INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT PROPOSAL

TITLE:	INTEGRATED EVALUATION AND STRATEGY FOR THE SUSTAINABLE MANAGEMENT OF SECONDARY FORESTS IN THE CENTRAL FOREST REGION OF PERU
SERIAL NUMBER:	PD 138/02 Rev.2 (F)
COMMITTEE:	REFORESTATION AND FOREST MANAGEMENT
SUBMITTED BY:	GOVERNMENT OF PERU
ORIGINAL LANGUAGE:	SPANISH

SUMMARY

As a consequence of the deforestation process in the Peruvian Amazon Region, secondary forests account for approximately 70% of the total deforested area in the country, which has an annual deforestation rate of 261,000 ha. The reduction in deforestation rates is to a great extent linked to the sustained management of secondary forests, improved land-use management and intensive land utilisation to improve land productivity and extend rotation cycles in secondary forests and agricultural lands.

Secondary forests in the Amazon Region have become a resource base of high socioeconomic and ecological significance given the large area they cover, their accessibility, and the goods and services they provide to small and medium scale farmers; therefore, special attention should be given to their sustainable management, not only as temporary or intermediate resources, but as end-products. Planning for a sustained use of secondary tropical forests can only take place on the basis of a preliminary comprehensive evaluation of the resource base through the collection of information on the exact area of secondary forests, their socioeconomic context, their biological dynamics, biodiversity, stock volumes of commercial species, growing biomass, ownership status and local uses, which can serve as the basis for the formulation of criteria and indicators for sustainable forest management and the implementation of relevant management plans.

The main objective of this project is to generate integrated, comprehensive, detailed, updated and highly reliable information on secondary forests in the Central Forest Region of Peru and develop a regional strategy for the implementation of sustainable management plans for the benefit of the communities involved in the study as well as other areas or regions with potential for replication, on the basis of the guidelines for the management of secondary and degraded forests recently developed by ITTO.

EXECUTING AGENCY:	NATIONAL INSTITUTE FOR NATURAL RESOURCES – INRENA
COOPERATING GOVERNMENTS	---
DURATION:	3 YEARS
APPROXIMATE STARTING DATE:	UPON APPROVAL

BUDGET AND PROPOSED SOURCES OF FINANCE:

Source	Contribution in US$
ITTO	**474,500**
INRENA	180,000
TOTAL	**654,500**

PART I: CONTEXT

1.1 Origin

The degradation or elimination of natural tropical forest ecosystems in the Amazon Region of South America, and specifically in Peru, has always been a matter for serious concern for the national authorities and the organised civil society in general, particularly considering that over 260,000 ha of forests are deforested annually in Peru, which is equivalent to 0.45% of the total tropical moist forest area in the country. The causes of deforestation are usually well known both in Peru and in other countries that face this problem on a daily basis, but very little progress has been made in the establishment of global or regional strategies with a view to curbing or arresting the deforestation process.

According to Peruvian statistics on forest cover and land use – and especially as a result of a contrastive analysis of national forest maps prepared between 1975 and 1995 – it has been estimated that approximately 60-70% of deforested areas are later permanently abandoned or are left unused for periods of 3-10 years. This leads to the development of secondary forests[1], which today cover a total area of approximately 8 million hectares throughout the national territory. A great percentage of these forests (nearly 3 million hectares) is concentrated in the Central Forest Region (Selva Central) of the country. These resources represent an enormous biodiversity and biomass production potential, which – if properly utilised through an integrated strategy for natural resources harvesting – could significantly contribute to a reduction in the deforestation process and could generate additional income for the rural families. The Central Forest Region of Peru covers an area of approximately 7 million hectares and is the closest area to the major population centres of the Peruvian coastal region (including the capital city of the country), where the process of population expansion and occupation over the Amazon region started.

The origin of secondary forests in the Amazon Region is closely linked to socioeconomic factors as they have developed mainly as a result of the slash-and-burn practices of migrant communities, who clear the land for subsistence farming with very low production levels. The process of occupation and use of Amazon lands also led to the establishment of large estates, whose owners with high economic capacity have also cleared extensive areas of forest for the practice of cattle ranching and/or fruit tree and coffee crops. In addition, timber loggers have opened new roads into the forest for unplanned forest logging, which has also facilitated the encroaching of spontaneous farmers. The socioeconomic motivations and implications of the deforestation process are very complex in nature and may have serious impacts on the environment.

One of the requirements to improve forest resource management in the Amazon region is the demarcation and integrated evaluation of the forest resource base and a basic understanding of the composition and dynamics of forest ecosystems. This will require compatible and updated information with specific parameters for forest classification and adequate forest inventory sampling designs. The proposed project is aimed at strengthening the management and generation of information on the biophysical and socioeconomic aspects of forest resources at the national level, particularly in the context of secondary forests, so as to contribute to their sustainable management and use and to the improvement of the living standards of the local communities.

The specific objectives of the project are related to the implementation of a national information system for ongoing monitoring; the establishment of a methodology for the conduction of forest inventories; the formulation of basic criteria for forest zoning; the acquisition of knowledge on the current and potential uses of secondary forests vis-à-vis the needs and demands of related communities; the identification of markets for timber and non-timber products that may constitute an additional source of income for farmers with secondary forests on their lands; and the improvement of mechanisms for the exchange of experiences and information among the various sectors involved in land-use management, so as to develop an inter-institutional strategy aimed at reducing deforestation rates on the basis of sustainable secondary forest management.

1.2 Sectoral policies

This project is consistent with the strategies and policies implemented by the Peruvian State through the promulgation of the following legislation:

[1] Secondary forests are defined here as woody vegetation of a successional nature growing on land whose original vegetation was cleared by human intervention (Smith *et al.* 1997; Regulations of the Forestry and Wildlife Law – Act No. 27308).

The recently promulgated *Forestry and Wildlife Law (Act No. 27308)*, replacing Decree Law No. 21147 of 1972. This legislation regulates the sustainable utilisation and conservation of forests and forest lands for the benefit of present and future generations, harmonising the social, economic and ecological interests of the country. This Law requires, as the basis for sustainable forest management, the preliminary evaluation and demarcation of forest resources. To this end, an ongoing national forest inventory programme should be implemented as well as a regular integrated evaluation of major forest ecosystems in accordance with the priorities established in the national, regional and departmental development plans.

Natural Protected Areas Law (Act No. 26834). It regulates the management of the National System of State Protected Areas (SINANPE) and sustainable management and utilisation instruments for natural protected areas.

Organic Law for the Sustainable Harvesting of Natural Resources (Act No. 26821). It provides the general framework for the conservation of biological diversity and sustainable utilisation of biodiversity resources. It contains provisions regarding forest planning, inventories and monitoring, conservation mechanisms, rural and indigenous communities, and scientific and technological research.

The new Forestry Law of Peru (Act No. 27308) established the national plan for deforestation prevention and control in the Amazon Region, which is particularly important for the rehabilitation and management of degraded or deforested areas such as those found in the Central Forest Region of the country.

PART II: THE PROJECT

Project objectives

2.1 Development objective

Limit the progress of the deforestation process in Peru through the successful implementation of strategies aimed at the sustainable management of secondary forests.

2.2 Specific objective

The project expects to achieve the following specific objective over a period of three years:

2.2.1 Develop an integrated plan for the sustainable management of secondary forests in the Central Forest Region of Peru, including an integrated evaluation of these forests and a strategic plan for their sustainable management.

2.3 Justification

Secondary tropical forests as the “resources for the future” have been the subject of discussion for many decades (e.g. Budowski 1961; Gómez-Pompa 1971; Fontaine *et al.* 1978; Ewel 1981). Over the last decade, given the international concern for deforestation in the tropics and forest revaluation to offset the increasing global environmental degradation trend, the issue of secondary forests has attracted a great deal of attention from the scientific community and national and international development programmes (e.g. Parrotta and Kaneshiro 1995; Sips *et al.* 1996; ACT 1997, 1999; Guariguata and Finegan 1998; Dotzauer 1999; Emrich *et al.* 2000; Chokkalingam *et al.* 2001). In addition to an increasing volume of literature on the biological and economic potential of secondary forests as the basis for a forest production system (in the neo-tropics, e.g. Wadsworth 1987, 1997; Dourojeanni 1987, 1990; Brown and Lugo 1990; Dubois 1990a, b; Finegan 1992; Weaver 1995; Smith *et al.* 1997a; Kammesheidt, in print), great emphasis is being placed on quantifying the contribution of secondary forests to environmental conservation both at the local and the regional levels (e.g. Brown and Lugo 1990; Fearnside 1996; Smith *et al.* 1997b).

According to the data produced by the FAO program FRA2000, there are approximately 300 million hectares of secondary forests worldwide, and at least 80 million ha of these are found in South America (FAO 2001).

The management of secondary forests to generate income for small producers and environmental benefits for society is becoming increasingly significant. It has been demonstrated that the productivity of secondary forests can be increased through management practices (e.g. Hutchinson 1995; Guariguata 1999) and that secondary forest management requires a relatively low investment in terms of manpower and other inputs, the cost of which, under favourable market conditions, can be covered by the increase in productivity (e.g.

COSEFORMA/GTZ Project 2000). In areas affected by the agricultural frontier, where the valuable forest species in primary forests have been extracted, the sale of timber from secondary forests is starting to be a profitable activity (PBS 2000; Yepes 2001). Furthermore, the sale of non-timber forest products represents a supplementary source of income, sometimes even more important than the sale of timber (e.g. Padoch 1987; COSEFORMA/GTZ 2000).

Secondary forests provide management opportunities to generate benefits that justify their maintenance as they can contribute to reduce or arrest the introduction of unsustainable land-use changes in natural forest areas. Even though secondary forests cannot replace all the values of primary forests, their management represents a sustainable use of land that can provide many of the services supplied by primary forests (such as carbon sequestration, biodiversity preservation, etc.), while at the same time offering a better production alternative than agricultural and cattle-ranching activities.

The management of secondary forests and the rehabilitation of degraded forest areas must be primarily based on the priorities, objectives and needs of forest users. Degraded and secondary forests are generally used by poor farmers as an important additional source of income, providing a wide range of products that can contribute to their subsistence or can improve their living standards (as sources of energy, food, medicines, etc.). Furthermore, a substantial part of these areas can be efficiently utilized for the production of food through agroforestry activities.

However, the potential of secondary forests to generate benefits to producers, rural communities and the society at large is seldom recognised. Thus, producers are not interested in secondary forest management nor are they motivated to undertake the management of these resources. The national policies and standards enforced to date for the regulation of natural resources have never included secondary forests. In order to encourage the management of these resources, it will be necessary to demonstrate the benefits that this land use system can provide to producers.

There are currently many information gaps and a number of obstacles that should be overcome to encourage the sustainable management of secondary forests. These include:

- a lack of information on the extent, distribution and conversion and use of secondary forests;
- limited knowledge on promising management options and related benefits;
- a lack of knowledge and development of timber and non-timber forest product markets;
- limited processing and value-added production at the agrarian unit and community levels;
- poor development of non-timber product processing and marketing;
- a lack of clear and consistent policies and standards to promote the sustainable management of secondary forests.

