

INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT PROPOSAL

TITLE:	PROMOTING SFM AND LOCAL WOOD CONSUMPTION THROUGH CAPACITY BUILDING AND IMPROVING REGULATION IN THE NORTH ZONE, COSTA RICA
SERIAL NUMBER:	PD 931/23 (F) [CN-21005]
COMMITTEE:	REFORESTATION AND FOREST MANAGEMENT
SUBMITTED BY:	GOVERNMENT OF COSTA RICA
ORIGINAL LANGUAGE:	ENGLISH

SUMMARY

In Costa Rica's northern forest region, where most of Costa Rica's wood is produced, pressure on agricultural reclamation rather than forest management is increasing, escalating the threat of severe deforestation and deforestation.

The main causes of this problem are lack of knowledge and experience in sustainable forest management, insufficient support of the government such as law and regulation improvement, owner's lack of capacity to marketing, and lack of demand for locally produced timber. As a result, these causes do not generate sufficient profits through forest management, and thus, owners are interested in converting forests to other uses such as agriculture. **These forests are mostly owned by small producers. Project activities will encompass the gender action plan under the National REDD+ Strategy and the ITTO guidelines on gender equality and women's empowerment, and will involve local communities, in particular women and youth, will need additional decent work, opportunities and thus improving their livelihoods.**

When the project is completed, the knowledge of SFM of forests owners and related officials will be expanded and SFM will be applied to forest management. In addition, the income of owners will increase due to improved laws and procedures, improved marketing capabilities of owners, and increased demand for local timber. As a result, the pressure for conversion of forests in northern forests will be alleviated, and the basis for sustainable forest management will be laid.

EXECUTING AGENCY:	San Carlos Forestry Development Commission Association (CODEFORSA)		
COLLABORATING AGENCIES:			
DURATION:	24 MONTHS		
APPROXIMATE STARTING DATE:	UPON APPROVAL		
BUDGET AND PROPOSED SOURCE OF FINANCE	Currency Source	Contribution in US\$	Local Currency Equivalent
	ITTO	138,260	
	CODEFORSA	60,000	
	TOTAL	198,260	

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List of Acronyms and Abbreviations

CODEFORSA	San Carlos Forestry Development Commission Association
FONAFIFO	National Forest Financing Fund
SINAC	National System of Conservation Areas
ZN	North Zone
MFS/ SFM	Sustainable Forest Management
PSA	Payment for Environmental Services
AFE	State Forestry Administration
DFID	Department for International Development
ppm	Permanent Measurement Plot
CATIE	Tropical Agricultural Research and Higher Education Center
SWITCHED ON	National Forest Office
REDD+	Reduction of Greenhouse Gas Emissions Caused by Deforestation and Forest Degradation
PDF	National Forest Development Plan
INF	National Forest Inventory
ID	Social Development Index
COSEFORM	Cooperation of the Forestry and Timber Sectors
FUNDECOR	Foundation for the Development of the Central Volcanic Cordillera.
GMF	AFE Forest Management Manager
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation)
MINAE	Ministry of Environment and Energy
MP	Ministry of National Planning and Economic Policy
PMIB	Comprehensive Natural Forest Management Program
AC	SINAC Conservation Area
ppm	Permanent Measurement Plots
SIREFOR	Forest Resources Information System (SINAC)

Maps of project area



Figure 1. Map of the Project's area of influence: North Zone of Costa Rica

Project: Promoting SFM and local wood consumption through capacity building and improving regulation in the North Zone, Costa

PART 1. Project Context

1.1 Origin

After the change in land use was prohibited in Costa Rica in 1991, the sectors involved agreed to improve the procedures that would facilitate access to forest resources. On this date, the use of the forest was characterized by the fact that the best and most valuable trees were extracted, there was no planning or technical support, the harvest permit was granted and there was no control by the State; Thus, the forest was destroyed by up to 56%. There were no field experiences that showed which were the most appropriate techniques for the use of forest resources without leading to their decline. Hence, with the intention of fighting against the overexploitation that the forests suffered at that time, several pilot projects in forest management will be produced in the Northern Zone.

The projects sought to generate data that would contribute to improving the regulation of forest use. One of these projects was carried out by CODEFORSA in the period 1991-1998, which with the financial support of the British cooperation (DFID) established ten forest management units for demonstration, and 34 permanent sampling plots (PPM). In these units, forest censuses and topographic surveys were introduced as planning tools, while applying various harvesting intensities, at the same time, all this was validated in the field through experiments in the PPM (Méndez, 2003). Thus, CODEFORSA, with the support of academic institutions such as CATIE, used its research units for the application of post-harvest silvicultural treatments, obtaining as a practical result the guide for diagnostic sampling and the prescription of silvicultural treatments, published in 1994.

Simultaneously, as progress was made with the different development projects, some weaknesses in the management system that prevailed at that time were corrected. Procedures for pre-harvest inventory and yield regulation were strengthened, with the intention of minimizing the impact of forest use and avoiding over-harvesting of the most valuable species. It was possible to go from a basis per stand (60% of the commercial volume above the minimum cutting diameter) to a basis per species (60% of the commercial volume of each species above the minimum cutting diameter) (Magines et al, 1998). Also, a minimum harvest cycle of 15 years was established. Thus, these and other changes gave rise to the SFM platform that governs the country.

However, the current SFM platform has not been attractive enough for smallholders to adopt voluntarily. In fact, already in the year 2000 as a result of the elimination of the payment for environmental services (PSA) that were made to forest management; The Costa Rican forestry sector put on the political table the discussion of how unattractive this SFM scheme was for forest owners. Later, in 2006, this observation was validated, with the results of the study on apparent consumption of wood published by the National Forestry Office (ONF). The ONF demonstrated that the contribution of wood from the MFS had been drastically reduced, reaching 6% of the national total and that in the short term there would be a deficit that would exceed 60% of the apparent consumption of wood. This despite the fact that the country has recovered its forest cover to 53%, which presupposes that there are at least 1,600,000 ha of privately owned forest (primary and secondary) with the potential to sustainably produce wood. From there, the premise arose that there are distortions that prevent SFM from regaining its importance in supplying wood and, at the same time, generating greater local well-being; therefore, the forestry sector sees in the following project an alternative to reposition the SFM, which must first validate the pros and cons of the implementation of the SFM at a regional scale, so that later it can be carried out at a national level 1

1.2 Relevance

1.2.1 Conformity with ITTO's objectives and priorities

Consistent with Article 1 (ITTA 2006 objectives) this project seeks to provide a cooperation framework for Regional action, which addresses ecological, social, economic and governance aspects related to SFM, and with this promote management sustainable use of timber-producing forests. In parallel, the project seeks to contribute to the generation of empirical data that supports ITTO objectives c, f, k, m, n and r.

Each of the outputs and results that make up the project is directly related to one or more ITTO objectives, for example:

Product 1 and 4, seeks to contribute to sustainable development and poverty reduction, through the identification of value chains and revaluation of wood. For what is wanted to promote better market conditions that ensure that the forest owner can obtain a fair price for the wood, in particular promoting the acceptance of said products by consumers.

Product 2 seeks sustainable management, for which SFM promotion and training is carried out for forest owners, forest regents, public officials, among others, as an alternative to improve the income generated by the harvest of producing forests. of wood, achieving an improvement in the competitiveness of the forest with respect to other land uses.

Product 3 aims to encourage and support research and development with a view to improving forest management, others increasing capacity to conserve and enhance forest values in timber-producing tropical forests. For what it is wanted to resume the research efforts on SFM that have been stagnant due to lack of financing and with this provide the AFE with new scientific knowledge, applied to the management of private forests where the approval of cutting permits and information is required. for the REDD+ strategy.

The project also aligns with priorities in the Strategic Action Plan (2022-2026). This project aims to conserve and manage forests sustainably by increasing the knowledge of forest owners and governments on SFM and improving related systems. Therefore, this is directly related to number 3. 'Resilience, restoration and conservation. In addition, by improving the economic contribution of sustainably managed forests to local residents, strategic plan number 2. 'Economies and tropical timber trade' can be achieved.

The objective of this project is also consistent with ITTO Programme Lines 1, 2 and 3 (the Council DECISION 4(LVI). It also in line with the ITTO Environmental and Social management Guidelines in the Sub-section 1.3.2 (environmental, social, cultural and economic aspects)

1.2.2 Compatibility with Costa Rican policies

In the country, REDD+ strategies, the National Forest Development Plan (PNDF), the National Forest Inventory (INF), Costa Rica Carbon Neutral in 2021, seek to implement a set of policies and programs to address the causes of deforestation and/or or forest degradation and to potentiate the role of forests in mitigating climate change and reducing poverty. For example: the PNDP, strategic objective 7.1 mentions that SFM should be promoted as a key element for the adaptation strategy, as well as for the mitigation associated with carbon neutrality. Agreement 36-2012 MINAET, C-Neutral Country Program, mentions that sources of compensation should be promoted, which are essential for low-emission eco-competitive development.

1.3 Study area

1.3.1 Geographic location

The Northern Zone is located to the north of the Republic of Costa Rica, it is comprised between the peaks of the Central Volcanic Cordillera, the Montes del Aguacate, the Guanacaste Volcanic Cordillera and the border with Nicaragua. It limits to the north with Nicaragua, to the south with the provinces of Guanacaste and part of Alajuela, to the east with the province of Limón and to the west with Guanacaste (Figure 2).

