Period	Total ITTO contribution
PD 106/90 Rev.1 (F); PD 15/95 Rev.3; PD 16/99 Rev.2 (F); PD 288/04 Rev.2 (F)	1993–2010	US$4 268 420

Implementer	Donors
Sarawak Forest Department (Malaysia)	Denmark; Japan; Switzerland

The TBCA contains some of the largest remaining populations of the orang utan. *Photo: Rob Broek iStockphoto*

sanctuary and also in the Pulong Tau National Park and its creation reflects a new approach of government to protected-area management by involving communities and timber companies as co-partners and, through sustainable use, allowing locals a share of the forest resources.

"Community relationships have improved since we began to work together. We are growing to be independent of the government. We have saved enough money to upkeep our fish pond and I am thinking of building my own pond."

Rejang ak. Sugai of Ng. Ju

"Thank you for making an improvement to our livelihood. It is now easier to earn a living. There is no more need for us to go into the rivers to fish during the Gawai (harvest) festivals. The fish in the rivers have also recovered."

Anthony Bau, longhouse headman

"Our family is learning to become more enterprising, and we have been earning additional income from the fruits we have planted."

Gerasi ak. Kapi, longhouse headman

"When I took the petai [Parkia speciosa] fruits I planted to my relatives and friends in Entabai and Julau, many asked why I did not bring more to sell. They told me that the fruits were like gold to them because it was no longer easy to get them from the forest."

Jawa ak. Ribut of Ng. Ju

"One year after ITTO and the Forest Department came to help us, I built a fish pond with my own money and have enjoyed more income."

Nyalih ak Masil

"Working with the local communities of the Lanjak-Entimau Wildlife Sanctuary has taught us that the local communities need not be a hindrance to biodiversity conservation. Indeed, the local people are in a better position to help the government to protect the forest and its resources because they are on the ground. This is one of the most important lessons that we have learnt from Lanjak-Entimau."

YAB Pehin Sri Haji Abdul Taib Mahmud, Sarawak Chief Minister

18

Restoring a forest ecosystem in Togo

An ITTO project in Togo has helped a community to restore the productivity and ecological functions of a local forest and to increase income through new forest-based enterprises and ecotourism.

The Missahoé Forest Reserve was established in 1953 in a mountain range near the town of Kpalimé in Kloto prefecture. Eleven local communities and around 20 000 people live in the vicinity. The Missahoé Forest Reserve has been logged heavily in the past and the remnant forest has been progressively eliminated by waves of immigrants practising shifting cultivation or planting coffee and cacao. By 1999 the forest was almost denuded of vegetation and subject to frequent fires.

An ITTO pre-project carried out in 1997–99 helped to prepare a project proposal for the sustainable management of community forests in Kloto, starting with the Missahoé Forest Reserve, with the participation of the local community.

The project began in 2000. Among other things, it achieved the consensual demarcation of the boundaries of the forest reserve and of five areas to be used by farmers; the planting of 596 hectares in the reserve and 288 hectares in its vicinity, mostly with *Terminalia, Cordia* and *Khaya* species; the training of 350 people; and the preparation of a management plan for the reserve. The project also established a 'forest fund' to help pay for the continued maintenance of the planted areas.

A village in the Missahoé Forest Reserve. *Photo: Juergen Blaser/ITTO*

Remnant forest in the Missahoé Forest Reserve. *Photo: Juergen Blaser/ITTO*

According to an ex-post evaluation conducted three years after project completion, the plantations established under the project were in good condition and demonstrating better-than-expected growth rates. Moreover, the remnant native vegetation in the reserve had recovered significantly and was being better protected from fire, and there were permanent water flows in many previously dry creeks. The evaluators considered the management plan prepared for the Missahoé Forest Reserve to be conceptually sound and the project to have been highly cost-effective. Women were involved heavily in the project, including in leadership roles, and a women's association that had been created under the project had developed a small but well-managed and profitable forest

Project IDs	Period	Total ITTO contribution
PPD 11/96 Rev.2 (F); PD 9/99 Rev.2 (F)	1997–2003	US$443 728

Implementer	Donors
Department for the Protection and Control of Flora Utilization (Togo)	Japan; USA; Korea

Communities living in or near the Missahoé Forest Reserve rely on forests for a wide range of products, including fuelwood. Forest restoration and agroforestry development is helping to ensure the availability of such products in the future. *Photo: Juergen Blaser/ITTO*

nursery. It was evident to the evaluators that the attitude of the local people to forests had changed for the better. Given the success of the planted forests, farmers not involved in the project had become interested in establishing small forest plantations on their own land.

