

## Government Role

Under an agreement signed in October 2007 by the governments of the United States and environmental groups, \$26 million of Costa Rican debt will be forgiven in exchange for tropical forest conservation. **The debt-for-nature swap** comes under the Tropical Forest Conservation Act of 1998, legislation intended to allow eligible developing countries to forego paying back debt owed to the U.S. in exchange for supporting local tropical forest conservation activities.

In the 1990s Costa Rica set a new course; one that sought to unlock the value of its ecosystems. While ecotourism was the most obvious path, Costa Rica also pioneered the development of payments for environmental services ("PSA" or *pagos por servicios ambientales*). In 1996 the country established a program to compensate landowners for keeping forests intact and reforesting degraded areas.

Despite its environmental rhetoric and conservation legislation, Costa Rica has a poor track record when it comes to deforestation. In the early 1990s, the country had one of the worst deforestation rates in Latin America. Costa Rica was once 99 percent forested, but forest cover has steadily diminished from 85 percent in 1940 to around 35 percent today according to the FAO's *State of the World's Forests* (FAO's *Forest Resources Assessment* says the current cover is closer to 50 percent). Historically, clearing for agriculture (mostly coffee and bananas) and cattle pastures has been the largest contributor to Costa Rica's rainforest destruction. During the 1970s and early 1980s, vast stretches of rainforest were burned and converted into cattle lands.

## Continuing Deforestation

Evidence of deforestation is everywhere. Enormous logging trucks loaded with gigantic trees can be seen thundering down roads, exiting the dwindling reserves - the sights and sounds of a forest's slow death. From the air, one can see the huge plots of land barren of the massive giants that once stood there.

There are many reasons for the deforestation that is occurring in Costa Rica. Firstly, logging companies do not discriminate when deforesting. An entire area will be cleared in order to extract only one or two profitable species; the rest is left to rot. In addition, roads that logging companies build to transport trees out of the virgin forests further enable the encroachment of civilization into those forests. The production of grazing land, however, is the major cause of deforestation. Since the 1950s, about 60% of Costa Rica has been cleared to make room for cattle ranching. In fact, during the 1960s, the U.S. offered Costa Rican cattle ranchers millions of dollars in loans to stimulate beef production. The result was devastating.

Banana plantations also contribute to the shrinking of the Costa Rican wilderness; in particular, the ultra-diverse lowland rainforest. They now cover 130,000 acres of previously forested land, primarily in the Atlantic and Northern regions. In addition, this industry has a long tradition of affecting its workers with exposure to high levels of dangerous pesticides. In the 1970s, this became embarrassingly apparent when thousands of plantation workers throughout Central America became sterile.

## Conservation

The project **COSEFORMA** which ended in 2001 was a conservation project of forest resources and the establishment of a self-sustaining forestry sector which creates employment and generates income for the poor population in rural areas. The project therefore supported all options which gave additional value to the goods and services provided by forests in order to make forest management more competitive with other forms of land use. In this light, COSEFORMA carried out a diversity of activities:

(i) The introduction of sawmills for small diameter trees from forest plantations. In cooperation with CCF, marketing strategies for secondary timber products like furniture and industry palettes were developed. This boosted industrial activity in the area.

(ii) Reforestation programmes were promoted to reduce the degradation of forests. These programmes supported the cultivation of diversified local tree species instead of concentrating on one species only. Endemic tree species were integrated, contributing to the stability of plantations and providing additional income sources through new products.

(iii) The use of non-timber forest products was stimulated, starting with the support of the local Co-operation 'Coop San Juan'. This Coop cultivates Raicilla, a medical plant used to combat diarrhoea and dysentery, which is an important export product.

(iv) To meet the increasing demand for high quality seed and seedlings, COSEFORMA supported the establishment of a seed laboratory for local tree species in 1995, with co-operation of the Technical University in Cartago.

(v) In support of the above actions, COSEFORMA provided training for (local) professionals in the management of primary and secondary forests, reforestation techniques, processing of small timber and the management of plantations.

