

B I O D I V E R S I T Y

F O R E S T S

# Environmental Protection and Sustainable Development in the Selva Alta of Tambopata-Inambari Basins Peruvian Amazon

› DECISION SUPPORT SYSTEM

› ECONOMIC DIVERSIFICATION

› ENVIRONMENTAL SUSTAINABILITY

› TRANS-BOUNDARY ECOSYSTEM



*Ministero degli Affari Esteri*



*Meeting point of lowland Amazon forest with Andean foothills*

## Background and rationale

The Tambopata and Inambari river basins are located in the tropical rain forest zone of Southern Peru, on the Madre de Dios and Puno Departments, along the borders with Bolivia and Brazil. After the decline of rubber-tree latex (*Hevea brasiliensis*), quinine bark (*Cinchona* spp.) and gold exploitation, the poor economy in the area has been mainly based on coffee production for the export market and coca leaves for local consumption and trade. At the beginning of 1990s, the unstable and frequent falls in coffee prices, the growing demand for illegal coca and the remoteness of the area, made farmers turn to selling coca to drug traffickers for income. Over the last ten years, surfaces cultivated with coca in Tambopata and Inambari have increased from 800 ha to 3,500 ha. A decrease in surfaces down to about half such extension has been recently registered, mostly along the Inambari hillsides, but this is probably linked to the local higher productivity of the illegal crop. Unlike the rest of Peru, which has seen a sharp drop in farm-gate prices for coca since 1995, in Tambopata and Inambari basins the market is stable. One reason is the proximity to Bolivia, where most dried

coca leaf produced in the two catchment areas can be sold easily. The area is populated by some 24,000 rural inhabitants (4,800 families), mainly migrants from the Titiaca basin cities and the Puno highlands. Although many families currently make their living from the illegal cultivation of coca, they are aware that the intervention of law-enforcement agencies could destroy all their resources overnight. Located on the border between Peru, Bolivia and Brazil, the Tambopata-Candamo Reserved Zone (ZRTC) was created in 1990, to be integrated in 1996 in the Bahuaja-Sonene National Park (BSNP) together with the Pampas del Heath Reserve. The Tambopata National Reserve is located along the Northern border of the BSNP. These areas host an exceptional level of biodiversity: more than 1,300 bird species (including 10% of the world's parrot species), 200 mammals, 1,200 butterflies and 10,000 species of higher plants. This is due to the privileged location at the meeting point of lowland Amazon forest with three other ecosystems: the Andean foothills, including cloud mountain forests, the dry forest and Pampas savannah. One of the highlights of the reserve is the Colpa de Guacamayos, one of the largest natural clay licks in Peru.

This copper-coloured cliff attracts thousands of macaws and parrots each day, which come to feed on the mineral salts contained in this area. The BSNP therefore is an important site for scientific and conservation institutions, and has a potential for the development of environmentally sustainable economic activities, including tourism. However, these opportunities are strongly limited by a number of problems, among which the following are particularly relevant for natural resources management:

- ❶ poverty;
- ❷ difficult access, transport and communication facilities;
- ❸ continuous migration, chaotic space occupation, low perception of belonging among the newly settled population;
- ❹ scarce availability of information on local socio-economic issues, on the ecosystem and on natural resources current and potential use;
- ❺ lack of information on land use classification and weak institutional capacity in this sector;
- ❻ inappropriate agricultural techniques;
- ❼ low levels of technical assistance;
- ❽ degradation of natural resources due to deforestation, fires, soil degradation and water pollution;
- ❾ development of illegal crops;
- ❿ poor local and national institutional coordination and decision-making capacity;
- ⓫ marginal influence on the national and regional political scenarios;
- ⓬ weak community involvement in the local decision-making process, particularly on environmental issues;