Since the 1980s, there have been several research and development projects focused on secondary forests in the Peruvian Amazon Region. From 1984 to 1987, the National Agrarian University (UNALM) carried out a project on *Use of Purmas (secondary forests) in the Peruvian Amazon Region*, with the financial support of CIID (Canada), which was terminated due to the social and political difficulties encountered in the area (PERU – UNALM 1998). From 1997 to mid-2000, UNALM acted as the national coordinator of a research project on *Management of Secondary Forests in the American Tropics (PBS)*, led by the Centre for International Forest Research (CIFOR) and the Centre for Tropical Agricultural Research and Education (CATIE), which also included activities in Brazil and Nicaragua (PBS 1988)[2]. In 1999, the project on *Demonstration Secondary Forest Management in the Peruvian Amazon Region for Commercial Purposes* started to be implemented by the National Forestry Chamber with the financial support of the Embassy of the Netherlands (MADEBOSQUES Project 1998). The area of action of all of these projects was (or still is) the Pucallpa area in the Central Forest Region of the country.

The International Tropical Timber Council has adopted Action 3, Goal 2 of the Libreville Action Plan in the field of Reforestation and Forest Management and Decision 7(XXV) on the 1999 ITTO Work Programme for the Reforestation and Forest Management Committee, item (ii), which stipulates that guidelines should be developed for the rehabilitation of degraded forests and forest lands, including guidelines on the management of secondary forests. On the basis of this resolution, ITTO has developed draft guidelines for the rehabilitation and management of secondary forests and degraded primary forests in tropical regions. These guidelines are aimed at providing a knowledge base in key areas of policies, socio-economic aspects,

[2] This Project was also concentrated in the area of Pucallpa in Peru. Its efforts were aimed at understanding the dynamics of secondary forest use and conversion at the agrarian unit level so as to determine the potential for secondary forest management for production and conservation purposes under various use intensity conditions, and to develop and validate diversified secondary forest management techniques with the participation of producers (PBS 1998).

legal aspects, and institutional and ecological issues that must be taken into consideration in the planning and implementation of valid and viable strategies for the rehabilitation of degraded primary forests, the sustainable management of secondary forests and the rehabilitation of degraded forest areas.

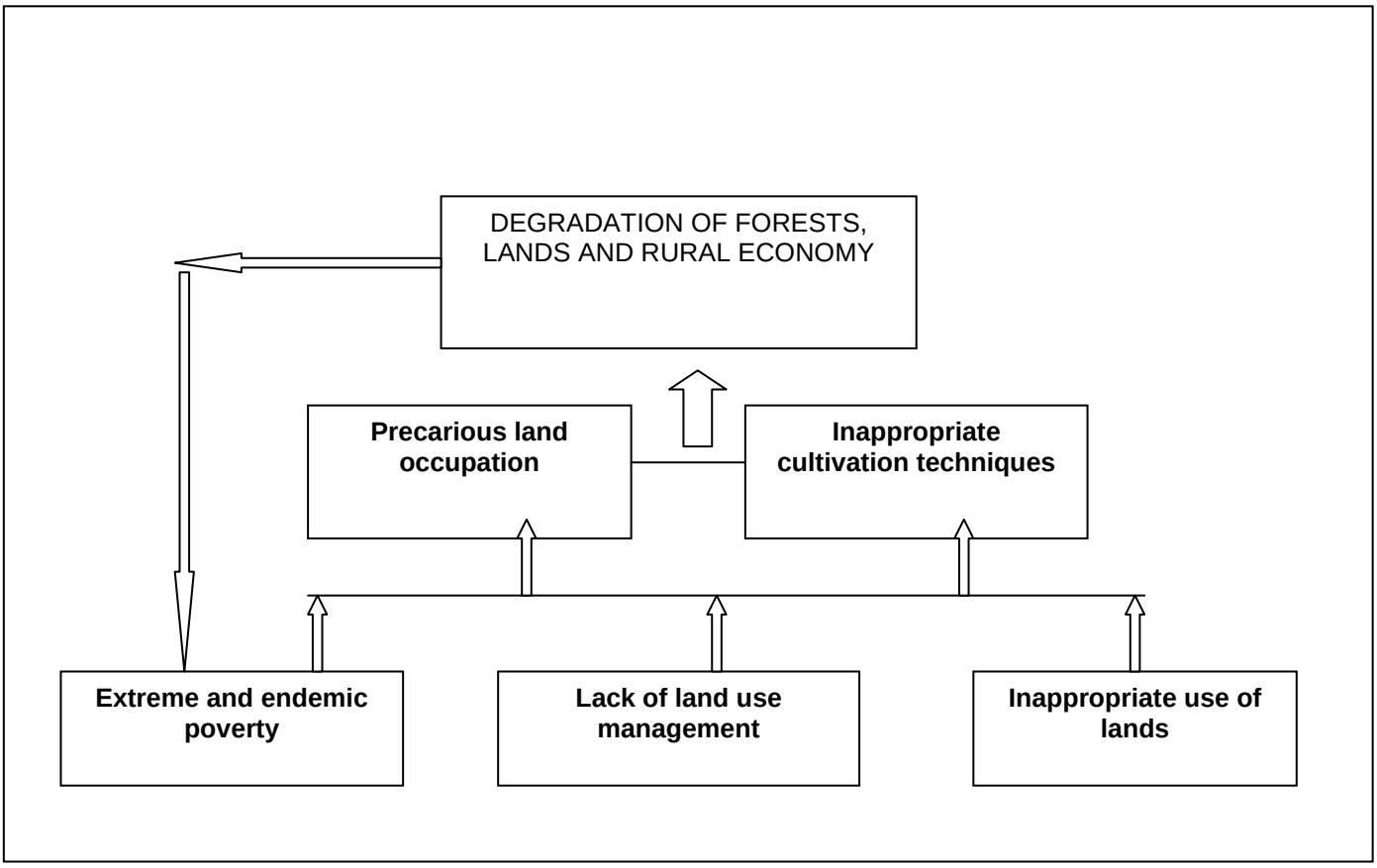
IUCN's "Forests Reborn" initiative, FAO's proposal for the development of guidelines for secondary forest management and ITTO's work on forest restoration have mutually compatible goals, and collaboration between the three organisations in this area could lead to synergies of effort that would mutually benefit them.

The environmental and economic interactions of secondary forests and the ecosystems, as well as the production systems of farmers and their relationship with secondary forests is still not well known. A more complete or integrated study should be undertaken on the biological and socio-economic context of the secondary forest ecosystem at a wide scale and in geographical contexts of economies of scale, as most of the studies carried out to date on secondary forests have been implemented on experimental scales or plots.

2.4 Problem to be addressed

There is no doubt about the importance and the enormous benefits that could be derived from the sound management of secondary forests and degraded natural tree formations, and from their incorporation into the formal and stable economy. However, the first problem to resolve in this regard is the lack of updated and totally reliable knowledge and information on their characteristics and their ecological and economic potential at the level of economies of scale, as with isolated or very reduced efforts in space and time with limited participation of forest users it will simply not be possible to develop and, even less, implement a real strategy for the sustainable management of secondary forests.

PROBLEMS TREE: VICIOUS CIRCLE OF POVERTY AND ENVIRONMENTAL DEGRADATION



2.5 Intended situation after project completion

After the three-year project implementation period, the following situation is envisaged:

2.5.1 Reliable and necessary information will be available for an extensive geographic region, to implement a sustainable management strategy for the secondary forests of Peru.

2.5.2 A fairly complete database will be developed for the project study area and at the national level, and will be available to potential users.

2.5.3 The need to incorporate secondary forests into a national strategy aimed at the prevention of deforestation has been disseminated and promoted at the national level, especially among direct users and decision-makers, and an awareness campaign has been launched to promote the economic and social advantages of the sustainable management of these forests.

2.5.4 A coordinated strategy proposal has been formulated at the national level between technical experts, users and decision-makers for the control of deforestation processes and the sustainable management of degraded forest areas, particularly secondary forests.

2.6 Project strategy

The implementation of this project is based on the integrated study of secondary forests and their ecological and socio-economic contexts. The project will ensure the participation of specialised professionals and users and decision-makers, who will jointly develop and propose a sustainable utilisation strategy for secondary forests in the Central Forest Region of Peru.

The project will implement an integrated and detailed study of the current and potential status of the harvesting, management and conservation of secondary forests and natural degraded forests, and the socio-economic influence exerted by the rural environment of the Amazon region. Based on this information that will be analysed by specialists together with forest users, consultation and work meetings will be held at different levels in order to develop a strategic framework for the sustainable management of these resources, using the guidelines for secondary forest management prepared by ITTO as the key reference point, an exercise which can be used at the same time to validate these guidelines.

The following principles and recommended actions in the ITTO guidelines for the management of secondary forests are the most significant and relevant to the implementation of this project and will be considered for validation as part of the project implementation process:

Principle	Recommended actions
1	1,2
2	5
8	25
11	34-38
12	39-40
13	43-44
20	69

The original English text of the principles and recommended actions established in the degraded and secondary forest management guidelines is shown in Annex 1.

INRENA has been implementing the project “National Forest Development Strategy” with the financial support of the Government of the Netherlands. The objective of this project, which has been under implementation for the last two years, is to establish a general framework for the national forest development strategy and policy. In this context, the Central Forest Region of Peru requires special attention because of its socioeconomic complexity, and it is precisely in this region where a large proportion of the country’s secondary forests are concentrated. The proposed project will significantly contribute to the development of a forest strategy for the region, making use of the large quantity of information produced by the “MADEBOSQUES” Project for secondary forest management in a specific low forest area of the Central Forest Region.

2.7 Target beneficiaries

The direct beneficiaries of this project will be:

Forest land users (farmers and loggers), who will have information on the potential, possibilities of efficient use and benefits that can be derived from secondary forests, as well as benefiting from the technical assistance that will be offered to them during the implementation of the project.

The organisations responsible for forest administration, as they will have the necessary information to make decisions and the methodology required for the integrated evaluation of secondary forests.

Decision makers, who will have the information and tools required for the implementation of a regional management plan for secondary forests, and for the prevention and control of deforestation.

Academic and research institutions, who will benefit from the information and methodology developed during the implementation of the project, as well as benefiting from their direct participation in certain stages of the project.

2.8 Technical and scientific aspects

The secondary forests of the Peruvian Amazon Region form an significant part of the forest cover and are located in production plots in highland and alluvial areas (Smith et al. 1999, 2000; Freitas et al. 2000; Baluarte et al. 2000). These forests are commonly found in small patches near residual forests[3] (Colan 1998; Galvan et al. 2000). Producers believe that the main function of secondary forests is the recovery of soil fertility, but they also classify as important the utilisation (for self-consumption or marketing) of a range of timber and non-timber products extracted from these forests. When secondary forests are available, producers reduce felling intensities in primary residual forests and use secondary forests to establish their crops, thus reducing deforestation rates (Smith et al. 2000).