The territorial extension of this region is 9,803 km², which represents 18% of the national territory. Its distribution by canton is as follows: San Carlos 3,347.98 km², Upala 1,580.67 km², Los Chiles 1,358.86 km², Guatuso 758.32 km², Sarapiquí 2,140.54 km², Peñas Blancas (San Ramón) 249.9 km², District of Río Cuarto de Grecia 254.2 km², Sarapiquí 112.9 km².

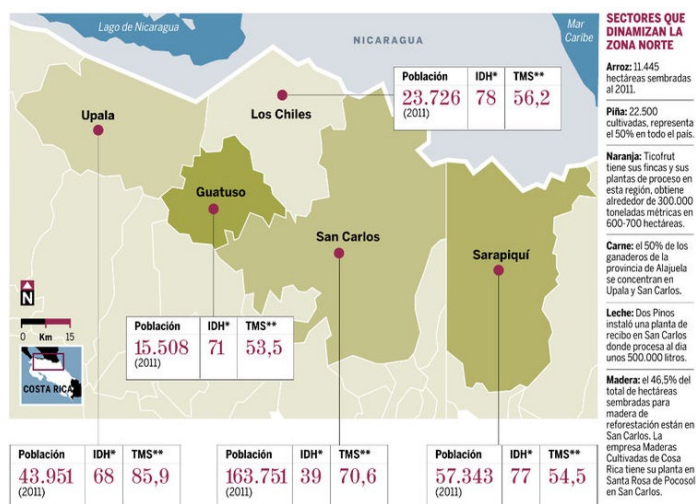


Figure 2: Work area distributed by cantons. Source: Taken from <http://www.elfinancierocr.com>

1.3.2 Environmental, social, cultural and economic aspects

The Northern Zone (ZN) has a tropical climate (dry and rainy season), winter goes from May to February and the dry season from March to May, with some sporadic rainfall caused by cold fronts from the north. Precipitation is variable, on average it oscillates between 2,000 mm/year in the plains of Guatuso, Upala and Los Chiles and up to 5,000 mm/year, in the volcanic massifs.

In general, the relief is undulating with upper parts, such as the Congo and Platanar hills and the Arenal, Tenorio, Miravalles and Rincón de la Vieja volcanoes, up to the very flat lower parts, easily flooded and swampy, such as the Llanos de Caño Negro, the Plains of Los Chiles, La Vega and the plains of Guatuso and Upala. From the lower parts to the higher parts, the relief increases in large terraces, which are very fertile and easy to prepare with machinery.

The region is part of the Atlantic flood plains and its relief is on the general plane, product of alluvial filling with base material of volcanic origin. The topographic profile is characterized by hills up to 382 meters above sea level, terraces with altitudes between 50 and 100 meters above sea level, and alluvial plains. The rivers that flow to the west are the Peñas Blancas, San Lorenzo, La Tigra, Fortuna and Javillos, which give rise to the great San Carlos River. To the east we find the Sarapiquí River, which joins the Tigre River and the Sucio River, to which many tributaries reach. To the south of the La Vieja, Peje, Aguas Zarcas, Caño Negro, Toro Amarillo, Río Cuarto and Tres Amigos rivers. To the north the rivers Frío, Zapote, Pizote, Higuerón, Medio Queso, Sabogal, Poccosol and Río San Juan. Of the lagoons that are observed in the Region, the Arenal Lagoon, Cote.

On the other hand, according to data from the preliminary study of the 2014 National Forest Inventory (INF), the ZN has a significant amount of productive forests (at least 200,000 ha, corresponding to 15% of the total available) to supply part of the raw material that the country needs. However, in ZN there is a direct relationship between the amount of forests and the poorest cantons in the country. Since, in the region are some of the poorest cantons in the country. Thus, the Social Development Index (IDS) 2017, calculated by the Ministry of National Planning and Economic Policy (MIDEPLAN) seeks to measure the social development of the 83 cantons of the country, the position of the cantons of the Northern Zone is as follows: very close to the last position, Sarapiquí (81), Los Chiles (77), Río Cuarto (74), Guatuso (68), Upala (67).

The canton of Guatuso (IDS position 68) in the geographic area where the Maleku indigenous territory is located, the Maleku indigenous population has lived in the Frío River region since pre-Columbian times. Expeditions carried out in the 18th and 19th centuries report the presence of the Maleku indigenous people in the Frío River Basin. It is believed that the territory inhabited, used and protected by the Maleku had an area of approximately 1,100 square kilometers (100,000 hectares) and coincided, to a large extent, with the area of the Frío River basin.

The 1977 Indigenous Law established the essential principles of autonomy, rights and limits of indigenous territories. In the specific case of the maleku, the Law recognizes an extension of 2,994 hectares, in the canton of Guatuso, province of Alajuela. It is noteworthy that the legal recognition of the Maleku territory did not entail control of the land by the indigenous population.

The Maleku are the smallest surviving indigenous community in Costa Rica. Their habitat was covered with tropical forest and wetlands and a great diversity of plants and animals, which played an essential role in their survival. Their life is based on a harmonious relationship with nature, as well as respect and love for what they possess. They adore Mother Nature as a God, who provides everything for the human being. They feel great respect for animals such as the Ujuti (mountain pig), the erra (green iguana) and the beaked sardine (the tare), the Tufi or peacock, which is linked to the creator (Tocu). It is a privilege to feed with it, but having it close is a death notice.

The Maleku are an Amerindian ethnic group from Costa Rica. The language is Maléku lhaica, which belongs to the voting group of the Chibcha families. Currently, the use of Spanish is widespread. Colonization and agricultural development, deforestation, the expansion of commercial monocultures, channeling and drainage of wetlands, and land usurpation have dramatically modified the cultural environment and natural landscape of the Maleku by forcing them to abandon their traditional methods of subsistence for wage labor and other commercial market activities.

The Frío river basin (Ucúrinh in maleku lháica) has been fundamental in the survival and cultural development of this people. The upper parts of the rivers Frío, Venado, Cucaracha, La Muerte, Pataste, Buenavista and Samen are considered sacred. Water has an important religious significance in their traditions. They establish bilateral kinship relationships. They are very respectful and united with their family, they divide the tasks among the family nucleus.

They are organized into 3 palenques: Margarita, Tonjibe and El Sol. Several related families are concentrated in each of them. Subsistence economy. They produce cassava, pejibaye, beans and bananas among others. They also practice hunting and fishing for their own consumption. They organize tourist activities such as guided tours within the territory, in which they show their traditional home (quadrangular palenque, on stilts and without walls); They offer traditional foods such as mafuriseca (fish-based preparation), as well as sale of handicrafts such as gourds and cultural talks. You can visit the traditional gardens of healing plants and admire the animals that still inhabit the forest, including toucans and frogs. Tourists who visit the communities get a better idea of the Maleku culture, although it is somewhat diminished in modern times, due to a phenomenon of transculturation.

To supplement family income, the Maleku have an important craft tradition: making and decorating masks and drums, generally with animal motifs: scarlet macaws (represent fidelity); the toucan (the inner beauty of women); the owl (guide of night trips); the jaguar (boldness or intelligence); the coral snake, which can only be worn by shamans, for its healing powers and its knowledge of medicinal plants and poisons; the morpho butterfly, (good luck and peace)

Most of the inhabitants (including the children) do some type of handicraft or help make it, cutting and preparing the necessary wood and fruits. On average, a family can obtain between \$155 and \$185 per month for the sale of handicrafts, food, agricultural products,

tourist tours and that is complemented for the family's subsistence by planting agricultural products necessary for living on their own land.

Another key aspect that must be mentioned is the forestry culture that the Northern Zone has to carry out SFM in tropical forests. This is due to a significant amount of successful experiences developed by national and international projects on SFM that strengthened and that concluded to strengthen local technical capacity. For example, the COSEFORMA project (Cooperación de los Sectores Forestal y Maderero) in 1990 developed a wide network of inter-institutional cooperation until it ended in 2001. The project targeted a wide range of groups, such as forest owners, peasants, forestry and lumber industries including their forestry and sawmill workers. Another project was called "Promotion of Reforestation and Natural Forest Management in the Huetar Norte Region", carried out between 1990-1995, with the objective of generating specific information, standards, methodology and experience required for the management of the main types of virgin natural forest and existing intervened natural forest in the ZN. Through this project, ten demonstration areas will be followed with PPM to start monitoring the SFM, and establish the first guidelines for low-impact use.

As a result of this cooperation, today it can be said that the ZN has an important local technical capacity to resume past experiences and apply them to new SFM concepts that are closer to REDD+ while contributing to local well-being. This knowledge is reflected in the fact that currently in the ZN, second harvests are being carried out in those forests that have had a first forest intervention through management plans prepared by CODEFORSA.

Project activities will encompass the gender action plan under the National REDD+ Strategy and the ITTO guidelines on gender equality and women's empowerment, and will involve local communities, in particular women and youth, will need additional decent work, opportunities and thus improving their livelihoods.