"Thanks to this project, we live better lives. Our parents and our next of kin have come to settle with us. Our income levels have been raised, which has enabled us to better mind our children's schooling and health needs."

Mr Koffi Kuma Ayih, Tové village

The Missahoé Forest Reserve. *Photo: Juergen Blaser/ITTO*

19

Wildlife management in concessions

A female western lowland gorilla, one of the endangered species found in the Noubalé-Ndoki National Park.
Photo: Alan Lagadu iStockphoto

In recent years, an influx of workers and other migrants to the Congo Basin has increased the demand for bush meat in local and urban markets, leading to often sharp declines in populations of species such as gorillas, elephants, bongos and a range of small mammals.

The policy of the Government of the Republic of the Congo is to promote both conservation and development through the sustainable use of the country's significant forest resources. In 2000, ITTO funded a project to improve biodiversity management and conservation in one of the most critical regions for biodiversity in Africa—a forest concession adjacent to the Nouabalé-Ndoki National Park in northern Congo. With an area of influence of about 1.8 million hectares, the project (including a second phase financed in 2005) was implemented as a joint initiative of the Congo's Ministry for Forest Economics (MFE), the Wildlife Conservation Society (WCS), and a private timber company (*Congolaise Industrielle des Bois*—CIB).

At its inception, the partnership between these three bodies—a government, an international conservation NGO and a Europe-based timber company—was unique in Central Africa, uniting stakeholders with divergent objectives around the common theme of SFM. CIB has provided substantial financial support, especially for wildlife protection. It also implements reduced impact logging, and it has a social unit which, together with local communities, engages in a participative planning process. It has banned hunting in certain areas, as well as the transport and export of bush meat from one site to another. The management plan for the Kabo concession—the first in the Congo—was adopted in 2006 and FSC certification

Project IDs	Period	Total ITTO contribution
PD 4/00 Rev.1(F); PD 310/04 Rev.2(F)	1999–2011	US$1 764 325

Implementer	Donors
Wildlife Conservation Society (USA)	Japan; France; Switzerland; USA; Norway

Bushmeat is still an important part of the local diet, but the project encouraged moves towards livestock-raising to provide an alternative source of protein. *Photo: Juergen Blaser/ITTO*

has been obtained. CIB has embarked on similar processes in its other concessions.

Through an agreement with the Congolese Government, WCS oversaw the management of the project. It established a system for ecological and socioeconomic monitoring and research and for law enforcement, which includes a set of indicators to measure the project's performance. It also raised awareness among local communities—villagers, nomadic peoples, and CIB workers and families—about the laws and regulations governing hunting and the sustainable use of natural resources. Villagers have formed committees to manage their hunting grounds and, after training, have largely assumed the management of their natural resources, including by contributing to the removal of illegal hunting camps.

According to an ex-post evaluation of the project's first phase conducted in 2008, this initiative is the first effective example of the integration of fauna conservation and management in forest concessions in Central Africa. In general, the innovative partnership between the Government of Congo, CIB and WCS has functioned well and in a positive way. The success of the model has led to its adoption in other forest concessions (i.e. the Mokabi and Ngombé forest management units), where collaboration with NGOs is being pursued with the aim, among other things, of obtaining FSC certification. The project has reduced uncontrolled and illegal hunting to a sustainable level and established an effective and functional control system.