Several forest inventories and ethno-botanical studies carried out on secondary forests associated with slash-and-burn systems in the Peruvian Amazon Region (e.g. Cordova 1996; Brodie et al. 1997; Colan 1998; Pacheco et al. 1998; Baluarte et al. 2000; Galvan et al. 2000; Vallejos 2000) confirmed the high social value that this resource has for local communities, as well as its potential for commercial production. It was found that in the Pucallpa region, secondary forests should be harvested by groups of species according to their most important use, the main uses for secondary forest species in the area being sawnwood, construction boards, multiple household uses, medicinal purposes, firewood and crafts (Sabogal et al. in print). In the Iquitos region, in the Northern Amazon region of Peru, studies carried out by Pacheco et al (1998) on secondary forests showed that there is a great flora variation between sites and between forests of the same site, both at the inter and intra-age levels. These characteristics can also be observed in the secondary forests studied in the Pucallpa region (Peru-UNALM 1998; Cordova 1996; Coronado 2002).

The great majority of studies on secondary forests, both on bio-physical and socio-economic aspects, are limited in geographic coverage, given that as a rule they only extend to the community or sectoral levels. One of the few large-scale studies undertaken was carried out in 1996 by the Peruvian Amazon Research Institute. This study shows, on the basis of a series of maps (from 1955 to 1994), the progressive occupation of forests along the Federico Basadre road in the Central Forest Region (IIAP 1996).

The proposed project will carry out the evaluation of secondary forests in the Central Forest Region using the following procedures:

1. Collection, evaluation and analysis of currently available information (maps, reports, etc.);
2. Detailed study of TM satellite images covering the Central Forest Region (15 images) at a scale of 1/100,000, with field truthing in representative and special interest areas. The study will be conducted over three successive periods between 1990 and 2000 depending on the availability of satellite images;
3. Land use and land tenure registry for agricultural-forestry areas, particularly in secondary forests;
4. Socio-economic studies on the inter-relation between the rural communities and forest resources in degraded and secondary forest areas – uses, management, income, access, needs, demand, etc.

[3] Forests that have been previously harvested for high value timber. Also known as logged-over primary forests.

5. Development of database on secondary forests and degraded primary forests as well as regional and national discussion and coordination fora for secondary forest assessment and management with the active participation of users.

Note: the use of satellite images is essential for the process of evaluation of forest resources over the vast area of the Central Forest Region of Peru, which covers approximately 7,000,000 hectares. A total of approximately 15 images at a scale of 1/100,000 are required to cover the whole area. In addition, the satellite images will facilitate the study of different periods for the purposes of comparison to determine the advance of the deforestation process and ensure the quantitative and qualitative assessment of secondary forests.

In addition to the digital interpretation of satellite images, field truthing activities are envisaged to ensure the availability of validated, highly reliable and updated photo-interpretation.

The areas (extent) covered by the different forest types in the study area are as follows:

Forest Types - 1995	CATEGORY				
	Production	Protection	Secondary Forests	Non Amazon F.	Total
Deforested areas, secondary forests			2031287		2031287
Moist high hill forest		202202			202202
Moist low hill forest	420344				420344
Moist montane forest		3047063			3047063
Moist high-terrace forest	1				1
Moist intermediate-terrace forest	4				4
Dry montane forest				1668	1668
Sub-moist Inter-Andean Valley forest		192049			192049
Puna grasslands				2937	2937
Moist scrublands and secondary forests			240515		240515
Sub-moist scrublands and secondary forests			155392		155392
Non codified forests				5	5
Pacales	147046				147046
Pajonal				488708	488708
Overall total	**567395**	**3441315**	**2427193**	**493318**	**6929222**

Source: Forest Map of Peru -1995 (with 1990 satellite images)

2.9 Economic aspects

If implemented, this project will generate a regional strategy that will facilitate the development of forestry and agroforestry activities that could result in important improvements in the income levels or benefits of the direct users of secondary forests. Furthermore, the reduction of annual deforestation rates will have a very positive impact on the valuation of production forest resources as well as those designated for conservation purposes.

Unskilled economically active population (EAP) in the department of Huanuco accounts for 92.9% of the total population, with 6.2% working children. The illiteracy rate in the department is 24.7%, of which 34.6% are women.

The unskilled economically active population in the department of Junín is 256185, and 61492 of this total are women. The illiteracy rate in the department is 5%.

According to the data obtained in the latest census, the EAP in the department of Pasco comprises 50,170 (or 81.4%) men. The poverty rate is 2.45 of a total population of 239,191, 41.1% of which lives in rural areas.

The EAP in the department of Ucayali (1981) comprises 98.6% of employed workers and 1.4% of unemployed workers or job seekers. The poverty rate is 2.49 of a total population of 331,824, 34.9% of which lives in rural areas.

In general terms, the main economic activities of the rural population in the Central Forest Region of Peru (approximately 1 million people) are subsistence agriculture and cattle-ranching, which account for 60% of their annual income. Forest harvesting activities (mostly informal) account for 25%, while other minor activities (commerce, etc.) make up the remaining 15%. However, it is estimated that the household economy of the rural population in this area depends on at least 50% of the resources from natural, degraded or secondary forests (Malleux J. 1992; Dourojeanni M. 1970).

The Central Forest Region is home to the greatest concentration of small timber loggers, with a total of approximately 1,500 loggers, who hold forest harvesting contracts over areas averaging 500 ha each, making up a total area of 600,000 ha. These loggers remain in their areas for a period of two years and then change their contracts to other localities, leaving behind degraded forests that become easy prey for farmers to establish subsistence farming plots.

Eighty percent of the supply to the large-scale forest industry comes from small-scale loggers who are in fact sub-contracted by the large industries.

2.10 Environmental aspects

The more efficient use of soils in accordance with their land-use capacity and the maintenance of secondary forests as a highly dynamic, multi-functional and extremely resilient ecosystem, will lead to very significant and far-reaching environmental benefits not only for the region under study but also for other regions of the country with potential for extrapolation. Even though this is the closest forest region to the major population centres of the Peruvian coastal and highlands regions, it has the lowest proportion of protected areas in the Amazon Region of the country with less than 5% of the total area. It is also for this reason that the objective of this project is to ensure the ecological and economic zoning of the region so as to identify those areas that should be designated as permanent protection or conservation units.

2.11 Social aspects

Secondary forests play a significant physical, social and economic role in the Amazon context, where more than 60% of lands that were deforested for agricultural purposes are now covered by these formations which have been gradually integrated into the family economies of small and medium scale farmers. Therefore, the proposed sustainable utilisation and management strategy for these forests will, by necessity, have a very important socio-economic impact, especially if we consider that this strategy must be developed with the active participation of users.

The economic benefits derived by the communities living in the general project area from incorporating alternative resource sources, and the environmental benefits derived from an improved use of land and natural resources in general, are the best examples of the social importance of this project and of the benefits that the community could enjoy.

The population of the Department of Huánuco is 477877 (1981 Census), distributed throughout 11 provinces, with 148,427 inhabitants, or approximately 31%, in urban areas, and 329450 inhabitants, or about 69%, in rural areas. The 1993 Census revealed a population increase to 654489, with 252778 inhabitants in urban areas and 401711 in rural areas.

The Department of Huanuco has a poverty rate of 2.96 of a total population of 678,041, 61.4% of which lives in rural areas.

The population of the Department of Junín is 1133183, distributed throughout 9 provinces, with 752433.55 inhabitants in urban areas and 380749 inhabitants in rural areas.

The department of Junín has a poverty rate of 2.22 of a total population of 1,092,993, 34.5% of which lives in rural areas.

The population of the department of Pasco is approximately 239,191 (1981 Census), distributed throughout 3 provinces as follows: 60% in the province of Pasco, 18% in the province of Daniel A. Carrión, and 22% in the province of Oxapampa. Rural areas account for 40.2% of the entire population, while 77% lives in the highlands and 23% in the forest region. The highest percentage of the population are young people between 5 and 29 years of age.

The department of Pasco has a poverty rate of 2.45 of a total population of 239,191, 41.1% of which lives in rural areas.

According to the 1981 National Population and Housing Census, the department of Ucayali has a population of 200,669, distributed throughout the following 4 provinces: Coronel Portillo (over 70% of the total population), Atalaya, Padre Abad and Purus.

The department of Ucayali has a poverty rate of 2.49 of a total estimated population of 331,824 as at 2002, with 34.9% of this total living in rural areas.

2.12 Risks

In general terms, the evaluation and development of a management strategy for secondary forests does not carry any risks in its implementation. The project might encounter a potential risk, not for this phase but for the attainment of its long-term objective, if both users and decision-makers decide not to participate or to support the formulation of a strategic proposal for the sustainable management of secondary forests. It is for this reason that the project must develop an intense action program for the dissemination, promotion and discussion of project outputs, committing users and decision-makers to an active participation.

3. OUTPUTS

Specific objective 1
Develop an integrated plan for the sustainable management of secondary forests in the Central Forest Region of Peru, including an integrated evaluation of these forests and a strategic plan for their sustainable management.

Output 1.1: Methodology for the integrated evaluation of secondary forests in the Central Forest Region of Peru developed and implemented.

Output 1.2: Operational database containing information on major biological characteristics and socioeconomic aspects of secondary forests in the Central Forest Region of Peru.

Output 1.3: Regional strategy for the sustainable management and utilisation of secondary forests as part of the implementation of the National Forest Development Strategy (Estrategia Nacional de Desarrollo Forestal – ENDF) in Peru.