1.4 Expected results of the project.

When the project is completed, the knowledge of SFM of forests owners and related officials will be expanded and SFM will be applied to forest management. In addition, the income of owners will increase due to improved laws and procedures, improved marketing capabilities of owners, and increased demand for local timber. As a result, the pressure for conversion of forests in northern forests will be alleviated, and the basis for sustainable forest management will be laid:

- ✓ The market for forest products is consolidated in the northern zone, where owners and buyers carry out business transparently through chains between owners and industrialists, which values the wood from the MFS.
- ✓ The profitability of forests in MFS is known.
- ✓ Public institutions in the northern zone promote the use of wood from the MFS, increasing its consumption.
- ✓ The forest regents and forest owners in the northern zone are trained in the elaboration of Management Plans and in the commercialization of the wood coming from the SFM.
- ✓ Experiences are developed that promote the management of forests with first or second harvests, generating income for their owners, which values these forests, reducing the change of use and illegal logging.
- ✓ Scientific information is generated through the PPM Network and the existing and future forest management demonstration Units, which favors decision-making regarding SFM. The information that will be produced will be documented in technical sheets that will be available to users.
- ✓ Through the promotion of SFM and the products generated by the forest, wood consumption is increased.
- ✓ The AFE reducing the processing times of the Management Plans,
- ✓ The Forest Cadastre is implemented and historical records of the forests are kept in MFS in the northern zone.
- ✓ The SFM promotion and training program is executed and developed, achieving an improvement in the income of forest owners.
- ✓ **Through the evaluation of the forests within the Maleku indigenous reserve, activities can be prescribed to favor the forest and adjacent areas.**

PART 2. Rationale and objective of the project

2.1 Basis

2.1.1 Justification and institutional and organizational structure

As of 1999, with the change of Central Government, the focus of priorities in the management of natural resources for the country varies, thus, as of the year 2000, an excessive regulation by the State begins to be applied to the forest management plans, which led to an administrative ban on SFM, which is reflected, for example, for the year 2006, the production of wood from forests had been reduced to 6% of consumption at the national level (Barrantes, A. 2007), a situation that has not changed, for the year 2014 where (Barrantes and Ugalde, 2014), reports that wood from native forests represents 2% of total consumption at the national level, a situation that varies significantly with the data from (Pedroni, 1992), author of the Forest Diagnosis of Costa Rica for that year, it is reported that the country was supplied with 100% wood from native forests.

In addition to the decrease in the percentage of wood coming from the forests, the waiting times and the paperwork for the approval of Harvest Management Plans vary from one Conservation Area to another. The Conservation Areas are territorial units in which SINAC distributes its operations in the country, there are 10 Conservation Areas in total; and even within the same Conservation Area, the criteria vary from one regional office to another. This lack of homogeneity in the request for requirements increases waiting times, which in some cases could reach two years. In addition to the above, in 2002 and in open contradiction with the provisions of Forestry Law 7575, the payment for environmental services (PSA) to the MFS was suspended with the signing of an executive decree, arguing that if the owners of the forests received income from the sale of their wood, they are not entitled to receive that PSA; without valuing, internally, the indications of the decisions of the AFE that have reduced the competitiveness of the MFS in comparison to other land uses.

In this context, there are many who have mentioned that, in Costa Rica, there is no government entity that has the operational capacity to effectively attack the causes that motivate the lack of competitiveness of SFM as land use. What's more, from the ideological point of view, the MFS has come to succumb to the environmentalist current that prevails in SINAC. Thus, the lack of support for SFM is demonstrated when the directors of some Conservation Areas have openly and publicly mentioned that they are not going to give any type of support to SFM. What in practical terms is reflected with little or scarce professional specialized personnel to process the Forest Management Plans in the CAs.

2.1.2 Stakeholder analysis

With the accession of Costa Rica to the ITTO in 2013, the focal point in the country, began in January 2014 a consultation process at the national level on the identification of priority areas of work, and that these areas are in accordance with what was agreed in the objectives of the National Forestry Development Plan (PNDF) and may be subject to a search for funds before this organization. The San Carlos Forest Development Commission (CODEFORSA) and FONAFIFO are part of the participants in the process developed by the focal point in Costa Rica. Hence, these entities took and systematized the main results obtained to date from the national process so that some were validated in a series of workshops at the regional level.

From the combination of both processes (national and regional) it was possible to identify that the factors that influence the decision to adopt SFM at the national level have a differentiated weight according to the type of actor. Thus, while in the North Zone there is a will to increase the number of management plans in forests that produce sustainable wood, in other Conservation Areas they are opposed to SFM. Therefore, it was concluded that in order to really contribute to the national effort to reposition the SFM, the due analytical follow-up of the process must be provided, firstly, at a regional level (in the Northern Zone) to validate the pros and cons of the execution of the actions authorized by the SFM, so that a more complex context can be carried out later on (at the national level).

Table 1. Actor analysis. North Zone, Costa Rica.

Group of actors	Characteristics	Problems, needs and interests	Strengths	Project relationship
primary actors				
Local producers	Forest owners interested in receiving income from SFM	Lack of knowledge and capital to invest in red tape	It has legal certainty to meet the requirements to access the MFS	Beneficiaries directing the project
Local farmers without forest	Owners of labor	Need for sources of employment	Knowledge of field activities	Indirect beneficiary of the project
SINAC, Arenal Huetar North Conservation Area	They approve the cutting permits. Set up a dialogue table with the Maleku people	Lack of training to implement forest regulations and lack of financial resources, logistics and personnel.	Faculty to promote SFM and coordination with the Maleku people	Direct beneficiary with training to improve their functions. Coordination with the Maleku people
ONF, FONAFIFO	State institutions in charge of promoting the forestry sector	Lack of support for forest owners.	Economic and administrative resources to favor the forestry sector	Part of the ITTO Advisory Committee and Focus Group
secondary actors				
Forest regents	Professionals who develop and execute management plans	The paperwork and waiting times for logging permits discourages the carrying out of Management Plans. Lack of training.	Technical and specialized knowledge about SFM	Receive training to improve capacities in terms of Management Plans, supervision of harvest activities and accompany the forest owner in the stages of the value chain
Timber industries	Timber buyers	The flow of wood from the SFM is unstable	They industrialize and place in the national market the wood coming from the MFS	Agreements between industry and owners to promote a fair timber market and eliminate intermediaries.
Maleku indigenous People	Located within the project area	Evaluate within the forest areas of the reserve the possibility of carrying out a management plan for the exploitation or forest restoration of degraded resources and of cultural and economic interest.	Organized group located within the project area	They have forests that apparently protect water resources within their territory, but they can be beneficiaries of training and evaluation of the potential of their forests.

2.1.3 Problem Analysis.

The Maleku indigenous territory and in general the indigenous territories in Costa Rica have been left out of the discussions and the creation of forest legislation due to the autonomy that these areas have in terms of the management of natural resources on their lands and that traditionally the culture Indian lives in harmony with nature. The 1977 indigenous law established the limits of the area of the Maleku indigenous territory at 2,994 hectares. Historically, the Maleku have occupied land within the Frío River basin, in an area of 100,000 hectares, evidencing that they have been relegated to only part of the territory. that they have historically occupied. This issue is very political and is already defined by law, so it is not something that we can solve through this project. At a general level, there are no data in the bibliography on the state of the forest areas included in the indigenous territories, among them the Maleku, so this project will be an opportunity to know their state, the potential it has for production or protection. of the resources it houses and the possibilities of improving their conditions with silvicultural activities such as enrichment with tree planting within the forest or on its peripheries or creating biological corridors between fragmented forest blocks by planting trees in strips or lines together with other agricultural or livestock activities that take place within the areas of the reserve. The community uses different species of plants such as the Suita (*Asterogyne martiana*) or the Mastate tree (*Poulsenia armata*) among others, which are used in rituals or as raw material for dresses and fabrics, knowing the populations of these varieties and others and the development of forms of reproduction or planting of these varieties in their forests will bring great benefits to their inhabitants.

According to Pedroni, 1992, author of the Forest Diagnosis of Costa Rica for the year 1992, in that year the country was supplied with 100% wood from native forests, the situation varies, for the year 2014, for example, Barrantes and Ugalde, 2014, estimate that the forests contribute 20,640 m³-r to the primary wood transformation industry in Costa Rica, which represents only 2% of national consumption.

These percentages of wood mostly come from the forests of the northern zone of Costa Rica, with a significant amount of natural forests, where at least a first harvest has been carried out between the years 1990 and 2000, under the technical assistance of CODEFORSA. These forests are already fulfilling the time to carry out a second forest harvest that corresponds to 15 years after the first harvest. Faced with this situation, forest owners lack the knowledge and experience in the commercialization of wood, leaving themselves exposed to the manipulation of intermediaries, who are the ones who take advantage of most of the profits, aggravated by the low local demand for products from the forests. managed forests.

Due to the situations described above, consultation workshops have been held with interested parties, see annex 5, such as forest owners, AFE, Universities, Forest Regents, Industrialists, among others, to determine the problem, the causes and the effects of the decrease in forest management in Costa Rica

Concluding that: "There is a lack of knowledge and experience in SFM that allows forest owners to manage and market them, in order to increase their income and ensure its sustainability. and among the causes, the following are mainly cited:

Forest owners do not have enough knowledge for proper forest management and its commercialization, Little support to the owner in the commercialization of wood, Excessive regulation that hinders or discourages SFM, and also does not are consistent with the current situations, Little demand in the local market for wood from managed forests, Lack of follow-up on the experiences generated in natural forest and Lack of promotion of SFM as an alternative for the forest owner. Problem tree of Figure 3 shows it.

Above problem analysis is summarized in Figure 3, the problem tree. A solution tree has been constructed in Figure 4 as mirror of the problem tree. The solution tree is to be used as the basis for defining the relevant interventions for solving the problems. The interventions defined in this manner must be the relevant ones because they are the positive state of the negative conditions or problems registered in the problem tree.