*Nursery for turtle eggs*

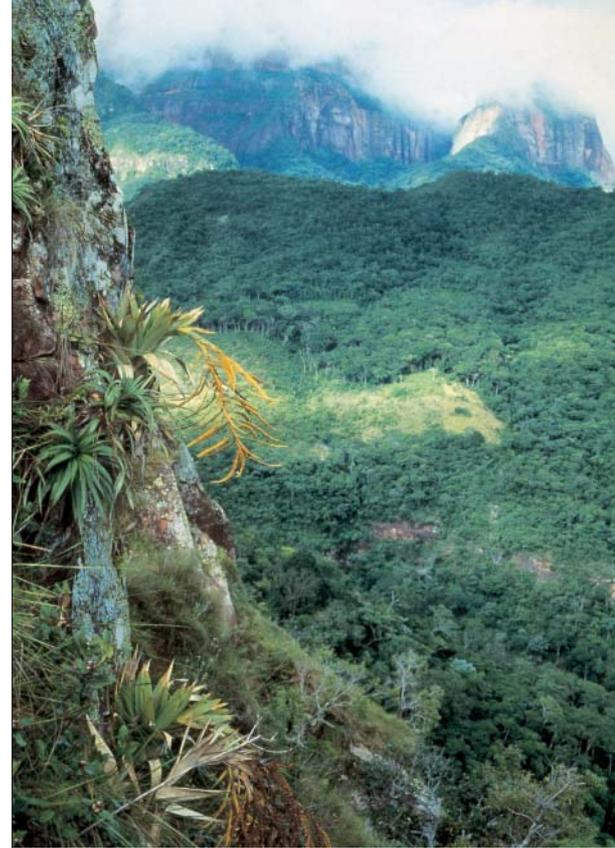




- ❶ absence of links and contacts with the national scientific community;
- ❷ lack of coordination of different stakeholders at local and national levels, as well as with institutional partners across the borders.

Within this context and by adopting a systemic approach, the core objective of the Proyecto Tambopata Inambari (PTI) is to integrate sustainable development principles into the management of natural resources in the Tambopata-Inambari area and into the National Plan for the fight against illegal drug production. Thus, the Project will contribute to environmental stability, to the protection of biodiversity, to the eradication of poverty and to the economic stability in the area, by developing alternative sources of income, strengthening the role of local communities in natural resources management, and building institutional capacities for the sustainable development of the area. The PTI considers the catchment area as the working unit. Thus, the Tambopata and Inambari river basins as a whole represent the most extensive management scenario.

Within these areas, however, the Project will focus on the buffer zones of the Bahuaja-Sonene National Park (BSNP) and on the highlands in the Puno Department. This because of the increasing anthropic pressure in these areas and the land use capacity for coffee and coca production. Given the proximity of the border and the similar circumstances in the neighbouring countries, the Project will also promote collaboration on ecosystem management with Bolivia and Brazil. The *Parque Nacional Madidi*, sited in Bolivia across the border, faces similar conditions as the Peruvian Protected Areas. Since 1999, an international cooperation group (MAP, Madre de Dios, Acre, Pando) in which PTI personnel has been actively involved, is promoting and developing useful links among the three countries, in order to facilitate sharing of regional experiences for tackling common regional problems and threats. Furthermore, the recent international initiative known as the “Ecological Corridor Vilcabamba Amboró” with new extensions toward the Brazilian border, has created new conservation connections among Peru, Bolivia and Brazil. At the same time, the publicised project for the full paving of the “Inter-Ocean New Road” linking Peru and Brazil, will intensify pressure on natural resources exploitation in the region. Both the “corridor” and the “new road” interventions are located fairly close to the PTI area. This will provide a timely and interesting opportunity to diffuse the experience of the Project on adequate and sustainable measures to integrate conservation and development issues in the Amazon region. At the same