4. ACTIVITIES

IMMEDIATE OBJECTIVE	OUTPUTS	ACTIVITIES	PERSONNEL	MONTHS
1. Develop an integrated plan for the sustainable management of secondary forests in the Central Forest Region of Peru, including an integrated evaluation of these forests and a strategic plan for their sustainable management	1.1 Methodology for the integrated evaluation of secondary forests in the Central Forest Region of Peru developed and implemented	1.1.1 Collect and systematise information on secondary forests.	professional (a) professional (b) 2 assistants	2 1 6
		1.1.2 Identify sustainable management limitations and alternatives.	professionals (a) professional (c) professional (e) 1 assistant	2 2 2 3
		1.1.3 Develop detailed maps of the Central Forest Region.	professional (a) professional (b) 2 assistants	3 7 14
		1.1.4 Develop methodology for the integrated evaluation	professionals (a) professional (b) professional (c) professional (e) assistant	3 3 2 2 2
		1.1.5 Validate integrated evaluation methodology	professional (a) professional (b) 4 assistants	2 3 8
		1.1.6 Develop manual on secondary forest evaluation methodology	professional (a) professional (b) professional (c) 1 assistant	3 2 2 3
	1.2 Operational database containing information on major biological characteristics and socioeconomic aspects of secondary forests in the Central Forest Region of Peru	1.2.1 Collect background information and statistical data on secondary forests	professionals (a) professional (b) professional (c) professional (d) professional (e) 2 assistants	1 2 2 3 1 4
		1.2.2 Interview the communities living in the secondary forests of the Central Forest Region	professionals (a) professional (c) professional (e) 4 assistants	1 2 2 8
		1.2.3 Develop database on secondary forests	professional (a) professional (b) professional (d)	1 1 5
		1.2.4 Design computer system on degraded forest resources	professional (a) professional (b) professional (d)	2 2 6
		1.2.5 Computerise data, documents and national free-access forum	professional (a) professional (b) professional (d) 2 assistants	1 1 4 4
		1.2.6 Establish discussion fora on disseminated information	professional (a) professional (c) professional (e)	2 1 1
	1.3 Regional strategy for the sustainable management and utilisation of secondary forests as part of the implementation of the National Forest Development Strategy (Estrategia Nacional de Desarrollo Forestal – ENDF) in Peru	1.3.1 Establish information and analysis fora with local communities	professional (a) professional (e)	1 1
		1.3.2 Apply relevant ITTO guidelines in the Central Forest Region	professional (a) professional (b) professional (c)	1 1 1
		1.3.3 Develop ecological-economic zoning proposal for secondary forest management	professional (a) professional (b) professional (c) professional (e)	3 3 1 1
		1.3.4 Develop regional strategy in coordination with stakeholders	professional (a) professional (b) professional (c) professional (e)	3 2 1 2
		1.3.5 Develop action plan for implementation of strategy	professional (a) professional (b) professional (c) professional (e)	5 2 3 2

5. LOGICAL FRAMEWORK WORKSHEETS

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
DEVELOPMENT OBJECTIVE Limit the progress of the deforestation process in Peru through the successful implementation of strategies aimed at the sustainable management of secondary forests	The strategy for sustainable secondary forest management is incorporated into the national forest strategy of Peru.	The strategy for sustainable secondary forest management becomes part of the national forest strategy of Peru.	Commitment to the implementation of the strategy at the high political decision-making levels of the country.
SPECIFIC OBJECTIVE Develop an integrated plan for the sustainable management of secondary forests in the Central Forest Region of Peru, including an integrated evaluation of these forests and a strategic plan for their sustainable management	The communities in the Central Forest Region incorporate the regional strategy for sustainable secondary forest management and harvesting into their local development plans.	Copy of regional strategic plan for sustainable secondary forest management and harvesting.	Local authorities and users willingness to implement the strategy.
OUTPUT 1 Methodology for the integrated evaluation of secondary forests in the Central Forest Region of Peru developed and implemented	Methodology adopted and of official use by INRENA.	Executive resolution approving the methodology.	The methodology is in accordance with the characteristics and requirements of secondary forest management.
A1: Collect and systematise information on secondary forests	50 interviews to 30 researchers and institutions and to 20 community members by July 2003	Information systematisation reports	Participation of interviewees – professionals and community members
A2: Identify sustainable management limitations and alternatives.	40 interviews to community members systematised by August 2003	Information systematisation reports	Community participation
A3: Develop detailed maps of the Central Forest Region	3 sets of multi-temporal maps with 5-year intervals prepared by December 2003	Files and library	Access to high-quality 5-year interval satellite images
A4: Develop methodology for the integrated evaluation	Methodology document	Project files	Sufficient information on secondary forests and evaluation methodologies
A5: Validate integrated evaluation methodology	Methodology applied with 20 users by December 2004	Reports of results for each case and files	Users' participation
A6: Develop manual on secondary forest evaluation methodology	Manual for the integrated evaluation of secondary forests by December 2005	Copy of manual in ITTO library	Timely implementation of previous activities
OUTPUT 2 Operational database containing information on major biological characteristics and socioeconomic aspects of secondary forests in the Central Forest Region of Peru	Feedback from 50 parties on the quality of the information provided by the system and at least 20 community members using this information for the management of their plots by December 2005	Record of users, feedback files and field visits	The quality of the information meets users' requirements
A1: Collect background information and statistical data on secondary forests	Visits to and interviews with at least 20 institutions and access to publications on the subject to collect information by June 2003	Reports and files	Institutions are willing to share consistent information

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
A2: Interview the communities living in the secondary forests of the Central Forest Region	100 interviews with users proportionally distributed among 4 departments by December 2003	Information systematisation reports	Cooperation from communities and consistent responses
A3: Develop database on secondary forests	A database on characterisation and management of secondary forests covering at least 6 topics by May 2004	Monthly reports	Access to reliable available information on each of the topics selected
A4: Design computer system on degraded forest resources	Computer system in operation by December 2003	Web page	Accessible technical equipment and qualified personnel
A5: Computerise data, documents and national free-access forum	1000 registered users of information by December 2005	Six-monthly reports	There is an unmet demand for information on secondary forest management alternatives
A6: Establish discussion fora on disseminated information	3 discussion meetings on information quality by December 2005	Systematised agreements reached during meetings	Active participation of information users
OUTPUT 3 Regional strategy for the sustainable management and utilisation of secondary forests as part of the implementation of the National Forest Development Strategy (Estrategia Nacional de Desarrollo Forestal – ENDF) in Peru	Regional strategy officially approved and in the process of being validated with 20 families by December 2005	Official document and interviews with families	Families' participation
A1: Establish information and analysis fora with local communities	6 information meetings in 4 departments over 3 years	Minutes of meetings, interviews with community members	Regular participation of community members ensured.
A2: Apply relevant ITTO guidelines in the Central Forest Region	Number of ITTO guidelines included in the strategy	Final regional strategy document	Full command of ITTO guidelines by the project team
A3: Develop ecological-economic zoning proposal for secondary forest management	Proposal containing descriptive and cartographic information prepared by December 2005	Progress reports, documents on file	Availability of satellite images, cartographic information and adequate equipment
A4: Develop regional strategy in coordination with stakeholders	6 participatory workshops with the communities in the Central Forest Region over 3 years	Workshop reports and list of participants	Active participation of community members
A5: Develop action plan for implementation of strategy	Participatory development of plan by December 2005 – 1000 copies of plan	Copies of plan on file and in library	Availability of financial resources and professional commitment

6. WORK PLAN

ACTIVITIES	RESPONSIBLE PARTY	YEAR 1												YEAR 2												YEAR 3											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1.1.1 Collect and systematise information on secondary forests	Project Staff																																				
1.1.2 Identify sustainable management limitations and alternatives.	Project Staff																																				
1.1.3 Develop detailed maps of the Central Forest Region	Project Staff																																				
1.1.4 Develop methodology for the integrated evaluation	Project Staff																																				
1.1.5 Validate integrated evaluation methodology	Project Staff																																				
1.1.6 Develop manual on secondary forest evaluation methodology	Project Staff																																				
1.2.1 Collect background information and statistical data on secondary forests	Project Staff																																				
1.2.2 Interview the communities living in the secondary forests of the Central Forest Region	Project Staff																																				
1.2.3 Develop database on secondary forests	Project Staff																																				
1.2.4 Design computer system on degraded forest resources	Project Staff																																				
1.2.5 Computerise data, documents and national free-access forum	Project Staff																																				

		YEAR 1												YEAR 2												YEAR 3											
ACTIVITIES	**RESPONSIBLE PARTY**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1.2.6 Establish discussion fora on disseminated information	Project Staff																																				
1.3.1 Establish information and analysis fora with local communities	Project Staff																																				
1.3.2 Apply relevant ITTO guidelines in the Central Forest Region	Project Staff																																				
1.3.3 Develop ecological-economic zoning proposal for secondary forest management	Project Staff																																				
1.3.4 Develop regional strategy in coordination with stakeholders	Project Staff																																				
1.3.5 Develop action plan for implementation of strategy	Project Staff																																				

7. DETAILED PROJECT BUDGET

			Values in US$							
ACTIVITIES	**PERSONNEL**	**Months**	**USD Month**	**Project Personnel**	**Sub-Contracts**	**Duty Travel**	**Capital Items**	**Consumable Items**	**Miscellaneous**	**Total**
1.1.1 Collect and systematise information on secondary forests	professional a	2	2000	4000		2400	32400	500	800	47600
	professional b	1	1500	1500						
	professional c	1	1500	1500						
	2 assistant	6	750	4500						
1.1.2 Identify sustainable management limitations and alternatives.	professionals a	2	2000	4000						12250
	professional c	2	1500	3000						
	professional e	2	1500	3000						
	1 assistant	3	750	2250						
1.1.3 Develop detailed maps of the Central Forest Region	professional a	3	2000	6000	10000	18000	47000	6800	13500	122300
	professional b	7	1500	10500						
	2 assistants	14	750	10500						
1.1.4 Develop methodology for the integrated evaluation	Professionals a	3	2000	6000						18000
	Professional b	3	1500	4500						
	Professional c	2	1500	3000						
	Professional e	2	1500	3000						
	Assistant	2	750	1500						
1.1.5 Validate integrated evaluation methodology	professional a	2	2000	4000		1800		300	600	17200
	professional b	3	1500	4500						
	4 Assistant	8	750	6000						
1.1.6 Develop manual on secondary forest evaluation methodology	professional a	3	2000	6000	6000			3600	1500	25350
	professional b	2	1500	3000						
	professional c	2	1500	3000						
	1 Assistant	3	750	2250						

			Values in US$							
ACTIVITIES	**PERSONNEL**	**Months**	**USD Month**	**Project Personnel**	**Sub-Contracts**	**Duty Travel**	**Capital Items**	**Consumable Items**	**Miscellaneous**	**Total**
1.2.1 Collect background information and statistical data on secondary forests	professionals a	1	2000	2000			12000	500	500	30000
	professional b	2	1500	3000						
	professional c	2	1500	3000						
	professional d	3	1500	4500						
	professional e	1	1500	1500						
	2 assistants	4	750	3000						
1.2.2 Interview the communities living in the secondary forests of the Central Forest Region	professionals a	1	2000	2000		20000		1000	3000	38000
	professional c	2	1500	3000						
	professional e	2	1500	3000						
	4 assistants	8	750	6000						
1.2.3 Develop database on secondary forests	professional a	1	2000	2000				500	500	12000
1.2.4 Design computer system on degraded forest resources	professional a	2	2000	4000	4000			1500	1100	22600
	professional b	2	1500	3000						
	professional d	6	1500	9000						
	professional b	1	1500	1500						
	professional d	5	1500	7500						
1.2.5 Computerise data, documents and national free-access forum	professional a	1	2000	2000				500	500	13500
	professional b	1	1500	1500						
	professional d	4	1500	6000						
	2 Assistants	4	750	3000						
1.2.6 Establish discussion fora on disseminated information	professional a	2	2000	4000	4000	1000		500	500	13000
	professional c	1	1500	1500						
	professional e	1	1500	1500						
1.3.1 Establish information and analysis fora with local communities	professional a	1	2000	2000	4500	25200		9200	9500	51900
	professional e	1	1500	1500						
1.3.2 Apply relevant ITTO guidelines in the Central Forest Region	professional a	1	2000	2000	12500			2500	2000	22000
	professional b	1	1500	1500						
	professional c	1	1500	1500						