Figure 3. Problem tree

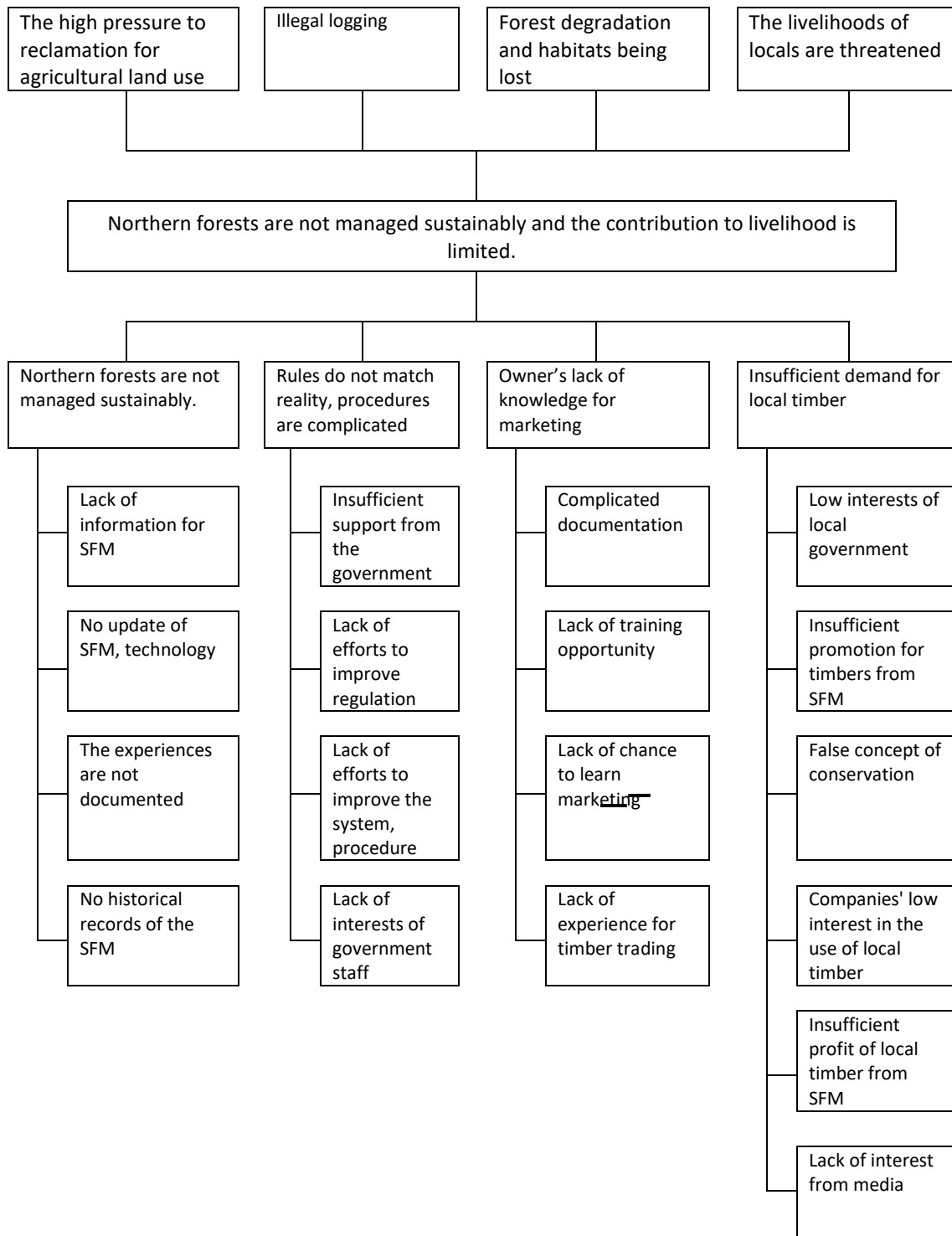
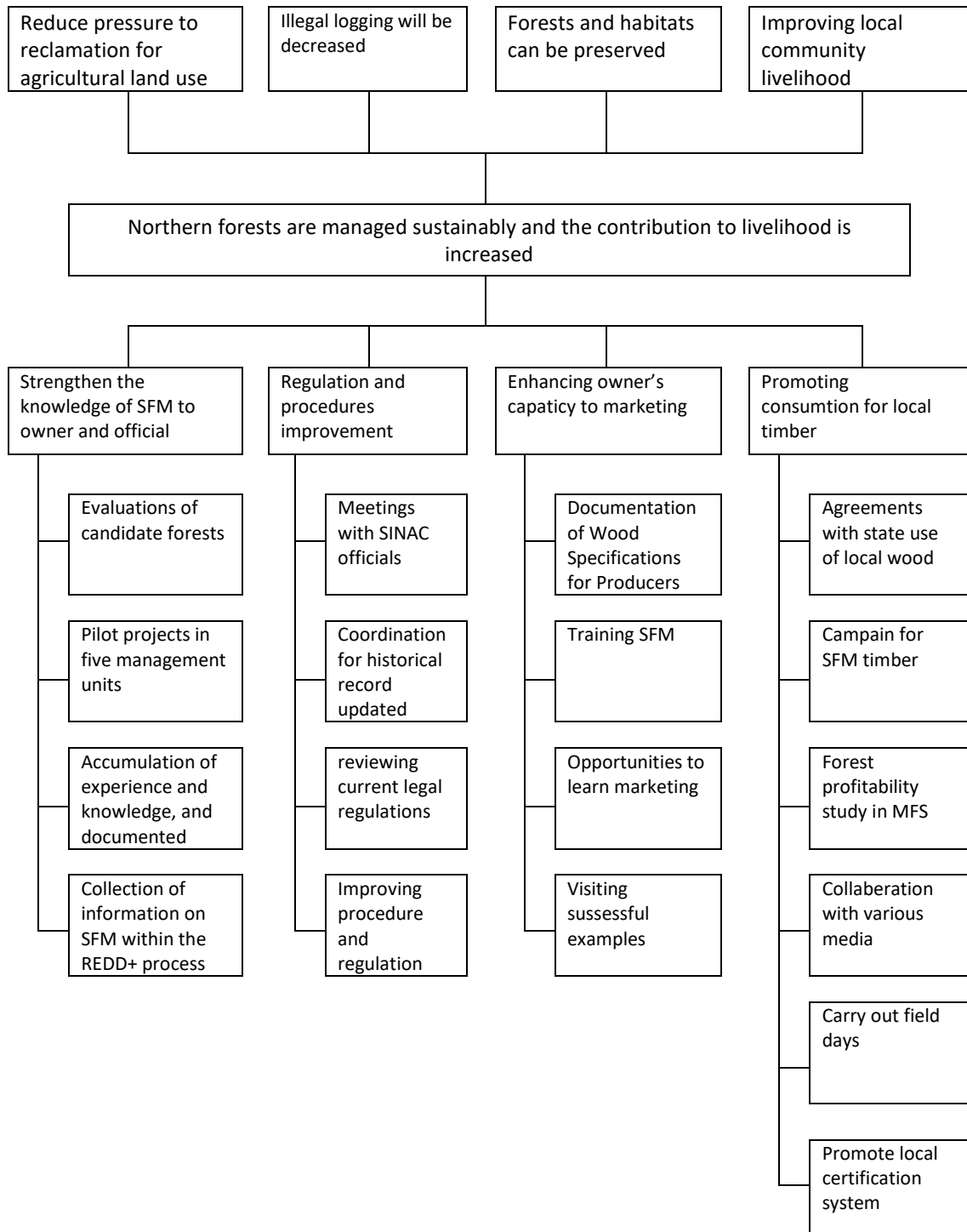


Figure 4. Solution Tree



2.2 Objectives

2.2.1 Development objective and impact indicators

Conservation of forest resources and biodiversity through sustainable management of forests and increased income of forest owners in northern Costa Rica

Impact indicators:

- 1.1. 10% increase in farms subject to MFS.
- 1.2. The paperwork and waiting times for the approval of short permits are reduced by 25% as a response to the training program.
- 1.3. The training provided helps to improve the knowledge of forest owners about SFM in the North Coast area. from the PPM, the national forest inventory and the management plans, which are linked within the Regional Forest Cadastre.
- 1.4. The priority actions to follow to reposition the SFM are agreed by the different actors in a work plan for the period 2023-2024.
- 1.5. Develop knowledge about the state of the forests within the Maleku indigenous reserve.**

2.2.2 Specific objectives and result indicators

Promotion of sustainable forest management through capacity development of forests owner, regulation and procedure improvement, and increased demand for local wood.

Results indicators:

- 2.1. At least 300 ha of forest are sustainably managed per year and are included in the Forest Cadastre.
- 2.2. By 2024, owners are trained and their farms are incorporated into SFM, in addition to actors, including regents and SINAC officials involved in SFM.
- 2.3. By 2024, 5 new demonstration units are created, which have PPM and the already existing 5 PPM measurement is updated.
- 2.4. By 2024, the scientific information for the project has been documented, which will be available for the REDD+ process in Costa Rica.
- 2.5. By 2024, the potential volumes of wood supply that come annually from the MFS for the period 2023-2024 are known.
- 2.6. By 2024, 5 groups, including at least one woman, have achieved a chain process with timber industrialists and there are agreements with two state institutions for the purchase of SFM timber.
- 2.7. By 2024, a promotional campaign for SFM will be carried out, impacting that the government institutions in the northern zone consume wood that comes from the MFS.
- 2.8. By 2024, there are updated studies on chaining and profitability of wood from SFM.
- 2.9. By 2024, it is possible to develop activities together with the inhabitants of the Maleku indigenous reserve in forest restoration of forests and biological corridors.**

PART 3: Description of project interventions

3.1 Products and activities

3.1.1 List of activities.

PRODUCT 1: Strengthen the knowledge of SFM of owners, Maleku territory and public officials: a personalized forest management pilot plan will be developed in five units

Activities:

- 1.1. Create 5 new MUs with sustainable management of 50 hectares each.
- 1.2. Carry out the silvicultural evaluation of the forests located within the indigenous territory.**
- 1.3. Through two technical files, one per year, the experiences on SFM will be documented.
- 1.4. Collection of information on SFM within the REDD+ process, so that it is available.