The *ITTO/IUCN guidelines for the conservation and sustainable use of biodiversity in tropical timber production forests*, a joint publication of ITTO and the International Union for the Conservation of Nature, set out the specific actions that policymakers, forest managers and other stakeholders should take to improve biodiversity conservation in tropical production forests. This 2009 publication updates an earlier set of guidelines published in 1994, drawing on, among other things, lessons learned in the northern Congo project.

20

Producing and adding value to rattan

In the past, the local supply of rattan for Thailand's furniture and handicraft industries has been derived almost entirely from the wild. Excessive and wasteful harvesting, including from illegal sources, has resulted in supply shortages.

To help address this problem, an ITTO project commenced in 2001 with the aim of developing and disseminating, among village farmers and forest communities, appropriate technologies for rattan plantation management and the efficient use of rattan for weaving and furniture-making.

The project established demonstration plots for rattan shoot and cane production in several provinces, and training courses were conducted in communities on rattan-shoot processing and packaging and on rattan weaving and furniture-making.

The demonstration plots gave the communities a clearer grasp of the benefits of adopting sound plantation management and shoot-harvesting techniques. This was critical to the decision by farmers to replace crops such as cassava and sugarcane with rattan. In collaboration with other government entities, two community-based enterprises, one on rattan-shoot processing and the other on rattan furniture-making, were established.

Villagers prepare rattan poles for processing.
Photo: Florence Soriano/ITTO

The Baan Kumphangsaen (BKS) Group, a furniture-making cooperative enterprise in Ratchaburi, has been particularly successful, progressing from basket-making to medium-value and high-end furniture-making for export. The project provided a training course in rattan-weaving and furniture-making, after which the trained people gathered together to set up the BKS Group to market their furniture and weaving products. Another training course, on new designs in rattan furniture, helped the cooperative to integrate rattan and steel, adding value to their products and reducing rattan wastage.

The BKS Group obtained a 4-star certificate from the government's One Tambon–One Product program and their products were presented at a wide range of trade fairs. This certification was instrumental in attracting further support from local government and business-support units.

In 2011, five years after completion of the ITTO project, the BKS Group is a successful business. In 2003 the community could earn only 20 baht for the small rattan gift baskets they produced; now, their high-value rattan products are sold for several thousand baht. The group has become famous at a national level, receiving visits from all over the country from communities and entrepreneurs anxious to learn the secrets of their success.

The BKS Group serves as a model for the development of enterprises in other previously subsistence-based communities. The sustainability of its business can be attributed largely to the project's technical interventions and the leadership of the group, which, aside from showing sound financial management and resourcefulness, has also encouraged innovation among its members.

Project ID	Period	Total ITTO contribution
PD 24/00 Rev.1 (I)	2001–2006	US$292 457

Implementer	Donor
Forest Research Office, Royal Forest Department (Thailand)	Japan

Villagers participate in a rattan furniture-making workshop. *Photo: P. Denrungruang/ITTO*

"The successful development of the community-based furniture enterprise in Ratchaburi is viewed as a model for developing subsistence-based communities into enterprise-based ones. By having a business champion in the community leader, this experience can be replicated in other villages by the Royal Forest Department project staff and extension workers."

Ex-post evaluation of ITTO project PD 24/00 Rev.1 (I)

21

Better harvesting practice in Brazil

The aim of reduced impact logging (RIL) is to minimize the environmental impact of timber harvesting through careful planning and the high-quality execution of those plans. RIL reduces soil and water degradation and the loss of wildlife and ensures that forests quickly recover from logging. RIL has also been shown to reduce the damage to growing stock caused by falling trees and to decrease the number of 'lost' logs (those trees that are felled but not extracted because they aren't seen by tractor operators), thereby reducing timber wastage.

An ITTO project in the Brazilian Amazon implemented in three phases by *Instituto Floresta Tropical* (Tropical Forest Institute—IFT) from 1998 has had a substantial impact, not only on the skills available for high-quality RIL but also on public awareness about the importance of good forest management in general and RIL in particular.

In the first phase, foresters, supervisors, managers and trainers from Brazil and other ITTO producer countries in Latin America and the Caribbean were trained in RIL techniques. The training was field-based and practical, giving participants direct, hands-on experience in all activities related to pre-harvesting measurement and layout, harvest planning, logging and post-harvesting treatments. Lectures provided a theoretical foundation for the hands-on field work.