			Values in US$							
ACTIVITIES	**PERSONNEL**	**Months**	**USD Month**	**Project Personnel**	**Sub-Contracts**	**Duty Travel**	**Capital Items**	**Consumable Items**	**Miscellaneous**	**Total**
1.3.3 Develop ecological-economic zoning proposal for secondary forest management	professional a	3	2000	6000		2400		500	500	16900
	professional b	3	1500	4500						
	professional c	1	1500	1500						
	professional e	1	1500	1500						
1.3.4 Develop regional strategy in coordination with stakeholders	professional a	3	2000	6000		2400		500	500	16900
	professional b	2	1500	3000						
	professional c	1	1500	1500						
	professional e	2	1500	3000						
1.3.5 Develop action plan for implementation of strategy	professional a	5	2000	10000						20500
	professional b	2	1500	3000						
	professional c	3	1500	4500						
	professional e	2	1500	3000						
GRAND TOTAL				**231000**	**41000**	**73200**	**91400**	**28400**	**35000**	**500000**

PROFESSIONAL STAFF

Professional a: Project coordinator, expert in forest cartography, forest inventories and geographic information systems, 36 months

Professional b: Expert in forest remote sensing, 30 months

Professional c: Expert in conservation of forest resources and biodiversity, 18 months

Professional d: Expert in systems and database development, 18 months

Professional e: Socio-economic Expert, 14 months

CAPITAL ITEMS AND EQUIPMENT

45 satellite images, aerial photographs and maps = US$25,000

1 4x4 vehicle = US$35,000

1 Computer work station for interpretation of satellite images and GIS, including printer and scanner = US$12,000

1 Computer work station for systems and database, including printer and scanner = US$12,000

INRENA will provide the following to the project: a total of 20 satellite images and other necessary equipment and materials, facilities maintenance costs, support staff, and miscellaneous supplies.

PROJECT BUDGET BY COMPONENT AND BY SOURCE

10	**Project Personnel**	TOTAL	ITTO	INRENA	YEAR 1	YEAR 2	YEAR 3
11	National Coordinator	72,000	72,000		24,000	24,000	24,000
12	National Experts	120,000	90,000	30,000	55,500	31,500	33,000
14	Assistants and other staff	39,000	15,000	24,000	26,250	10,500	2,250
19	**Component Total**	**231,000**	**177,000**	**54,000**	**105,750**	**66,000**	**59,250**
20	**Subcontracts**						
21	Preparation of maps /cartography	15,000	15,000	-	5,000	10,000	-
23	Publication of manuals	21,000	21,000	-	5,000	10,000	6,000
24	Other	5,000	5,000	-	-	3,000	2,000
29	**Component Total**	**41,000**	**41,000**	**-**	**10,000**	**23,000**	**8,000**
30	**Duty Travel**						
31	DSA	48,200	48,200	-	15,000	20,000	13,200
32	Transport Costs	25,000	25,000	-	10,000	10,000	5,000
	Component Total	**73,200**	**73,200**	**-**	**25,000**	**30,000**	**18,200**
40	**Capital Items**						
41	Capital equipment	91,400	83,800	7,600	83,800	7,600	-
49	**Component Total**	**91,400**	**83,800**	**7,600**	**83,800**	**7,600**	**-**
50	**Consumable items**						
51	Raw materials and fuel	28,400	20,000	8,400	15,000	8,400	5,000
59	**Component Total**	**28,400**	**20,000**	**8,400**	**15,000**	**8,400**	**5,000**
60	**Miscellaneous**						
61	Sundry	35,000	-	35,000	15,000	10,000	10,000
69	**Component Total**	**35,000**	**-**	**35,000**	**15,000**	**10,000**	**10,000**
70	**Executing agency management costs (15%)**	75,000	-	75,000	25,000	25,000	25,000
79	**Component Total**	**75,000**	**-**	**75,000**	**25,000**	**25,000**	**25,000**
	SUB-TOTAL	**575,000**	**395,000**	**180,000**	**279,550**	**170,000**	**125,450**
80	**ITTO Administration, Monitoring & Evaluation**						
81	Monitoring and review	30,000	30,000	-	10,000	10,000	10,000
82	Programme support costs (6%)	34,500	34,500	-	11,500	11,500	11,500
73	Ex-post evaluation	15,000	15,000	-	-	-	15,000
89	**Component Total**	**79,500**	**79,500**	**-**	**21,500**	**21,500**	**36,500**
100	**GRAND TOTAL**	**654,500**	**474,500**	**180,000**	**301,050**	**191,500**	**161,950**

YEARLY PROJECT BUDGET BY SOURCE – ITTO

/ Annual Disbursements Budget Components	TOTAL	YEAR 1	YEAR 2	YEAR 3
10. Project Personnel	177000	70000	54000	53000
20. Subcontracts	41000	10000	23000	8000
30. Duty Travel	73200	25000	30000	18200
40. Capital Items*	83800	83800		
50. Consumable Items	20000	15000	0	5000
60. Miscellaneous	0	0	0	0
SUBTOTAL 1	**395000**	**203800**	**107000**	**84200**
80. ITTO Administration, Monitoring & Evaluation				
81. Monitoring and review costs	30000	10000	10000	10000
82. Programme Support Costs	34500	11500	11500	11500
83. Ex-post evaluation	15000			15000
SUBTOTAL 2	**79500**	**21500**	**21500**	**36500**
ITTO TOTAL	**474500**	**225300**	**128500**	**120700**

* Two computer work stations including printer and scanner
One 4x4 Truck - Land Cruiser

YEARLY PROJECT BUDGET BY SOURCE – INRENA

/ Annual Disbursements Budget Components	TOTAL	YEAR 1	YEAR 2	YEAR 3
10. Project Personnel	54000	35750	12000	6250
20. Subcontracts	0	0	0	0
30. Duty Travel	0	0	0	0
40. Capital Items	7600	0	7,600	0
50. Consumable Items	8400	0	8,400	0
60. Miscellaneous	35000	15,000	10,000	10,000
SUBTOTAL 1	**105000**	**50750**	**38000**	**16250**
70. Executing Agency Management Costs	75000	25000	25000	25000
SUBTOTAL 2	**75000**	**25000**	**25000**	**25000**
INRENA TOTAL	**180000**	**75750**	**63000**	**41250**

PART III: OPERATIONAL ARRANGEMENTS

1. Management structure

INRENA will be responsible to ITTO for the administrative aspects of project implementation. At the highest hierarchical level in the project organisational structure there will be a Steering Committee made up of two INRENA officers, the Head of INRENA, who will chair the Committee, the General Forest Director, a professor from the Faculty of Forestry of the Agrarian University of La Molina (UNALM), the Coordinator of the Project "Support to the National Forest Development Strategy (ENDF)" and an ITTO representative.

This Committee will meet at least twice a year to establish project strategies and policies, as well as monitoring project activities.

The day-to-day implementation of the project will be under the responsibility of the Project Coordinator, who may be supervised by the General Forest Director.

2. Monitoring, reporting and evaluation

ITTO, INRENA, UNALM and the ENDF Project, as members of the Steering Committee, will be jointly responsible for the monitoring and evaluation of project achievements. Two meetings will be held during the first year of project implementation in order to ensure the smooth implementation of initial project activities. Annual meetings will be held during the second and third years, unless otherwise decided by the Committee. INRENA will be responsible for project auditing services and internal control during the implementation period. Regular audits will be carried out and the relevant reports will be made available to the Steering Committee. The Project Coordinator will be responsible for preparing regular progress reports and the project completion report in accordance with ITTO requirements.

3. Future operation and maintenance

It is expected that, upon project completion, local stakeholders and INRENA will internalise and jointly assume the responsibility for the implementation of the proposal within the framework of the Forestry and Wildlife Law as a way of accessing forest resources and ensuring their sustainable management.

Furthermore, actions will be taken to ensure that local governments include the implementation of the regional strategy for sustainable secondary forest management and harvesting in their work programmes and budgets. To this end, INRENA will provide the necessary technical assistance.

PART IV: THE TROPICAL TIMBER FRAMEWORK

1. Compliance with ITTO objectives

The proposed project is closely related to many of the objectives set out in Article 1 of the International Tropical Timber Agreement, 1994. A description of the relevance of expected project outputs to these objectives is given below:

- Objective a: The Project will provide technical and scientific information on environmental, ecological, economic, social and cultural aspects, which will be supplied at the national and international levels and will facilitate consultations and field visits by the personnel working in the Amazon sub-region.

- Objective c: The Project will contribute to the process of sustainable forest management and development, establishing forest planning and zoning activities for an improved administration, integrated utilisation and conservation of resources.

- Objective d: The local capacity of the country and other ITTO members will be enhanced in relation to the implementation of strategies and mechanisms for the market introduction of products and resources from sustainably managed forests that are socially, economically and ecologically viable.

- Objective e: Sustainable forest management will lead to the establishment of production areas for local consumption with potential to satisfy, in the medium to long term, the demand of the international trade, ensuring the harmonisation of strategies to achieve equitable prices for producers and consumers.

- Objective f: The integrated management of resources, including forests, water, soils, timber and non-timber products, will be ensured with the active participation of the local communities, using the most suitable methodologies and technologies developed as a result of research and development activities.

- Objective g: Project actions will serve as an example for the use of knowledge acquired at a larger scale and will promote possibilities for private and public investment with a view to improving the capacity for sustainable management and conservation of Amazon forests.

- Objective i: Using adequate sustainable forest management mechanisms and appropriate silvicultural practices, it will be possible to achieve a better utilisation and more efficient processing of the various timber and non-timber forest products.

- Objective m: The Project will generate relevant information on forest management, zoning and characterisation technologies as well as on sustainable forest utilisation, and will help to improve access to knowledge and information in this field.

2. Compliance with ITTO Action Plan

The proposed project is consistent with the project-related activities of the Organisation described in Article 25 of the ITTA 1994. Furthermore, the proposal takes into account the priorities and guidelines established in the ITTO Libreville Action Plan (1998 – 2001). In particular, it is related to the area of Reforestation and Forest Management (section 3.2 of the Action Plan) and specifically to Goal 1, actions 1, 2, 4 and 7, and Goal 2, actions 1, 4 and 5.

With regard to Goal 1, the Project envisages activities aimed at sustainable production, increase of knowledge and information for the establishment of sustainable forest management guidelines, and support to raise awareness at all levels. As the sustainable utilisation and conservation of forest ecosystems with the participation of the local communities are socially and economically viable, the project will provide production alternatives to prevent the implementation of destructive and illegal logging activities and to ensure the multiple-use management of forest areas with the participation of the local communities concerned and the relevant agencies in the countries involved.