PRODUCT 2: Improving regulation, procedures and historical records- the AFE will review and improve the relevant regulations and data.

Activities:

- 2.1. Meetings with SINAC officials to improve communication in the management of management plans that are presented for evaluation regarding the application of the regulations.
- 2.2. Coordinate with SINAC to keep the MFS historical record updated by entering data into the forest cadastre
- 2.3. Meetings with SINAC to review current legal regulations to determine changes that improve SFM management.
- 2.4. 4With process coordination and negotiation meetings, five groups have achieved a chain with timber industrialists, for the sale of timber from the forests.

PRODUCT 3: Enhancing owner's capabilities in SFM and marketing- training programs for managers and owners in marketing and SFM are carried out.

Activities:

- 3.1. Create a document that summarizes the conditions that the wood must have to be accepted by the local industry in terms of dimensions, species, quality, penalties for defects.
- 3.2. Training is carried out for the regents, AFE officials and owners in SFM techniques.
- 3.3. A training program is carried out for managers and owners in the marketing area with an annual activity.
- 3.4. Three successful experiences in MFS will be visited.

PRODUCT 4: Promoting consumption of local timber- campaigns will be launched to boost the demand for wood produced in local SFM units.

Activities:

- 4.1. At least two agreements with state institutions to promote the use of wood in their tenders.
- 4.2. Promotion campaign in public and private institutions on the consumption of SFM wood.
- 4.3. Forest profitability study in MFS.
- 4.4. Elaboration of posters, brochures, technical sheets, advertising guidelines, radio and television programs at the level of the northern zone, to promote the consumption of wood from the MFS.
- 4.5. Carry out two field days to show the productive value of forests to the public, private and producer sectors.
- 4.6. Have a discussion about the advisability of implementing a local certification system for wood produced with SFM.

3.2. Approaches and methods

In order to achieve the purpose of the project, stakeholders will be largely divided into three groups, and each role will make it easy to achieve the purpose.

First of all, it is a group of forest owners. They are the most important group in sustainable forest management, including women and young owners and the Maleku indigenous group. Educating them on the concept of SFM, forest management technology and the timber market mechanism. They will also acquire the skills to record and accumulate experience and knowledge on forest management. They will be able to sustainably generate profits and keep the forest healthy through sustainable forest management. Various workshops, discussions and pilot projects will be held to educate forest owners.

Second, the second is government officials. They will play a central role in improving unreasonable regulations and procedures, and will also contribute to systematizing the historical record. they will also help forest owners accumulate experience and knowledge. To this end, they will first participate in education to increase their interest in forest management, especially their understanding of SFM. The government will also play a leading role in launching campaigns to promote local wood consumption.

The third is various experts and field experience. They will help to improve the knowledge and capacity of forest owners by educating them on their expertise and practical experience. They will also help relevant officials improve regulations.

3.3. Work plan.

The project proposal is planned to be executed in a period of 24 months. For CODEFORSA we consider that the period established in the schedule, if it is viable for the execution of all the programmed activities, there may be some impact indicators that have to be evaluated more qualitatively than quantitatively to determine the progress of the fulfillment of the objectives set for the end of the project.

PRODUCTS AND ACTIVITIES	Responsible	Year1		Year2	
		1st	2nd	3rd	4th
PRODUCT 1. Strengthen the knowledge of SFM of owners and public officers- a customized forest management pilot plan will be developed in five units					
Activity 1.1. Create 5 new MUs with sustainable management of 50 hectares each.					
1.1.1 Evaluations of candidate forests to be incorporated as management units.	-ing. Forest manager of the Technical Department. - Ing. forestry 1 -Project Manager				
1.1.2 Carry out the management through an inventory and topographic surveys.	-ing. Forest Marketing - Ing. forestry 1 -ing. Forest manager of the Technical Department -ing. Forestry in GIS				
Activity 1.2. Carry out the silvicultural evaluation of the forests located within the indigenous territory.					
1.2.1 Carry out silvicultural measurement of forests within the Maleku indigenous territory and adjacent areas and implementation of activities.	- Ing. forestry 1 -ing. Forest manager of the Technical Department				
1.2.2 Prepare the silvicultural evaluation document and the prescription of activities within the forest and adjacent areas.	- Ing. forestry 1 -ing. Forest manager of the Technical Department				
Activity 1.3. Through two technical files, one per year, the experiences on SFM will be documented.					
1.3.1 Two technical sheets, one per year, will document the experiences on SFM	-Project Manager -ing. in Forest Marketing. -ing. Forest manager of the Technical Department				
Activity 1.4. Collection of information on SFM within the REDD+ process, so that it is available.					
1.4.1 Collection of information on SFM within the REDD+ process, so that it is available	-ing. in Forest Marketing -Project Manager				

PRODUCTS AND ACTIVITIES	Responsible	Year1		Year2	
		1st	2nd	3rd	4th
PRODUCT 2. Improving regulation, procedures and historical records- the AFE will review and improve the relevant regulations and data					
Activity 2.1 Meetings with SINAC officials to improve communication in the management of management plans that are presented for evaluation regarding the application of the regulations.					
2.1.1 Meetings with SINAC officials to improve communication in the management of the management plans that are presented for their assessment regarding the application of the regulations.	-Project Manager -ing. in Forest Marketing. -ing. Forest manager of the Technical Department				
Activity 2.2 Coordinate with SINAC to keep the MFS historical record updated by entering data into the forest cadastre.					
2.2.1 Coordinate with SINAC to keep the historical record of the SFM updated by entering data into the forest cadastre.	-Project Manager -ing. Forestry 1. -ing. Forest manager of the Technical Department				
Activity 2.3 Meetings with SINAC to review current legal regulations to determine changes that improve SFM management.					
2.3.1 Meetings with SINAC to review current legal regulations to determine changes that improve SFM management.	-Project Manager -ing. Forestry 1. -ing. Forest manager of the Technical Department -ing. in Forest Marketing.				
Activity 2.4 With process coordination and negotiation meetings, five groups have achieved a chain with timber industrialists, for the sale of timber from the forests.					
2.4.1 Coordination and negotiation meetings.	-Project Manager -ing. Forest manager of the Technical Department -ing. in Forest Marketing.				
2.4.2 Formalization of chain agreements between producer and industrialist for the sale of wood.	-Project Manager -ing. Forest manager of the Technical Department -ing. in Forest Marketing.				
PRODUCT 3. Enhancing owner's capabilities in SFM and marketing- training programs for managers and owners in marketing and SFM are carried out.					

PRODUCTS AND ACTIVITIES	Responsible	Year1		Year2	
		1st	2nd	3rd	4th
Activity 3.1 Create a document that summarizes the conditions that the wood must have to be accepted by the local industry in terms of dimensions, species, quality, penalties for defects.					
3.1.1 Literature review requirements and regulations of the timber market for the industry.	-Project Manager -ing. Forest Extension Agent -ing. in Forest Marketing.				
3.1.2 Create a document that summarizes the conditions that the wood must have to be accepted by the local industry in terms of dimensions, species, quality, penalties for defects.	-Project Manager -ing. Forest Extension Agent -ing. in Forest Marketing.				
Activity 3.2 Training is carried out for the regents, AFE officials and owners in SFM techniques					
3.2.1 Planning of training for regents, AFE officials and owners in SFM techniques.	-ing. Forest Extension Agent -ing. in Forest Marketing. -ing. Forest Manager of the Technical Department				
3.2.2 Execution of training for regents, AFE officials and owners in SFM techniques.	-ing. Forest Extension Agent -ing. in Forest Marketing.				
Activity 3.3 A training program is carried out for managers and owners in the marketing area with an annual activity.					
3.3.1 Planning of training program for managers and owners in the marketing area.	-ing. Forest Extension Agent -ing. in Forest Marketing. -ing. Forest Manager of the Technical Department				
3.3.2 Execution of training program for managers and owners in the marketing area.	-ing. Forest Extension Agent -ing. in Forest Marketing.				
Activity 3.4 Three successful experiences in SFM will be visited.					
3.4.1 Selection of the three successful experiences to coordinate the visits.	-ing. Forest Extension Agent -ing. in Forest Marketing.				