Field-based RIL training under the ITTO project. *Photo: Instituto Floresta Tropical*

This work was strengthened and built upon in the following two phases. Since the beginning of the project, significant gains have been made in training, extension and relationship-building in priority regions of the Amazon frontier, such as Calha Norte, BR319, BR163 and the Trans-Amazon Highway. While the Amazonian forest sector still needs thousands more professionals and workers trained in RIL and other aspects of SFM, the project has been able to meet a significant part of the demand in these priority areas. In total, about 1700 forestry personnel were trained directly by the project.

Several forestry technical schools and a university are now using the IFT training program developed by the project as an adjunct to their curricula. For example, during 2002 IFT organized a special two-week course in RIL training for students who had just graduated from the *Universidade Federal Rural da Amazônia*. This was done at the students' own request because they had discovered that enterprises were more interested in hiring graduates who had taken the IFT RIL training course.

The influence of this work on the adoption of SFM in the Brazilian Amazon has been substantial, going far beyond the direct effect of the training program. The project's RIL procedures have been encoded in regulations and in field guides prepared by the *Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis* (Brazilian Institute of Environment and Renewable Resources) and other

Project IDs	Period	Total ITTO contribution
PD 45/97 Rev. 1 (F); PD 206/03 (F); PD 432/06 Rev.2 (F)	1998–2010	US$1 983 395

Implementers	Donors
Tropical Forest Foundation (USA); Brazilian Institute of Environment and Renewable Resources (Brazil); IFT (Brazil)	Japan; Switzerland; USA

Field-based RIL training under the ITTO project. *Photo: Instituto Floresta Tropical*

agencies. The IFT's methods for auditing forest operations and monitoring their impacts have been adopted widely by forest certifiers and by inspectors charged with enforcing Brazil's new statutes related to forest management. But perhaps most importantly, people who have participated in the RIL training courses are putting what they learned into practice on a daily basis. Some have set up their own businesses to develop forest management plans and to do RIL training. This includes both forestry graduates and technical personnel such as top-quality sawyers.

The overall effect of the project has been to greatly accelerate the adoption of RIL techniques in Brazil. It started at a time when conditions within Brazil had developed to a point where the demand for RIL training was increasing rapidly and the project was able to satisfy a substantial part of that demand. This in turn has had an important positive effect on the adoption of SFM. SFM is advancing rapidly in the Brazilian Amazon, and the region seems poised to make a significant improvement in the status of forest management in coming years.

22

Thailand's rubberwood furniture industry

East Coast Furniture, a rubberwood-based enterprise, Thailand. *Photo: Charlotte Cudby/ITTO*

At the time of the ban on logging in natural forest in 1989, Thailand's furniture industry—a significant exporter and employment provider—was forced to find an alternative source of raw material. It quickly adapted to rubberwood, of which there was an abundant supply from the country's extensive rubber plantations, to the point that today the furniture industry is almost fully reliant on this timber. The transformation was problematic, however, and Thailand's furniture industry declined in competitiveness.

An ITTO pre-project implemented in 1998–2000 brought together key players with an interest in rubberwood development and generated data and information about the key issues facing the sector. The scope of work needed to improve the competitiveness of the wood-furniture industry was very broad. Much had to be done, for example, to create cooperative and productive relationships between stakeholders, including a number of government departments, who until then had hardly interacted at all.

It was realized that the needs for technical assistance in the rubberwood sector were so extensive that a large-scale national program was justified. On the other hand, it was first necessary to create awareness of the key issues to be resolved, to establish an adequate information base, and to develop a critical mass of human resources.

It was the task of an ITTO project to initiate this process. This project brought together key stakeholders to improve understanding and build a positive environment for engagement; transferred

Project ID	Period	Total ITTO contribution
PD 51/00 Rev.2 (I,M)	2002–2005	US$406 138

Implementer	Donors
Forest Research Office, Royal Forest Department (Thailand)	Japan; Korea; USA

A chair made from rubberwood, Thailand. *Photo: Charlotte Cudby/ITTO*

technology by training trainers, developing training materials and providing new technologies to local industries; and generated a strong body of information on rubberwood to inform future work on developing the sector.