## Eco-tourism

Ecotourism is loosely defined as nature-based tourist experiences, whereby visitors travel to regions for the sole purpose of appreciating their natural beauty. As early as 1965, *responsible tourism* was defined

- respects local culture
- optimizes benefits to local people
- minimizes environmental impacts
- maximizes visitor satisfaction

Eco-tourism has become one of the most important sources of revenue for Costa Rica. The country is considered an ideal introduction to the rainforests for its biodiversity, its excellent and accessible parks system, and its relative safety for tourists. In some areas, tourism has proved a little too much for the environment and some parks now have restrictions on the number of visitors allowed at any given time. Further, the construction of hotels in some locations has proved ecologically controversial. Still, Costa Rica serves as a prime example to other developing countries that economic well-being is compatible with forest preservation.

## Illegal logging

The peninsula of Osa, a strip of land in the southeast of Costa Rica and home to some of the most unique flora and fauna in the country, is in danger due to illegal logging. For years, the territory has been the victim of a systematic attack by loggers and their power saws - the main enemy of ecosystems there, which is growing stronger.

Although the logging is low-intensity and continues to be prohibited, as much in Osa as in the rest of the country, the government is granting permits for controlled cutting called "plans of operation," which once approved must undergo a government investigation. "The problem is that we do not have the human capacity to exercise this control," says Rodriguez, who adds that in all of the peninsula, his ministry scarcely has four forest engineers and reduced personnel who are unable to cope with their duties. The last straw has been the recent approval of laws which give the ministry more functions but not more economic resources.

- Costa Rica has proportionally less rain forest left than many other tropical countries. In fact, only a few islands of relatively untouched lowland Caribbean rain forest remain. Less than 10 percent of Costa Rica's forests are national parks.
- Both the national park service and FUNDECOR, a nonprofit organization devoted to the conservation of national parks, acknowledge there is not enough money to protect the national parks and their boundaries from encroachment and destruction.<sup>14</sup>
- At the current rate, forests outside of park lands will only last 5 to 10 years in this country that supposedly represents the bastion of conservation in Latin America.

### **Benefits for growth.**

The COSEFORMA project has generated considerable benefits for the local and regional economy, generating sustainable employment and income for unskilled and semi-skilled workers. Most recorded economic benefits appear at the local level.

1. The sawmills for small diameter trees proved to be particularly profitable. On the one hand, they ensured that this wood -formerly considered as waste- was instead profitably used, for example in industrial processes as energy replacing fossil fuels. On the other hand, the sawmills established a small diameter wood industry that generated employment and income. Furthermore, production costs have successfully been reduced through this advanced technology (e.g. from US\$200 to US\$40 per m<sup>3</sup> for teak wood). There is a great demand for small diameter wood at regional, national and international levels (e.g. Teak contributes US\$ 2,8 million per year to Costa Rica's total GDP).
2. The project's intensive training programmes dedicated to technical issues, planning, administration and management have qualified staff working in the forestry sector. For example, with the introduction of special sawmills, forestry managers were trained in techniques of sustainable management for primary and secondary forests, plantations and in harvesting techniques.
3. Through better management on plantations, wood quality has improved significantly. In 2000, 60% of the wood was estimated as good/very good quality, compared to only 22% at the beginning of the project in 1992. The sales of this better quality wood has helped increase local incomes.
4. The advisory services of COSEFORMA in the field of institution building and decentralization helped to develop and strengthen the national Administration of Forests and National parks SINAC.

### **Benefits for poverty reduction.**

As mentioned earlier, most benefits from COSEFORMA have accrued to local communities. The project has considerably improved job opportunities as well as income for local households.

1. The project successfully contributed to the generation of employment for the rural population. New jobs were created on plantations and secondary forests (approximately 950), labour demand for teak increased by 111 posts and 250 employment opportunities were additionally created in sawmills. Also, there were jobs available for both skilled and unskilled workers in the new enterprises making production tools.
2. The local Co-operation 'Coop San Juan' benefited from increased yields of wood and non-timber products. Cultivation of the medical plant Raicilla has generated US\$5293 for the Coop San Juan. Additional products, as well as governmental payments for environmental achievements (US\$406 per ha) augmented this income accumulating to US\$ 2094 per year for each of the 50 members. This is twice the salary of a regular unskilled worker in Costa Rica.

### **Benefits to the environment.**

The project has provided major additional ecological benefits by reducing the rate of deforestation. This resulted in the preservation of large areas of rainforest. While at the end of the 1980, the annual rate of deforestation was about 30.000 ha, it is now estimated to be around 4000 ha. Meanwhile, the demand for private reforestation has increased. Between 1990 and 2000, about 40% of the small landowners (approximately 3650 persons) participated actively in reforestation.