PRODUCTS AND ACTIVITIES	Responsible	Year1		Year2	
		1st	2nd	3rd	4th
3.4.2 Carrying out visits to three successful experiences in SFM.	-ing. Forest Extension Agent -ing. in Forest Marketing. -Project Manager -ing. Forest Manager of the Technical Department				
PRODUCT 4. Promoting consumption of local timber- campaigns will be launched to boost the demand for wood produced in local SFM units.					
Activity 4.1 At least two agreements with state institutions to promote the use of wood in their tenders.					
4.1.1 Promote with State institutions so that wood is acquired in their tenders.	-ing. Forest Extension Agent -ing. in Forest Marketing. -ing. Forest Manager of the Technical Department				
4.1.2 At least two agreements are made with State institutions so that they include the purchase of wood from SFM in their tenders.	-ing. Forest Manager of the Technical Department -Project Manager				
Activity 4.2 Promotion campaign in public and private institutions on the consumption of SFM wood.					
4.2.1 Design of the promotion campaign in public and private institutions.	-ing. Forest Extension Agent -ing. in Forest Marketing. -ing. Forest Manager of the Technical Department				
4.2.2 Implementation of the campaign on the consumption of SFM wood.	-ing. Forest Extension Agent -ing. in Forest Marketing. -ing. Forest Manager of the Technical Department				
Activity 4.3 Forest profitability study in MFS.					
4.3.1 Preparation of the Forest profitability study in MFS.	-ing. Forest Extension Agent -ing. in Forest Marketing. -ing. Forest Manager of the Technical Department				

PRODUCTS AND ACTIVITIES	Responsible	Year1		Year2	
		1st	2nd	3rd	4th
Activity 4.4 Elaboration of posters, brochures, technical sheets, advertising guidelines, radio and television programs at the level of the northern zone, to promote the consumption of wood from the MFS.					
4.4.1 Design and preparation of posters, brochures, technical sheets, advertising guidelines.	-ing. Forest Extension Agent -ing. in Marketing				
4.4.2 Dissemination and distribution of posters, brochures, technical sheets, advertising guidelines in the activities to be carried out.	-ing. Forest Extension Agent -ing. in Marketing				
4.4.3 Coordinate and participate in radio and television programs at the northern zone level	-ing. Forest Extension Agent -ing. in Marketing				
Activity 4.5 Carry out two field days to show the productive value of forests to the public, private and producer sectors.					
4.5.1 Design and planning of field days.	-ing. Forestry 1. -ing. Forest Extension Agent -ing. in Marketing				
4.5.2 Execution of field days.	-ing. Forestry 1. -ing. Forest Extension Agent -ing. in Marketing				
Activity 4.6 Have a discussion about the advisability of implementing a local certification system for wood produced with SFM.					
4.6.1 Planning and coordination of the debate.	-ing. Forest Manager of the Technical Department -Project Manager -ing. Forest Extension Agent -ing. in Marketing				
4.6.2 Execution of the debate.	-ing. Forest Manager of the Technical Department -Project Manager -ing. Forest Extension Agent -ing. in Marketing				

3.4. Budget.

For the execution of the project proposal, the sum of \$167,060.00 is required as a contribution from ITTO. The counterpart corresponds to \$28,800.00, below, the budget is broken down by activity.

3.4.1 Master budget

Products and/or activities	Description	budget composite	Quantity		units	Unit cost	Total cost	ITTO		CODE FORSA	
			Year 1	year 2				Year 1	year 2	year 1	year 2
Component 1. Strengthen the knowledge of SFM of owners and public officers- a customized forest management pilot plan will be developed in five units.											
1.1	Create 5 new MUs with sustainable management of 50 hectares each.										
1.1.1	Evaluations of candidate forests to be incorporated as management units.	11.3	5		Days	\$154	\$770	\$770			
		33	5		Days	\$140	\$700	\$700			
		12.2	5		Days	\$64	\$320	\$320			
		31	10		Days	\$30	\$300	\$300			
1.1.2	Carry out the management plans in the 5 new demonstration units of 50 hectares each through an inventory and topographic surveys.	11.3	26	26	Days	\$154	\$8 008	\$4 004	\$4 004		
		33	45	45	Days	\$140	\$12 600	\$6 300	\$6 300		
		12.2	50	50	Days	\$64	\$6 400	\$3 200	\$3 200		
		12.3	35	35	Days	\$25	\$1 753	\$877	\$877		
		31	60	50	Days	\$30	\$3 300	\$1 800	\$1 500		
1.2	Carry out the measurement of stocks in the five PPM that CODEFORSA already has established.										
1.2.1	Carry out silvicultural measurement of forests within the Maleku indigenous territory and adjacent areas and implementation of activities.	11.3		20	Days	\$154	\$3 080		\$3 080		
		12.2		40	Days	\$64	\$2 560		\$2 560		
		12.3		40	Days	\$25	\$1 002		\$1 002		
		54.1		8	plots	\$400	\$3 200		\$3 200		
		33		44	Days	\$140	\$6 160		\$6 160		
		31		60	Days	\$30	\$1 800		\$1 800		
		11.3		5	Days	\$154	\$770		\$770		
		44			Diameter tapes, 2GPS,	\$1 000	\$1 000	\$1 000			
1.2.2	Prepare the silvicultural evaluation document and the prescription of activities within the forest and adjacent areas.	11.3		20	Days	\$154	\$3 080		\$3 080		
		12.2		8	Days	\$59	\$472		\$472		
1.3	Through two technical files, one per year, the experiences on SFM will be documented.										
1.3.1	Two technical sheets, one per year, will document the experiences on SFM	11.3	4	4	Days	\$154	\$1 232	\$616	\$616		
		33	2	2	Days	\$140	\$560	\$280	\$280		
		31	2	2	Days	\$30	\$120	\$60	\$60		

1.4	Collection of information on SFM within the REDD+ process, so that it is available.										
1.4.1	Collection of information on SFM within the REDD+ process, so that it is available.	11.3		4	Days	\$154	\$616		\$616		
		12.2		4	Days	\$59	\$236		\$236		
		33		4	Days	\$140	\$560		\$560		
		31		4	Days	\$30	\$120		\$120		
Subtotal component 1						\$60 719	\$20 227	\$40 492	\$0	\$0	
Component 2. Improving regulation, procedures and historical records- the AFE will review and improve the relevant regulations and data.											
2.1	Meetings with SINAC officials to improve communication in the management of management plans that are presented for evaluation regarding the application of the regulations.										
2.1.1	Meetings with SINAC officials to improve communication in the management of management plans that are presented for evaluation regarding the application of the regulations.	11.3	6	6	Days	\$154	\$1 848	\$924	\$924		
		31	6	6	Days	\$30	\$360	\$180	\$180		
		33	6	6	Days	\$140	\$1 680	\$840	\$840		
2.2	Coordinate with SINAC to keep the MFS historical record updated by entering data into the forest cadastre.										
2.2.1	Coordinate with SINAC to keep the MFS historical record updated by entering data into the forest cadastre.	11.3	3	3	Days	\$154	\$924	\$462	\$462		
		33	3	3	Days	\$140	\$840	\$420	\$420		
		31	3	3	Days	\$30	\$180	\$90	\$90		
2.3	Meetings with SINAC to review current legal regulations to determine changes that improve SFM management.										
2.3.1	Meetings with SINAC to review current legal regulations to determine changes that improve SFM management.	11.3	3	3	Days	\$154	\$924	\$462	\$462		
		33	3	3	Days	\$140	\$840	\$420	\$420		
		31	3	3	Days	\$30	\$180	\$90	\$90		
2.4	With process coordination and negotiation meetings, five producers have achieved a chain with timber industrialists, for the sale of timber from the forests.										
2.4.1	Coordination and negotiation meetings.	11.3	3	3	Days	\$154	\$924	\$462	\$462		
		33	3	3	Days	\$140	\$840	\$420	\$420		
		31	3	3	Days	\$30	\$180	\$90	\$90		
2.4.2	Formalization of chain agreements between producer and industrialist for the sale of wood.	11.3	1	4	Days	\$154	\$770	\$154	\$616		

Component 2 Subtotal						\$10 490	\$5 014	\$5 476	\$0	\$0
Component 3. Enhancing owner's capabilities in SFM and marketing- training programs for managers and owners in marketing and SFM are carried out.										
3.1	Create a document that summarizes the conditions that the wood must have to be accepted by the local industry in terms of dimensions, species, quality, penalties for defects.									
3.1.1	Literature review requirements and regulations of the timber market for the industry.	11.3	4		Days	\$154	\$616	\$616		
		33	2		Days	\$140	\$280	\$280		
		31	2		Days	\$30	\$60	\$60		
3.1.2	Create a document that summarizes the conditions that the wood must have to be accepted by the local industry in terms of dimensions, species, quality, penalties	11.3	4		Days	\$154	\$616	\$616		
		54.1	300		copies	\$3	\$900	\$900		
3.2.	Training is given to the regents, AFE officials and owners in SFM techniques.									
3.2.1	Planning of training for regents, AFE officials and owners in SFM techniques.	11.3	3		Days	\$154	\$462	\$462		
		33	2		Days	\$140	\$280	\$280		
		31	2		Days	\$30	\$60	\$60		
3.2.2	Execution of training for regents, AFE officials and owners in SFM techniques.	11.3	2	2	Days	\$154	\$616	\$308	\$308	
		33	2	2	Days	\$140	\$560	\$280	\$280	
		31	2	2	Days	\$30	\$120	\$60	\$60	
		60	30	30	Refreshment	\$9	\$540	\$270	\$270	
		60	30	30	Lunch	\$20	\$1200	\$600	\$600	
		60	1	1	Rental of premises	\$200	\$400	\$200	\$200	
		54.1	1	1	Materials	\$100	\$200	\$100	\$100	
3.3	A training program is carried out for managers and owners in the marketing area with an annual activity.									
3.3.1	Planning training program for managers and owners in the marketing area.	11.3	2	2	Days	\$154	\$616	\$308	\$308	
		33	1	1	Days	\$140	\$280	\$140	\$140	
		31	1	1	Days	\$30	\$60	\$30	\$30	
3.3.2	Execution of training program for managers and owners in the marketing area.	11.3	2	2	Days	\$154	\$616	\$308	\$308	
		33	2	2	Days	\$140	\$560	\$280	\$280	
		31	2	2	Days	\$30	\$120	\$60	\$60	
		60	30	30	Refreshment	\$9	\$540	\$270	\$270	
		60	30	30	Lunch	\$20	\$1200	\$600	\$600	
		60	1	1	Rental of premises	\$200	\$400	\$200	\$200	
		54.1	1	1	Materials	\$100	\$200	\$100	\$100	
3.4	Three successful experiences in MFS will be visited.									