According to an ex-post evaluation conducted three years after project completion, the project was highly successful in each of these activities. For example, it:

- Encouraged stakeholders to collaborate and build networks.
- Developed a good information base and built capacity across stakeholders on rubberwood development issues and priorities.
- Trained local trainers and developed useful and relevant course documentation.
- Spurred the industry to improve its attitude to change and to upgrade operations to increase its productivity and competitiveness.
- Highlighted the importance of stakeholder agreement on a common vision for rubberwood development to support consistent follow-up action and build longer-term commitment.

A rubberwood furniture component in East Coast Furniture, a Thai factory. *Photo: Charlotte Cudby/ITTO*

The ex-post evaluation found that the project was governed collaboratively and the budget well managed:

> *"That, along with unexpected in-kind contributions by industry, meant that significantly more activities were achieved at the level of outputs than originally envisaged."*

Many stakeholders were involved in implementing the project, from project design to completion, which was difficult to manage but done well. According to the evaluator:

> *"The overall impacts of the project demonstrated that positive outcomes had been achieved for the target beneficiaries of the project. Furthermore, there have since been some excellent follow-up initiatives that would not have taken place if it were not for the catalytic effect of the project."*

23

Tenure and local enterprise

Indonesian forest communities would like more say in the management of customarily owned forests.
Photo: Hwan Ok Ma/ITTO

In many tropical countries, the state has claimed legal title to forests since colonial times, even though customary ownership of those forests dates back centuries and possibly millennia. Local people are often viewed by the law as trespassers on their own customary land, and they are unable to use the forest legally to improve their livelihoods. This leads to conflict, stunts local development and holds back SFM.

Recognizing the importance of customary rights and local-level forest-based entrepreneurship, in 2007 ITTO partnered with the Rights and Resources Initiative (RRI), the Government of Brazil and the Global Alliance of Community Forestry (GACF) to host the first international conference on forest management and community forest enterprises (CFEs).

That conference, which brought together government policymakers and forest-community leaders and supporters from across the three tropical regions, had tangible outcomes. In its wake, for example, the Brazilian government and civil-society organizations agreed to develop a community forestry policy and program, which in turn has produced a national council on community forestry and a range of new policies, programs and financial support.

The conference also led directly to a second international event, in 2009, this time hosted by the Government of Cameroon in Yaoundé. That conference enabled a rare international airing of the contentious issue of forest tenure in Central and West Africa. It also prompted moves towards reform in several African countries. For example, the Government of the Republic of the Congo recently passed a law recognizing the land rights of indigenous forest peoples, a first in Central Africa. The declaration issued at the end of that conference has become a baseline for action in the region.

A tribal chief speaks out during a working group at the Yaoundé conference. *Photo: A. Sarre/ITTO*

In mid 2010 a third international conference to address forest tenure was convened in Lombok, Indonesia, hosted by the Government of Indonesia. This was an opportunity for leaders of disaffected forest communities to air their grievances to an international audience, and it also enabled officials of the Government of Indonesia to make overtures to such communities and to commit to a multi-stakeholder dialogue. A meaningful process to address forest tenure is now a real possibility in Indonesia (see quotes next column).

These three international conferences have helped to bring the issue of forest tenure to global prominence. ITTO has played a major role, not only by helping to fund the conferences but also in acting as a broker between governments, civil-society organizations and communities.

Governments that have embarked on forest-tenure reform know that it is not an easy path. Nevertheless, it is a path they must travel if they are to resolve the conflicts and clear away the confusion over ownership that for so long has hindered sustainable forest-based development.

A plenary session at the Rio Branco conference. *Photo: A. Sarre/ITTO*

"I am offering to meet with civil society in the next three to six months to discuss what we will do together. This conference is not the end; it is the initial step. It is a ceasefire to put on the table the principles we can agree on."