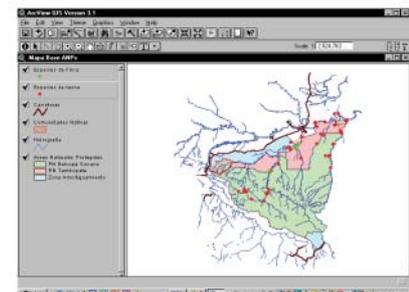


time, a number of projects are currently working towards sustainable development: the *Instituto Peruano del Bien Común* (IBC) is involved in the development of forest community management for eco-tourism; a UNDP project is using satellite imagery to review land-use patterns in the region; international conservation organisations, such as Conservation International and WWF, are also active and carry out research on biodiversity with the Peruvian national university. The Italian Cooperation has entrusted the PTI implementation to the World Conservation Union (IUCN), in cooperation with the Peruvian Government and two non-governmental organisations (NGOs), the Peruvian ProNaturaleza and the Italian CESVI. Two other national institutions are also involved in the Project’s execution: CONTRADROGAS (*Comisión Nacional de Lucha contra el Consumo de Drogas*), the national



Left:  
changes in the  
river course

Top left:  
bridge built with the  
Project’s support





*Above:  
destruction of mountain  
slopes for gold mining*

*Bottom/right:  
deforestation due to  
road construction*

agency for illegal drug control, and INRENA, the Peruvian Environmental Agency. The Project should last two years and funds amount to almost 2,5 million euros.

## Goal, objectives and expected outputs

The Project development goal is to ensure the ecosystem conservation and the welfare of the local population, through the promotion of sustainable development processes for the use of renewable natural resources, in alternative to coca production.

**The specific objectives of the Project are the following.**

- Strengthen local institutional capacity for systemic planning and management of the sustainable use of natural resources.
- Promote and strengthen the participation of the local communities in the sustainable management of their natural resources.
- Develop alternative and sustainable income-generating activities, within the framework of the systemic area planning, through the set up of production and protection pilot activities.



Expected results are as follows.

- INRENA capacity to plan and manage the sustainable use of natural resources is strengthened and consolidated.
- INRENA is accepted and recognised as provider of services and technical assistance to national and local institutions.
- The Puno Department has a proactive role in the BSNP Management Committee.
- A Decision Support System (DSS) for the systemic management of the area is designed and established at the institutional level.
- The local population develops a positive attitude towards the adoption of sustainable practices for the use of renewable natural resources.
- A number of products, outcome of the sustainable use of natural resources and alternative to coca cultivation, have a secure market outlet.
- The economic importance of coca cultivation in the region is minimised.

A crucial tool to attain these results will be the systemic Decision Support System, which will provide its users with a better knowledge, understanding and estimate in advance of the effective economic and environmental consequences of the different planning/management options. The DSS, one of the most innovative elements of the Project, will contribute to assist in the design, planning and implementation of sustainable development activities that are compatible with the ecology and the social conditions of the area. Through its global networks, IUCN will highlight the lessons learned from this Project and communicate them to a wider audience. In particular, IUCN will support the development, sharing and adoption of a coherent approach among the involved Amazon countries.

## Implementation and results

The Project was conceived in 1999, and its implementation has started in 2002. Besides the initial logistic organisation, including recruitment of staff and purchase of equipment, the main activities so far have concerned the establishment of contacts with national and local institutions, visits to potential sites, definition of PTI area and maps development, initial development of the DSS, elaboration of the first annual plan of activities, etc. Most of PTI field activities will take place in the Department of Puno (Province of Sandia, District San Juan del Oro), where the Putina Punco PTI office is located. The local Project team, in coordination with INRENA and other Governmental agencies and NGOs, will develop a detailed assessment of the main local non-timber forest products. The aim is to identify feasible processing activities and marketing niches for these resources, in order to develop income-generating activities for the local communities. At the same time, the DSS will be developed with the Geographic Information System and the databases in the PTI Documentation Centre in Puerto Maldonado, Department of Madre de Dios, where a new decentralised INRENA modern information office is also placed. This will allow close collaboration with INRENA specialists from the very beginning of the Project. Finally, a Type II Partnership is under formulation for the integration of all Italian bilateral initiatives carried out in the same trans-boundary ecosystem across the borders in Bolivia, Brazil and Peru, which aims at the coherent management and sustainable development of the area.