3.4.1	Selection of the three successful experiences to coordinate the visits.	33		3	Days	\$140	\$420		\$420		
		31		3	Days	\$30	\$90		\$90		
		11.3		3	Days	\$154	\$462		\$462		
3.4.2	Carrying out visits to three successful experiences in MFS.	11.3		3	Days	\$154	\$462		\$462		
		33		3	Days	\$140	\$420		\$420		
		31		3	Days	\$30	\$90		\$90		
		63		3	transport	\$300	\$900		\$900		
		60		45	Refreshment	\$9	\$405		\$405		
		60		45	Lunch	\$20	\$900		\$900		
		54.1		2	Materials	\$100	\$200		\$200		
Component 3 subtotal							\$15 851	\$7 388	\$8 463	\$0	\$0
Component 4. Promoting consumption of local timber- campaigns will be launched to boost the demand for wood produced in SFM.											
4.1	Promote at least two agreements with state institutions to promote the use of wood in their tenders.										
4.1.1	Promote with State institutions so that wood is acquired in their tenders.	11.3	6		Days	\$154	\$924	\$924			
		33	6		Days	\$140	\$840	\$840			
		31	6		Days	\$30	\$180	\$180			
4.1.2	At least two agreements are made with state institutions so that they include the purchase of wood from SFM in their tenders.	11.3	2	2	Days	\$154	\$616	\$308	\$308		
		33	2	2	Days	\$140	\$560	\$280	\$280		
		31	2	2	Days	\$30	\$120	\$60	\$60		
4.2	Promotion campaign in public and private institutions on the consumption of SFM wood.										
4.2.1	Design of the promotional campaign in public and private institutions.	11.3	4		Days	\$154	\$616	\$616			
		12.2	5		Days	\$59	\$295	\$295			
4.2.2	Implementation of the campaign on the consumption of wood by MFS.	11.3	4	4	Days	\$154	\$1 232	\$616	\$616		
		33	3	3	Days	\$140	\$840	\$420	\$420		
		31	3	3	Days	\$30	\$180	\$90	\$90		
		12.2	4	4	Days	\$59	\$472	\$236	\$236		
		54.1	2	2	Materials	\$100	\$400	\$200	\$200		
4.3	Forest profitability study in MFS.										
4.3.1	Preparation of the Forest Profitability Study in MFS.	11.3		7	Days	\$154	\$1 078		\$1 078		
		12.2		4	Days	\$59	\$236		\$236		

4.4	Elaboration of posters, brochures, technical sheets, advertising guidelines, radio and television programs at the level of the northern zone, to promote the consumption of wood from the MFS.										
4.4.1	Design and preparation of posters, brochures, technical sheets, advertising guidelines.	11.3	4		Days	\$154	\$616	\$616			
		12.2	4		Days	\$59	\$236	\$236			
		54.1	2		fences	\$700	\$1 400	\$1 400			
		51	1,000		posters and brochures	\$1	\$1 000	\$1 000			
4.4.2	Dissemination and distribution of posters, brochures, technical sheets, advertising guidelines in the activities to be carried out.	54.1	1	1	Guidelines	\$200	\$400	\$200	\$200		
		61	1	1	months	\$439	\$878	\$439	\$439		
		61	1	1	Advertisements	\$1 000	\$2 000	\$1 000	\$1 000		
4.4.3	Coordinate and participate in radio and television programs at the northern zone level	11.3	1	1	Guidelines	\$154	\$308	\$154	\$154		
		61	1	1	months	\$400	\$800	\$400	\$400		
4.5	Carry out two field days to show the productive value of forests to the public, private and producer sectors.										
4.5.1	Design and planning of field days.	11.3	2	2	Days	\$154	\$616	\$308	\$308		
		33	2	2	Days	\$140	\$560	\$280	\$280		
		31	2	2	Days	\$30	\$120	\$60	\$60		
4.5.2	Execution of field days.	11.3	2	2	Days	\$154	\$616	\$308	\$308		
		33	2	2	Days	\$140	\$560	\$280	\$280		
		31	2	2	Days	\$30	\$120	\$60	\$60		
		60	35	35	Lunch	\$20	\$1 400	\$700	\$700		
		54.1	1	1	Materials	\$100	\$200	\$100	\$100		
4.6	Have a discussion about the advisability of implementing a local certification system for wood produced with SFM.										
4.6.1	Planning and coordination of the debate.	11.3		2	Days	\$154	\$308		\$308		
		31		1	Days	\$30	\$30		\$30		
		33		1	Days	\$140	\$140		\$140		
4.6.2	Execution of the debate.	11.3		2	Days	\$154	\$308		\$308		
		31		1	Days	\$30	\$30		\$30		
		33		1	Days	\$140	\$140		\$140		
	Subtotal component 4						\$21 375	\$12 606	\$8 769		
	Total of the four components						\$108 435	\$45 235	\$63 200		
	Administrative expenses										
	Office rent	41	12	12	months	\$500	\$12,000			\$6,000	\$6,000

	Project Director	11.1	12	12	months	\$2,000	\$48,000			\$24,000	\$24,000
	Subtotal administrative expenses						\$60,000			\$30,000	\$30,000
	Monitoring and Evaluation										
	Costs for ITTO monitoring and Evaluation						\$10,011				
	Costs for Project Audit						\$5,000				
	ITTO programme Support Cost (12%)						\$14,814				
	Subtotal ITTO						\$29,825				
GRAND TOTAL							\$198,260	\$45,235	\$63,200	\$30,000	\$30,000

3.4.2 Consolidated budget by component

Category	Description	Total	Year 1	Year 2
11.1	Forest Marketing Expert	\$9 702	\$3 080	\$6 622
11.2	Forest management expert	\$11 858	\$4 004	\$7 854
11.3	Forest extension expert	\$13 090	\$7 238	\$5 852
11.4	Project manager	\$48 000	\$24 000	\$24 000
12.1	Field assistant	\$9 280	\$3 520	\$5 760
12.2	Pawns (in english?)	\$2 755	\$877	\$1 878
12.3	Secretary	\$1 947	\$767	\$1 180
	19 Sub Total	\$96 632	\$43 486	\$53 146
30	Trips			
31	Per diem (in english?)	\$7 920	\$3 330	\$4 590
33	Local transport costs	\$32 120	\$12 740	\$19 380
	39 Sub Total	\$40 040	\$16 070	\$23 970
40	Capital goods			
41	Equipped office	\$12 000	\$6 000	\$6 000
	49 Sub Total	\$12 000	\$6 000	\$6 000
50	Expendable goods			
51	Promotion	\$6 378	\$4 139	\$2 239
54	Feeding	\$6 185	\$2 440	\$3 745
54.1	Materials	\$5 800	\$1 900	\$3 900
	59 Sub Total	\$18 363	\$8 479	\$9 884
60	Miscellaneous Expenses			
61	Miscellaneous expense	\$1 400	\$1 200	\$200
	69 Sub Total	\$1 400	\$1 200	\$200
81	Costs for ITTO monitoring and Evaluation	\$10 011		\$0
83	Costs for Project Audit	\$5 000		\$0
85	ITTO programme Support Cost (12%)	\$14 814		\$0
	89 Sub total (ITTO and Audit)	\$29 825		\$0
	TOTALS	\$198,260	\$87,837	\$110,423

3.4.3 ITTO Budget by component.

Category	Description	total	year 1	year 2
10	Project staff			
11.1	Forest Marketing Expert	\$9 702	\$3 080	\$6 622
11.2	Forest management expert	\$11 858	\$4 004	\$7 854
11.3	Forest extension expert	\$13 090	\$7 238	\$5 852
12.1	Field assistant	\$9 280	\$3 520	\$5 760
12.2	Pawns (in english?)	\$2 755	\$877	\$1 878
12.3	Secretary	\$1 947	\$767	\$1 180
	12 Sub Total	\$48 632	\$19 486	\$29 146
30	Trips			
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33	Local transport costs	\$32 120	\$12 740	\$19 380
	39 Sub Total	\$40 040	\$16 070	\$23 970
50	Expendable goods			
51	Promotion	\$6 378	\$4 139	\$2 239
54	Feeding	\$6 185	\$2 440	\$3 745
54.1	Materials	\$5 800	\$1 900	\$3 900
	59 Sub Total	\$18 363	\$8 479	\$9 884
60	Miscellaneous Expenses			
61	Miscellaneous expense	\$1 400	\$1 200	\$200
	69 Sub Total	\$1 400	\$1 200	\$200
81	Costs for ITTO monitoring and Evaluation	\$10 011		
83	Costs for Project Audit	\$5 000		
85	ITTO programme Support Cost (12%)	\$14 814		
	89 Sub total (ITTO and Audit)	\$29 825		
	TOTALS	\$138,260	\$45 235	\$63 200

The investment in aforementioned personnel is justified when a forestry expert is mentioned, when the reality is that there are several engineers specialized in different branches, as seen below:

1. Forest engineer
2. Forestry engineer specialist in forestry marketing
3. Forest engineer specialist in forest management
4. Forest engineer specialist in Forest Extension
5. Forest engineer specialist in GIS

3.4.4 Budget of the executing agency by component

Category	Description	total	year 1	year 2
10	project staff			
11.4	project manager	\$48,000	\$24,000	\$24,000
	19 Sub Total	\$48,000	\$24,000	\$24,000
40	Capital goods			
41	equipped office	\$12,000	\$6,000	\$6,000
	49 Sub Total	\$12,000	\$6,000	\$6,000
	TOTALS	\$60,000	\$30,000	\$30,000

3.5 Assumptions, risks and sustainability.

3.5.1. assumptions and risks

Regarding the risks of carrying out forest management activities in the Maleku indigenous territory, there are two risks: That the forest areas within the reserve have no potential for the development of timber or non-timber productive activities or that the Development Association that is the authority within the Reserve indicates that they do not want project activities to take place within their lands.