The Project is consistent with Goal 2, actions 1, 3, 4 and 5 because expected project outputs are related to the adequate and sustainable use of resources by developing and implementing management guidelines and criteria.

TERMS OF REFERENCE FOR PROJECT PROFESSIONALS

A. EXPERT IN FOREST RESOURCES ASSESSMENT

Forest engineer specialised in the assessment of forest resources with a thorough knowledge of geographic information systems, forest inventories and photo-interpretation.

Duties:

1. In close coordination with INRENA's Forest Management Director and ITTO's forest officer, this expert will be responsible for coordinating project technical and administrative activities during the project implementation period.
2. Design and implement a geographic information system (GIS) to develop the project cartography.
3. Coordinate the preparation of a secondary forest map for the Central Forest Region of Peru, prepare the map legend and supervise the photo-interpretation process in all its phases.
4. Design and supervise the forest inventory for the evaluation of secondary forests in the project area.
5. Participate, in conjunction with other project professionals, in the preparation of the manual for secondary forest evaluation.
6. Participate in the development of a proposal for a secondary forest management strategy.
7. Prepare the project technical and administrative reports.

Duration of contract: 36 months.

Location: Lima, with frequent trips to the Central Forest Region.

B. PHOTO-INTERPRETATION EXPERT

Under the supervision of the Project Coordinator and in coordination with other project professionals, the photo-interpretation expert will perform the following duties:

1. Preliminary and final photo-interpretation of secondary forests and deforestation processes in the Central Forest Region of Peru using satellite images and relevant aerial photographs.
2. Coordinate field-checking activities to validate the photo-interpretation process.
3. Participate in the process of data entry into the GIS system, in the preparation of the manual for secondary forest evaluation, and in the ecological-economic zoning.
4. Prepare technical reports as required.

Duration of contract: 30 months.

Location: Lima, with regular trips to the Central Forest Region.

C. EXPERT IN NATURAL RESOURCES CONSERVATION

Under the supervision of the Project Coordinator, the expert in natural resources conservation will perform the following duties:

1. Participate in the cartography development process so as to identify areas susceptible to imminent or potential degradation, and demarcate the areas that should be protected.
2. Participate in the ecological-economic zoning of the Central Forest Region in conjunction with other project experts.
3. Participate in the preparation of the manual for secondary forest evaluation.
4. Participate in the proposal for a secondary forest management strategy.
5. Participate in studies and field surveys on the use of secondary forest resources.
6. Prepare technical reports as required.

Duration of contract: 18 months.

Location: Lima, with regular trips to the project area.

D. SYSTEMS EXPERT

Under the supervision of the Project Coordinator, the Systems Expert will perform the following duties:

1. Prepare a prototype proposal for a database to be developed in conjunction with the GIS, photo-interpretation, conservation and socio-economic experts.
2. Develop the most suitable database system on the basis of the tests of the previously developed prototype.
3. Participate in the data entry and analysis process.
4. Train the project staff in the use of the system.
5. Participate in the preparation of the manual for secondary forest evaluation.
6. Prepare technical reports as required.

Duration of contract: 18 months.

Location: Lima.

E. SOCIO-ECONOMIC EXPERT

Under the supervision of the Project Coordinator, the Socioeconomic Expert will perform the following duties:

1. Design a model for surveys, interviews and discussions with secondary forest users in the project's area of influence.
2. Carry out a socioeconomic study on the access, use and conservation of natural resources in the project area, with special reference to secondary forests, based on field work and on the analysis of the information obtained from studies previously implemented in the area.
3. Participate in the organisation of project workshops and promote forest users' and decision-makers' involvement and discussions.
4. Participate in the preparation of the manual for secondary forest evaluation.
5. Prepare technical reports as required.

Duration of contract: 14 months.

Location: Lima, with frequent trips to the project area.

ANNEX 1

INTEGRATED EVALUATION AND STATEGY FOR THE SUSTAINABLE MANAGEMENT OF SECONDARY FORESTS IN THE CENTRAL FOREST REGION OF PERU

Logical Framework, January 2003 - December 2005

In order to better understand the project proposal, we have developed the corresponding Logical Framework, which provides detailed information of its contents. The following pages contain a narrative summary and other details of the Logical Framework which is provided to ensure a better understanding of this component.

GOAL

Peru limits the progress of the desertification process thanks to the successful implementation of sustainable secondary forest management strategies

The goal, within the context of the Logical Framework, is the same as the Development Objective or the general orientation of the project. Therefore, this is not a goal to be achieved in the short term but rather in the long term and the implementation of this project will contribute to the its achievement.

With this in mind, the major aim of the project is to help limit the progress of desertification, which is a serious problem in Peru. This could be achieved if the strategy for the sustainable management of secondary forests is incorporated into the national forest policy of Peru, as stated in the objectively verifiable indicator.

The way to verify this will be verifying that the strategy for the sustainable management of secondary forests is part of Peru's national forest strategy. To this end, the important assumption will be that the highest decision-making powers will commit themselves to the implementation of the strategy that the project plans to develop.

OBJECTIVE

The communities of the Central Forest Region of Peru benefit from the sound management of secondary forests

This objective is the Project's key commitment. In this particular case it is a commitment with the communities of the Central Forest Region of Peru, who will have an integrated secondary forest management policy in place and will profit from the corresponding benefits that this activity will provide. To this end, it will be necessary to achieve the following three outputs: an integrated secondary forest evaluation methodology, the dissemination of the results obtained through the evaluation and implementation.

An indicator of this objective will be that the communities of the Central Forest Region incorporate the regional sustainable secondary forest management and harvesting strategies into their local development plans. This indicator can also be verified through the Regional Strategic Plan for the sustainable management and harvesting of secondary forests.

The important assumption for the achievement of this Project Objective is the commitment of the local community to implement the integrated secondary forest management strategy.

It is important to point out that in order to ensure the achievement of this objective the following three outputs have been identified as essential. The contents of these outputs have been developed below.

- An integrated forest evaluation methodology,
- A database containing the main biological characteristics and the social and economic context of secondary forests,
- A regional sustainable secondary forest management strategy.

Once these three outputs have been obtained through the implementation of their respective activities, the objective will be deemed to have been achieved.

O1: ***Integrated secondary forest evaluation methodology developed and implemented in the Central Forest Region of Peru***

This first output refers to the Project's commitment of formulating an integrated methodology for the evaluation of secondary forests, which will be validated with a minimum of 20 users from the Central Forest Region. The accomplishment of this output shall be verified through INRENA indicators as this institution formulates the methodology for the official use of secondary forests in the country.

The means of verification shall be the Provincial Resolution approving the methodology. The important assumption for the achievement of this first output will be that the methodology responds to the characteristics and needs of secondary forest management in order to satisfy the demands of users who are actively participating in the process.

The following activities have been envisaged for the achievement of this output:

A1: ***Collect and systematize information on secondary forests***

This first activity involves gathering as much information as possible on secondary forests, both at the office and field levels, so as to have available data for the analysis of existing problems as well as appropriate sources for the development of the required methodology.

The indicator to evaluate the achievement of this activity involves carrying out fifty interviews, thirty with researchers and institutions and twenty with settlers living in the project area of influence, before July 2003. The means of verification will be the reports on the systematization of the information gathered. The important assumption that must occur in reality in order for this activity to be accomplished is the active participation of the professionals and settlers interviewed.

A2: ***Identify sustainable management limitations and alternatives***

This second activity refers to gathering information from the first sample of possible participants involved in the process of the formulation and application of the integrated methodology for the evaluation of the secondary forests of the Central Forest Region of Peru, which includes areas that extend over four different departments.

The accomplishment of this activity will require the identification of forty users strategically situated in the selected project sites. The accomplishment of this activity will be evaluated from the indicator arising out of the implementation of the 40 interviews with settlers, duly systematized and included in a detailed report that will constitute the means of verification.

The assumption that will be considered for the achievement of this activity is to ensure the active and committed participation of the settlers identified in the corresponding sample.

A3: ***Develop detailed maps of the Central Forest Region***

This activity does not require any conceptual explanation, but it does require an explanation of the content. The activity involves the preparation of sets of maps reflecting the pre-project situation, which will help to determine the deterioration status of secondary forests in the Central Forest Region of Peru. These maps will reflect the situation at five year intervals, thanks to the use of existing aerial photographs.

This visual monitoring practice will help create awareness among the population and will expedite the decision making process related to the forest policy in the country. This monitoring practice will eventually become proof of the positive changes arising from the sustainable management that will be implemented by the Project.

During the implementation period, it is envisaged that three sets of these "five-year-period" maps will be produced up to December 2003, as indicated in the objectively verifiable indicator. The means of verification on the achievement of this activity will be the institutional records and the library, where these maps will be located so that they can be used by any interested parties.

The assumption for the planning of this activity, is that the project will have access to quality satellite images taken over five-yearly periods.

A4: ***Develop an integrated evaluation methodology***

After completion of the three aforementioned activities the project will develop an integrated secondary forests evaluation methodology for implementation in the secondary forests of the Central Forest Region, on a demonstration basis, and subsequent generalization in other forest areas of the country, where it can be applied after the required adjustments are made.

The importance of this activity is based on the active participation of the population involved in the development of the methodology in the demonstration areas. The population will not only participate as information providers, but will primarily be the main actors who will be applying the sustainable management practices identified for secondary forests.

The indicator that will verify the achievement of this activity will be the document containing the methodology, and its means of verification will be the Project documentation. This activity is planned under the important assumption that there is sufficient information available on secondary forests and evaluation methodologies, including the ITTO guidelines, which will be an excellent basis for this activity.

A5: ***Validate integrated evaluation methodology***

Once the methodology has been developed it must be validated in real life situations on a demonstration basis, with selected families having specific characteristics, who are representative of the communities living in the secondary forests of the Central Forest Region.

The validation implies a systematic follow-up of the different practices that the methodology must include, as part of a general research methodology - an action that will gradually be systematized.

The objectively verifiable indicator of its achievement will be the participation of 20 families in the evaluation of their own plots, as part of a teaching/learning process. In other words, they will provide real life information, but at the same time they will be learning the concepts contained in the evaluation methodology. The cut-off date for its implementation will be December 2004, which will increase the duration of the Project by one more year in order to disseminate real life outputs within the framework of a general approach.

The means of verification will be the progress reports of each of the family plots which will be included in the Project files. The important assumption for the implementation of this activity is the active and committed participation of the selected families.

A6: ***Develop manual on secondary forest evaluation methodology***

The final activity of this first output will be development of a manual that can be used for the evaluation of the secondary forests of the country, which are estimated to be approximately 9 million hectares and which are in urgent need of evaluation, not only because of the vast area that they cover, but also because of their social importance given the migration waves that are taking place from the Mountain Ranges to the High forest areas of Peru.

The objectively verifiable indicator of the accomplishment of this activity will be the actual manual for the integrated evaluation of secondary forests of December 2005, which will include a systematization of the results of the validation and application, and which will constitute a Manual which can be applied to the different secondary forests of the country.