Hadi Pasaribu, senior official of the Indonesian Ministry of Forestry at the conclusion of the Lombok conference

"In the last few days we have learned some bitter truths, and it makes us wonder how on earth we can solve these problems. But the truth can drive us towards reconciliation. Indeed, there can be no reconciliation until there is truth. We still have to free ourselves from colonization, the remnants of colonization. Hopefully the Ministry of Forestry feels the same way. The Ministry of Forestry is part of the journey."

Abdon Nababan, representative of AMAN, a major Indonesian NGO, at the conclusion of the Lombok conference

24

Supporting training in Central Africa

Forestry students at CRESA, University of Dschang, Cameroon. *Photo: François Hiol Hiol/ITTO*

Regional Training Centre Specialized in Agriculture (CRESA) Forestry and Wood, University of Dschang, Cameroon. *Photo: François Hiol Hiol/ITTO*

CRESA, University of Dschang, Cameroon. *Photo: François Hiol Hiol/ITTO*

Joinery workshop, Mbalmayo Forestry School, Cameroon. *Photo: François Hiol Hiol/ITTO*

One of the keys to improving forest management in Central Africa is growing the skills base. Two ITTO projects are making a substantial contribution to this by supporting members of the Forestry Schools in Central Africa Network (RIFFEAC).

Under the first, small ITTO project, training needs were evaluated in three forest concessions in Cameroon, Gabon and the Republic of the Congo. These were validated at a regional workshop attended by forest professionals from the public and private sectors, and the data were used in the development of a reference training program in forest management and the management of forest concessions in member training institutions. The project updated curricula in forest management and trained trainers in the appropriate pedagogic methods for training in forest management.

The project gave impetus to involved schools and training institutes, ministries and governmental agencies, and helped to engage forest concessionaires operating in Central Africa. It increased the profile of RIFFEAC, which is now recognized by the Commission in Charge of Forests in Central Africa (COMIFAC) as the primary network for training in forest management in Central Africa. RIFFEAC was formed in 2001; with the help of the ITTO project it is now the umbrella network for 13 forest training institutes in Central Africa.

Project ID	Period	Total ITTO contribution
PD 189/03 Rev.1 (I), PD 456/07 Rev.4 (F)	2003–2013	US$1 349 460

Implementers	Donors
IUCN; RIFFEAC Secretariat	Japan; Switzerland; USA (first phase)

A 60-year-old plantation of African ebony (*Diospyros crassifolia*) at the Mbalmayo Forestry School, Cameroon. *Photo: François Hiol Hiol/ITTO*

A seedbed of wenge (*Millettia laurentii*) at the Mbalmayo Forestry School, Cameroon. *Photo: François Hiol Hiol/ITTO*

The success of this project and the capacity it created within RIFFEAC and national training institutions has led to the creation of a much larger, five-year project. This transformative subregional project, set to begin at the end of 2011, will strengthen the capacity of RIFFEAC training institutions to train forest professionals in the implementation of the ITTO/IUCN *Guidelines for the conservation and sustainable use of biodiversity in tropical timber production forests* and SFM, thereby reconciling biodiversity conservation and the wellbeing of local communities.

25

New ways of earning money from forests

One reason that forests continue to be cleared is that alternative land uses are more profitable than forest use. Yet forests provide many ecosystem services that are rarely paid for. Capturing that value in payments of hard cash could help to reduce deforestation.

An ITTO project that started in 2000 set out to test an alternative model for financing SFM in Colombia's San Nicolás valleys. It was implemented by the Regional Autonomous Corporation of Rio Negro (CORNARE) in cooperation with a Swiss research organization, EMPA.

San Nicolás is located in the high plateau region of east-central Colombia near the city of Medellín. An attractive series of inter-mountainous valleys noted for their diverse agricultural production, watershed services and tourism, San Nicolás is under pressure from urban development, the expansion of industrial crops, poor forest management and rising poverty. The project explored new funding sources for SFM and forest protection in a proposed sustainable forestry area covering 72 000 hectares and involving up to 45 000 smallholder farmers.