The means of verification will be the existing copies of this Manual, with the aforementioned characteristics, which will be found both in the Project records and in the library of the institution and the ITTO. The important assumption upon which this activity is based is the timely completion of the previous activities, without which it will be impossible to accomplish this activity.

Thus, the first out put and its corresponding activities will be completed. In summary, the output and activities are aimed at ensuring that the country has an integrated secondary forests evaluation methodology, which is extremely important for the national reality. An important aspect of all this will be the participation of the communities involved with secondary forests, who will be both the providers of quality information and the demonstration implementing agents of the outputs achieved, while contributing at the same time to their validation.

The participatory methodology and research-action components will be the two methodological instruments that the Project will use to achieve this first output.

O2: ***Operational database containing information on the main biological characteristics and the socioeconomic aspects of secondary forests in the Central Forest Region of Peru***

This second output is mainly aimed at generating important information on secondary forests in general, on secondary forests with specific national characteristics and, in particular, on the benefits derived from the formulation and application of the integrated secondary forests evaluation methodology, which is the subject of the first output.

The key element is to ensure the availability of transparent information through a computerized data base that will be available to all interested parties from all sectors, including: Academics, Researchers and, in particular, Action Programs for the sustainable management of secondary forests.

The main contents of the data base will include the biological characteristics and the social and economic contexts of the secondary forests of the Central Forest Region. The achievement indicator for this output will be the register of a minimum of 50 users registered with the system and a minimum of 20 families applying this information in the management of their forestry plots by December 2005.

The means of verification will be the register of users and the visits to the demonstration plots under implementation. The important assumption for the achievement of this output will be that the quality of the information provided must satisfy the demands of the users.

The following activities have been envisaged for the achievement of output 2:

A1: ***Collect background information and statistical data on secondary forests***

This first activity is aimed at collecting and systematizing general information on secondary forests, both from specialized institutions and from the Internet so as to facilitate the consistent systematization of information on the subject. Special emphasis will be placed on information related to Peru's secondary forests.

The objectively verifiable indicator for the accomplishment of this activity will be the visits and interviews carried out with at least 20 institutions up to June 2003, the first year of project implementation, as stipulated in the relevant schedule.

The means of verification will be the Project reports and records that will contain all of this information and the results of its processing. The important assumption is the institutions' willingness to share and disseminate the required information.

A2: ***Interview the communities living in the secondary forests of the Central Forest Region***

The second activity is aimed at collecting basic information on the secondary forests selected through a sampling process in the four departments where the Project will be implemented: Huanuco, Junin, Cerro de Pasco and Ucayali. During this information collection process, families will be selected to implement the recommendations of the first output, in other words, to carry out the integrated evaluation of secondary forests.

The objectively verifiable indicator for this activity will be the 100 interviews carried out with users throughout the 4 departments to December 2003. The means of verification will be the information systematization reports. The important assumption for this activity is that the communities will be willing to cooperate and that their replies will be consistent.

A3: ***Develop database on secondary forests***

In order to ensure the sound operation of the virtual information system, it will be necessary to establish a database that will systematize the information collected from the communities and from the secondary sources identified in the previous activities. This database will be continuously updated with the information collected in the field and with the virtual information obtained through the Internet.

The accomplishment indicator for this activity will be the actual database on the characteristics and management of secondary forests covering a minimum of 6 topics by May 2003, which will make it one of the first activities to be implemented by the project. The means of verification will be the monthly content reports and the important assumption is that the Project will have access to reliable and available information in relation to each of the proposed topics.

A4: ***Design computer system on degraded forest resources***

On the basis of the results from the two previous activities, the Project will be able to design the virtual information system on degraded forest resources, including secondary forests, which are in urgent need of being appropriately managed to ensure they do not deteriorate further and become a threat to the environment.

In view of this, there will be greater public interest in the availability of this information, which will not only be targeted to the users of the forests in question, but also to national and international institutions involved in forestry activities and the environment.

The accomplishment indicator for this activity will be the actual virtual information system in operation as at December 2003. The means of verification will be Project's Web page which will be available to the public at large. The important assumption is that the Project will have the appropriate technical equipment and qualified personnel.

A5: Computerize data, documents and national free-access forum

The continuous updating of information mentioned in the previous activity will be the basis for updating the database. However, it will be necessary to plan this activity in order to strengthen Project activities and ensure that adequate attention is given to the ongoing collection of all available information, which will then be disseminated accordingly.

In view of this, the second part of this activity will be to organize a national forum for the analysis and consideration of the information collected. The accomplishment indicator will be that at least one thousand users are registered as permanent users of the information generated by the Project by December 2005.

The means of verification will be the six-monthly reports of the new information systematized during that period and the feedback received from users. The important assumption upon which this activity is based is that there is an unsatisfied demand for alternative secondary forest management information.

A6: Establish discussion fora on disseminated information

After intense work through the virtual medium, it will be necessary to organize regular debates on the progress made in the resolution of problems addressed by the Project. The indicator for the achievement of this activity is a minimum of 3 discussion meetings on the quality of the information by December 2005.

The means of verification for the accomplishment of this activity will be the results of the meetings translated into action agreements and appropriately systematized. The assumption upon which this activity is based is that the users of the information will actively participate in the debate, and the success of this activity will depend on their participation.

In conclusion, this second output of the Project Logical Framework is aimed at contributing to the collection, systematization, analysis and socialization of existing information and of the information produced on the problems and alternative solutions related to the integrated management of secondary forests.

O3: ***Regional Strategy for the sustainable management and utilization of secondary forests as part of the implementation of the National Forest Development Strategy (Estrategia Nacional de Desarrollo Forestal - ENDF) in Peru***

The first project output is aimed at the development and implementation of an integrated evaluation of secondary forests in the Central Forest Region of Peru and the second output is aimed at the collection and dissemination of information that is available or that is generated on this issue. The contribution of the Project, however, would not be complete unless the results of its implementation are not permanently applied as part of a Sustainable Development Strategy for the whole country.

For this reason, this third and final project output seeks to contribute to the development of an official Regional Forest Management and Utilization Strategy for Secondary Forests as part of the implementation of a National Forest Strategy, which is currently in the process of being structured as an independent Project.

The achievement indicator for this output will be that the official Regional Strategy will be in the process of being validated with 20 families as at December 2005. The means of verification will be the official document

and the records of the interviews undertaken with the families implementing the strategy. The important assumption upon which this output is based is the active participation of the families involved as well as the ongoing political will to change of authorities at the highest level.

The following activities have been envisaged for the achievement of this last output:

A1: ***Establish information and analysis fora with local communities***

Today, every project must ensure the participation of the target communities in order to achieve real reforms that will change the situation of these communities. Based on this fact, the Project must ensure that technical advances, such as the evaluation of secondary forests, become issues that are managed by the communities involved, as this will create an awareness that will translate into a commitment to implement the alternative proposals promoted by the Project.

A series of meetings with the communities will help identify the technical and social problems affecting secondary forests and this participatory process will facilitate the collection and dissemination of systematized information which can then be updated. More important still, these meetings will create an awareness among the communities about the situation of secondary forests.

The objectively verifiable indicator considered in the Logical Framework will be the implementation of 16 information meetings held in 4 departments during the 3 years of project implementation. The means of verification will be the minutes of the meetings and the records of the interviews carried out with the community members. The important assumption upon which this activity is based is the guarantee that the communities will participate as required.

A2: ***Apply relevant ITTO guidelines in the Central Forest Region***

Given that ITTO has produced important data on secondary forests, the Project will implement this activity which is aimed at incorporating the relevant ITTO guidelines into the reality of the Central Forest Region of Peru. This activity will, at the same time, become a useful tool for the validation of these guidelines on the ground.

The objectively verifiable accomplishment and validation indicator for this activity will be the number of ITTO guidelines incorporated into the regional strategy for the sustainable management of secondary forests, which is the object of this Project. The means of verification will be the final document containing the regional strategy.

The important assumption upon which this activity is based is that the Project team is totally familiar with the ITTO guidelines.

A3: ***Develop an ecological-economic zoning proposal for secondary forest management***

On the basis of the progress made with the other outputs and activities, the Project will be able to develop an ecological-economic zoning proposal for the management of secondary forests, with special emphasis on the Central Forest Region of Peru. This is an essential instrument for the sound and systematic management of secondary forests.

The objectively verifiable indicator to evaluate the accomplishment of this activity will be the actual proposal, which will contain descriptive and mapping information as at December 2005. The means of verification will be the progress reports and other documents contained in the project files. The important assumption is that there are satellite images, mapping information and appropriate equipment available.

A4: ***Develop regional strategy in coordination with stakeholders***

The grassroots information obtained and the implementation of the ITTO guidelines aimed at solving existing problems will be evaluated through the development of a regional strategy for the sustainable management of secondary forests in the Central Forest Region of Peru.

This important activity will take into account the decentralization process taking place in Peru today, which requires new regional governments as well as local governments (the provincial and district municipalities) to incorporate into their development plans the key elements of the strategy for the sustainable management of secondary forests. This will ensure that there is no competition or dispersion of the communities, and will serve as a unifying element of common action in pro of local development.

The indicator for this activity will be the implementation of 6 participatory workshops with the communities of the Central Forest Region over the 3-year project implementation period. The means of verification will be the workshop reports and the lists of workshop participants.

The important assumption upon which this activity is based is that the local communities and authorities will actively participate in the implementation of the activity.

A5: ***Develop action plan for implementation of strategy***

The regional strategy for the sustainable management of secondary forests will be an important contribution to the local conditions in the project's area of influence. To this end, it will be necessary to develop an Action Plan for the implementation of the regional strategy, which will at the same time establish the basis for the development and implementation of strategies for all regions with secondary forests as part of the National Forest Strategy.

The indicator for the evaluation of the accomplishment of this activity will be the actual Plan, which will be developed through a participatory process by December 2005. The means of verification will be 1,000 copies of the Plan, duly distributed, with copies also available in the Project files and in the libraries of ITTO and INRENA.

The important assumption upon which this activity is based is the availability of budgetary funds and the professional commitment to implement it.

Michan, please insert 2 MAPS (before page 36 in the original Spanish document).

Thank you.

RESPONSE TO THE 24TH EXPERT PANEL'S COMMENTS AND RECOMMENDATIONS

COMMENTS AND RECOMMENDATIONS	RESPONSE TO COMMENTS AND RECOMMENDATIONS
During the first evaluation of the proposal, the 23th Expert Panel recommended that the number of specific objectives be reduced to one or two.	The presentation of the specific objectives of the project has been simplified in a single objective, which envisages all the previously established expected outputs.
Develop the technical and scientific aspects in much greater depth as they relate directly to the project strategy.	The technical and scientific aspects have been developed in greater detail, directly relating them to the project strategies and objectives. To this end, we have sought the cooperation of Dr Cesar Sabogal, co-author of the ITTO Guidelines for the Sustainable Management of Secondary Forests.
Clearly describe the socio-economic aspects of the project in comprehensive detail as they relate to the development of a national strategy for the sustainable management of secondary forests, especially regarding the role of local communities.	The description of the socio-economic aspects of the project has been significantly expanded, making reference to the National Forest Development Strategy that is currently being implemented by INRENA through a FAO Project with the financial support of the Royal Government of the Netherlands.
Explain the purpose of the mapping exercise and the methodology to be used.	Despite the obvious need and significance of satellite imagery based mapping for this project, a more detailed justification is given in the relevant section of technical and scientific aspects.
Seek assistance to incorporate the ITTO Guidelines for the Restoration, Management and Rehabilitation of Degraded and Secondary Forests into the proposal.	The assistance of Dr Cesar Sabogal (co-author of ITTO Secondary Forest Guidelines) has been sought and the principles and recommended actions most relevant to the project objective have been selected (see project strategy and Annex 2).
Ensure that all project activities are consistently reflected in the budget and work plan.	The budget has been thoroughly revised and all project activities are consistently reflected in it.
Revise the logical framework reducing the number of specific objectives, refine the indicators and provide more realistic assumptions.	The entire logical framework has been revised and re-drafted following this recommendation.
Adjust the budget for ITTO Monitoring and Review to US$ 30,000.00.	This recommendation has been duly incorporated.
Include an Annex, which shows the recommendations of the 24th Panel and the respective modifications in tabular form.	Included herewith.

ANNEX 2

ITTO GUIDELINES FOR DEGRADED AND SECONDARY FOREST MANAGEMENT

SECTION 1: POLICY, PLANNING AND MANAGEMENT GUIDELINES

A. Attain commitment to the management and restoration of degraded and secondary forests

Greater awareness of the current and potential value of degraded and secondary forests and their important roles in the rural landscape and in rural livelihoods is required. Improved information, communication and collaboration among policy makers and stakeholders can build consensus and support for local, national and international initiatives to more effectively manage these lands for the benefit of present and future generations.

Principle 1: Landscape Context	**Recommended Actions 1-3**
Degraded and secondary forests are an integral part of land-use systems. Degraded and secondary forests need to be seen as an integral part of the rural tropical landscape. They are affected by off-site conditions, . Restored primary forests, rehabilitated forests lands and managed secondary forests can provide numerous benefits and services to society; they fulfill important productive and protective functions and need full recognition as an important land-use element. Within any given landscape, some degraded primary forests and secondary forests may need to be converted to other uses, but such conversion should be part of an overall land use plan that optimizes the allocation of land within the landscape.	• Incorporate degraded and secondary forests into land use planning at the micro and macro scales. • Establish integrated land-use plans that reflect an appropriate balance between conservation, production and sustainable livelihood needs from forests. • Explore options for restoration and rehabilitation before allocating degraded and secondary forests to non-forest uses.

Principle 2: Livelihoods concerns	***Recommended Actions 4-5***
Degraded and secondary forests make valuable contributions to rural livelihoods, particularly those of the poor. The value of degraded and secondary forests for all those people who depend directly or indirectly on forest resources for their livelihoods needs to be documented and formally recognized. Inadequate participation of local stakeholders in policy processes and inadequate consideration of local needs, site conditions, and land use practices may result in degradation and inappropriate conversion of degraded primary forests and secondary forests.	• Emphasise recommendations for the management of degraded and secondary forests in national forest policy and legislation. • Give priority to the interests and knowledge of local stakeholders when managing degraded and secondary forests and adapt management strategies to local socio-cultural and economic conditions.

Principle 8: Stakeholder Participation	*Recommended Actions 25-28*
Local communities and stakeholders actively participate and share responsibility of decision-making in planning and implementing restoration, management and rehabilitation strategies for degraded and secondary forests. Restoration, management and rehabilitation of degraded and secondary forests needs to be understood and supported by all concerned stakeholders in order to be effective and to lead to sustainable results. Forest restoration and rehabilitation can only be sustainable in the long-term if they are socially acceptable. The principal stakeholders (forest owners, local communities, concessionaires, forest authorities) need to reach agreement on an equitable distribution of incentives, costs and benefits. Conflicts will be inevitable in decisions over the strategies to be implemented in areas that are designated as multiple use.	• Identify all local stakeholders and facilitate consultations for decision-making and planning at a landscape level. • Create opportunities for the economic empowerment of all forest-dependent local stakeholders. • Explore options for collaborative management between local and national stakeholders. • Identify areas of conflicts, and develop common approaches to deal with them.

D. Employ integrated approaches to resource assessment, planning and management

A thorough assessment and evaluation of the socioeconomic and ecological context at the rural landscape level greatly facilitates the formulation of strategies for the management and restoration of degraded forest lands, secondary forests and degraded primary forests. A participatory planning approach at the landscape-scale and involving all relevant stakeholders will help to minimize conflicts and risks, and optimize the environmental, social and economic benefits of forest land management.

Principle 11: Land-use options	*Recommended Actions 34-38*
The appropriate land-use option for a given site needs to be carefully chosen. Incentive schemes to promote the restoration, management and rehabilitation of degraded and secondary forest should prioritize those sites where both local and landscape level benefits can accrue. At the level of land-use planning, clear decisions need to be taken on which forest land will be used for agricultural production in the short and long term and which forest land will be devoted to conservation, sustainable production of forest goods and services, or forest restoration. It is important to avoid investments in forest restoration and rehabilitation of degraded forest land if no guarantee can be given that the land will remain under permanent forest cover.	• Clearly identify the site location (e.g. through delineation of boundaries) and clarify ownership and/or tenure-rights and possible user-rights. • Assess the area, distribution and functionality of degraded forest landscapes. • Identify the reasons why management, restoration or rehabilitation is needed and the general strategies through discussions with local people and site inspection. • Integrate planning work related to degraded forest landscapes in an overall rural landscape planning approach. Prepare cost-benefit and risk analysis of different land-use options in degraded forest landscapes, taking into account local, regional, national and possibly international concerns. • If a decision is taken that the degraded forest landscape should remain or be established as

	permanent forest estate, work with all stakeholders involved to define an adequate management strategy (restoration, rehabilitation, management of secondary forests etc).

Principle 12: Environmental Assessment	**Recommended Actions 39-42**
The initial environmental conditions, particularly stress and risk factors present in landscapes containing degraded and secondary forest must be assessed. The feasibility of forest restoration and rehabilitation of degraded forest land depends on the extent and nature of the existing environmental and socio-economic stresses. Sites with strong seasonal climate, low soil fertility and other environmental stresses are likely to be more difficult to restore than those that have more benign conditions. Frequent periodic but unpredictable stresses and strains (e.g. fires, droughts), episodic climatic anomalities (e.g. ENSO) and the potential for long-term global climate change, may make restoration goals elusive. Evaluation and measurement of success or failure depends in part upon being able to contrast the site before and after any of the three management strategies has been applied.	• Determine the specific physical and environmental risk and stress factors for the area that is being restored, rehabilitated or managed as a secondary forest stand. To do so, assess and monitor the physical site conditions (soil, water regime, climatic conditions) • Analyze outcomes and assess if the effects of these stress factors will allow a socially and economically feasible approach to forest restoration, secondary forest management or site rehabilitation. • Determine if stress factors may be affected by climate change. If so, assess the feasibility of undertaking restoration and rehabilitation activities under a mechanism proposed in the framework of the Climate Change Convention, and in particular in the framework of climate change adaptation programs. • Document the baseline situation through adequate ground photographs, aerial photographs, or satellite imagery. To the extent possible, document the site history that led to the need for restoration or rehabilitation.

Principle 13: Multiple-Use Concept	***Recommended Actions 43-47***
Degraded and secondary forests need to be managed under an adaptive and multiple-use management approach. Degraded forest landscapes should be managed under the general principle of multiple-use management in order to derive a maximum benefits from the resource. Planning needs to consider a dual purpose: on the one hand, management should boost the productivity of specified forest products, and, on the other hand, it should restore the protective functions of forest and soils. Restoration of degraded primary forests for timber alone is in most cases not a valid option, as forests are accessible to a variety of stakeholders, or fragmented, so that the single purpose of timber production is not sustainable	• Evaluate prospects for forest products and payment for services. This includes an assessment of feasibility of producing high-value timber, timber and firewood for industries, NWFPs for local needs and markets etc.. • Assess watershed protection, biodiversity conservation and carbon sequestration and storage capacities and the possibility of environmental payments at the national and international levels for such services. • Reach agreement between stakeholders on the main purpose(s) after thorough evaluation of all existing options, from an ecological, economic and social viewpoint. • Based on the results of a participative planning process, elaborate simple management plans for degraded forest landscapes. Such management plans comprise: mapping, tenure and ownership

Management plans need to be precise, simple, clearly understandable by all parties, accessible to all interested parties and cost-effective in their implementation. The management plan should be based on an adequate characterization of the social, cultural, economic and biophysical context in order to identify and describe the scenarios, the actors and their perceptions, the potentialities and needs. Management plans should be different for each forest condition and include descriptions of the main biophysical and socio-economic issues.	arrangement, establishing a typology of forest conditions, developing a management strategy for each forest condition, establishing a monitoring framework. Clearly indicate who is responsible for the implementation of different tasks. Formal arrangements for coordination should be stated in the management plan, including descriptions and purposes of planning meetings, reporting, review of results, and so on. • Consult and validate such plan with all concerned stakeholders at local, regional and national levels.

E. Take a holistic and adaptive approach to management, emphasizing environmental and social values

The success of strategies developed to restore degraded primary forests, improve management of secondary forests, and rehabilitate degraded forest lands requires a holistic perspective that integrates social and environmental values and goals of relevant stakeholders. An adaptive management approach that recognizes environmental and socioeconomic limitations, fully utilizes the self-recovery potential of secondary and degraded forests, understands the uncertainty often associated with forest restoration and rehabilitation and management as well as the changing needs and aspirations of landowners and rural communities is required. Such an approach can help to reduce risks and enhance the environmental, economic and social goods and services derived from management at the local and rural landscape scale.

Principle 20: Landscape restrictions	**Recommended Actions 69-71**
Restoration, management and rehabilitation of degraded and secondary forests can be subject to environmental and economic constraints. Forest restoration should not be attempted in landscapes that can no longer support the kind of ecosystem designated for restoration or which will likely be compromised later by the effects of land-use at the site, and offsite. To the extent possible, future threats to the integrity of the restored forest should be minimized by adequate mechanisms, such as rural landscape zoning and/or agreements with land users adjacent to the forest restoration sites.	• Analyze general land use patterns in the region, and determine if and how these land-uses will affect the restoration site. Combine this analysis with a soil and site survey and vegetation mapping. • Ensure that the factors that have led to the degradation of the primary forest have been or can be managed to the extent that they no longer constitute major risks to the restoration process.. • Prescribe forest restoration in general land-use plans in the area, and ensure (through, for example, binding commitments with neighboring landowners) that future restoration sites will not be affected by off-site land-use.