Possible revenue sources include:

- The sale of products from secondary forests under sustainable management.
- The sale of environmental shares that allow corporate purchasers to obtain 'environmental recognition' for use in publicity campaigns.
- The sale of certified reductions in greenhouse-gas emissions from reforestation, reduced deforestation, and carbon sequestration.

By the end of the project, a 25-year master plan for the region had been prepared, a baseline and monitoring plan for emission reductions and other ecosystem services—especially biodiversity conservation and scenic beauty—had been established, land tenure in the region had been clarified, and hundreds of local people had received

A project worker teaches forest restoration techniques to a community group. *Photo: CORNARE/ITTO*

training in reforestation, entrepreneurship and the creation of family businesses. The project created a partnership, 'MASBOSQUES', involving the private sector, municipality governments, key farmer organizations, relevant research and academic institutions, local NGOs and the church, to make decisions on natural resources and implement the management plan. A range of technical and scientific issues on the potential of the region's montane forests in mitigating climate change had been resolved, and there was greater awareness at the local level about the diverse range of options for increasing income through activities that are environmentally sustainable.

This change in awareness at the local level is movingly illustrated by a story told by one of the project coordinators, Carmenza Robledo:

> *"At one of the early workshops where we talked about the project, people were confused about carbon credits; they wondered if we wanted to sell their oxygen. During a break in the workshop a farmer, Don Marco Julio Trujillo, asked me: "Look, if you sell our air, what will our children breathe?" For the coordinators of the project this question struck home. We realized how important it was to involve local actors in a process that allowed all stakeholders (including the project team) to understand the opportunities for and limitations of using mechanisms aimed at mitigating climate*

Project ID	Period	Total ITTO contribution
PD 54/99 (F) Rev.2 (F); PD 240/03 Rev.1 (F)	2000–2009	US$1 119 186

Implementers	Donors
Autonomous Regional Corporation of Rio Negro-Nare (Colombia); EMPA	Japan; Switzerland; USA

A typical landscape in the San Nicolás valley.
Photo: CORNARE/ITTO

change, as well as the concerns and knowledge that the different stakeholders had.

"Some years later I met Don Marco Julio in another event with the communities. He had become a very active local promoter of the project and was involved in formulating the forest management plan. Moreover he offered land for the testing plots of one of the agroforestry systems we had designed. He was able to explain to his communities the link between growing the forest and carbon certificates. He did it in his terms. He explained that the systems that provide food and input for his family and the community are also important for cleaning the air, and that people from other countries were willing to pay for this service."

The project has helped to change the culture of decision-making about natural resources by creating an open dialogue space—known as the 'regional forum'—and putting in place a decision-making mechanism—MASBOSQUES—that is transparent and accountable. Such mechanisms require time and resources but give the region the best possible chance of achieving sustainable outcomes and gaining access to potential funding for climate-change mitigation and other ecosystem services. Given the volatile security situation in Colombia (especially during the project's first phase), the project's inclusive approach was essential for earning the support of stakeholders.

On behalf of farmers and other stakeholders, MASBOSQUES and CORNARE have since negotiated with the World Bank's Biocarbon Fund and other international investors, seeking payments for the region's carbon sequestration services.

"I think this is the moment to thank all the organizations that have supported us—CONARE, ITTO, EMPA and the Ministry of Environment—because not only are they supporting a project that benefits mankind in general, but that also has assured us farmers a food source and we are stronger communities due to all the activities."

Elisa Buitrago, local farmer

"[Through the project] CORNARE taught us that we were in an ecological corridor. They were willing and prepared to teach us, first, what is an ecological corridor, and then how we should work to protect it."

Jesús Quiroz, local farmer

"The workshops that we do provide technical support for the community work ... to increase the quality of life and the most important thing, the recovery of land in poor condition, the recovery of forests, the protection of watersheds. And the truth is that the environment has improved in El Retiro."

Juan Alberto Villejas, local farmer and one of the 'community promoters' trained by the project

A boy goes swimming in the Ecuador/Peru Condor TBCA. *Photo: Nicholás Kingman*

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