It is known that in the northern part of the country there are a large number of forests with potential for sustainable timber production, but these areas are in the hands of various owners, many of whom are unaware of the advantages they can have when they are performs management in his forest, others have an unpredictable idea of forest management, for which the project will develop a series of activities that help the owner to become interested in managing his forest, such as field days, informative material, provide facilities so that timber extraction permits can be processed, improve timber market conditions, etc.

Another risk that exists is the government policy regarding the use of forests, which at the beginning of this millennium was very restrictive and unclear regarding forest management, but in recent administrations there has been awareness that it is a resource that is It can be managed sustainably, there are policies that favor forest management such as the National Forestry Plan, and forestry legislation that allows the use of forests in accordance with the manual for second harvests. Despite these efforts, the processing of harvesting permits is slow and with many requirements,

Table 2. Risks, Measures and Mitigation Factors.

Assumed key	Risk Associated with the Assumption	Mitigation Factors
The Costa Rican State, through the AFE, maintains a policy that promotes and supports SFM.	A change in government policies discourages SFM or does not authorize the harvesting of trees in second crop forests.	CODEFORSA maintains a close relationship with the AFE and the organizations of the Costa Rican forestry sector, to promote the benefits of this project for the ZN and the importance of promoting within the SFM as a country strategy of the policy that is developed in the National Forestry Plan, 2011 -2021 and the goal of Carbon Neutrality by 2021
Forest owners in the ZN are willing to implement SFM on their farms as an alternative to generating additional income to agricultural activities.	The times for approval of harvest permits by the AFE and the costs to obtain these permits discourage owners from submitting their farms to MFS.	Within the activities of the project, coordination with the AFE is contemplated so that the necessary measures are taken in terms of trained and suitable personnel in the SINAC offices to transmit the management plans that are presented in the regional offices, as well as training so that the review process is executed according to current legislation. The project will have resources to support the forest owner in financing the Management Plan.
Timber buyers and sellers abide by the recommendations to establish a fair market for timber from natural forests.	Market conditions do not arise so that, within a fair market, there can be an increase in the price of standing timber or timber placed in the sawmill yard or the payment terms for the sale of timber are reduced.	Create regional and/or national agreements with government institutions to promote the consumption of national wood in government institutions and create shields for MFS wood.

Assumed key	Risk Associated with the Assumption	Mitigation Factors
In decision-making on national policies related to SFM, the REDD+ strategy, Carbon Neutrality and carbon reservoirs, technical-scientific information from reliable sources is required, which will be provided by the existing PPMs already established with the project in ZN forests.	That there is a lack of interest and that the information generated by this project is not taken into account in making decisions regarding the SFM and other related aspects.	From the beginning of the project, hold meetings with the Forest Management Manager (GMF) of the AFE and its administrator for adequate coordination regarding the type of information and reference of the PPM Network that is going to be reactivated and establish new ones for the Project.
The authority of the Maleku indigenous reserve grants permission to carry out the activities of the project.	That the forest areas within the reserve have no potential for the development of timber or non-timber productive activities or that the Development Association that is the authority within the Reserve indicates that they do not want project activities to take place within their lands	Implement coordination meetings with the peasant roundtable that SINAC is already developing with the indigenous territories and with the Maleku Development Association to show the activities to be developed through the project and the benefits for its inhabitants.

3.5.2 Sustainability

The North Zone of Costa Rica has been characterized as a pole of forestry development and, especially, in it, SFM techniques have been developed and improved, through several projects that were developed, one of them, financed by DFID called the Project of integrated management of the natural forest (PMIBN) between the years 1993-1998, which allowed the establishment of 10 Forest Management Units with PPM, where it will be limited through research, what should be the percentage of harvest intensity of the producing forest for throughout the country, as well as research on the application of silvicultural treatments and profitability analysis of Forest Management.

Another project of great impact developed in the Northern Zone was the project called COSEFORMA, Cooperation of the Forestry and Wood Sectors Financed by German GTZ, during the years 1991-2000, which developed several investigations and resources a lot of information both in natural forest and plantations and forest industry.

This project will be giving continuity to the sustainable forest management (MFS) that has been implemented in the area and will strengthen on this occasion the timber market area to be a truly fairer market, the approval procedure for harvesting permits in forests to make it more efficient, and it will generate a series of technical information that will help improve the forest management

activity, which will allow forest management to continue after the project in the areas that were not incorporated during the project's term. .

Demonstration areas with measurement plots developed by the project (PPM) must continue to be monitored, for which there will be contracts with the owners to continue collecting data in the future. This activity must be financed with other resources, then that the project ends.

The project will strengthen the areas of marketing of forest products, public-private relations for the development of capacities in forest owners, industrialists, regents and organizations that work in the area, for the repositioning of the forestry sector in the North Zone, leaving the bases to continue with other initiatives for the sector, either in forests for second harvests or in secondary forests.

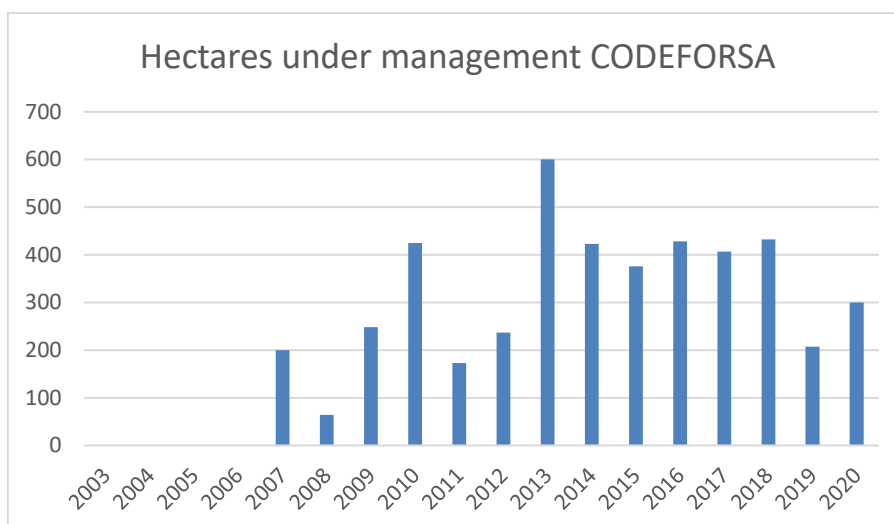


Figure 5 Hectares under SFM between 2003 and 2020, carried out by CODEFORSA

As shown in figure 5, from 2003 to 2020, CODEFORSA processed between about 500 hectares per year in MFS, which does not take off at the 5,000 hectares per year requested at the national level by the National Forestry Office of Costa Rica, (ONF, 2022, Communication personal), with the project it is hoped to promote the SFM, at least in 2,000 hectares per year.

PART 4. OPERATIONAL MANagements

4.1. Organizational structure and participation mechanisms of actors/beneficiaries.

4.1.1 Executing agency and participating entities

The highest instance responsible for the project will be the Board of Directors of CODEFORSA, which is appointed in the Annual Assembly of Associates, which delegates to the Board of Directors the control and rendering of accounts of the progress and results of the project.

The execution of the project will be carried out by the San Carlos Forest Development Commission Association (CODEFORSA), founded in 1983. CODEFORSA is a non-governmental, non-profit organization, whose main action activities are: Processing of Payment for Environmental Services in the modalities of Reforestation, Agroforestry and Forest Protection before FONAFIFO, has a Forest Nursery, carries out and processes Forest Management Plans before the AFE, executes an environmental education program and together with its associates develops the Wood Marketing Unit. CODEFORSA has carried out various projects developed with international institutions such as AID, DIFD, and the Costa Rica-Holland Agreement, which have been successful. CODEFORSA's direct area of influence is mainly the North Zone of Costa Rica.

CODEFORSA has offices located in Ciudad Quesada, canton of San Carlos, province of Alajuela, which are equipped with office furniture and other basic services to develop the project. There are technically trained personnel in the forest area as well as in administration.

For the execution of the project, CODEFORSA contemplates the establishment of agreements with government institutions such as: ONF, INISEFOR-UNA, AFE and with forestry research and education institutions. CODEFORSA will provide the infrastructure and the necessary means for the execution of the project. Being ultimately responsible for the correct use of the funds that will be available and for the fulfillment of the project objectives.

4.1.2 Team and project management

In the operation of the project, a Project Director will be appointed, who will assume the role of general manager and representative before the instances of financing and institutional coordination.

In what is strictly the operation of the project, a General Coordinator will be appointed, who will be in charge of supervising the work of the technical and administrative personnel. For the proper development of his functions, the Coordinator will have the support of an Advisory Committee made up of representatives of the different institutions that will provide contributions to the project: ONF, INISEFOR-UNA, FONAFIFO, SINAC and representatives of the small and medium forest owners associated with CODEFORSA, Fig. 4 shows the organization chart of the project structure.

In the administrative accounting field, the project will have an exclusive bank account for its execution, the issuance of the different checks with which the expenses will be covered will be supported by joint signatures of the president and the treasurer of the Board of Directors and the Director of the project. An exclusive accounting for the project and administrative instruments will be carried out in accordance with the strictest procedures established by the Audit.

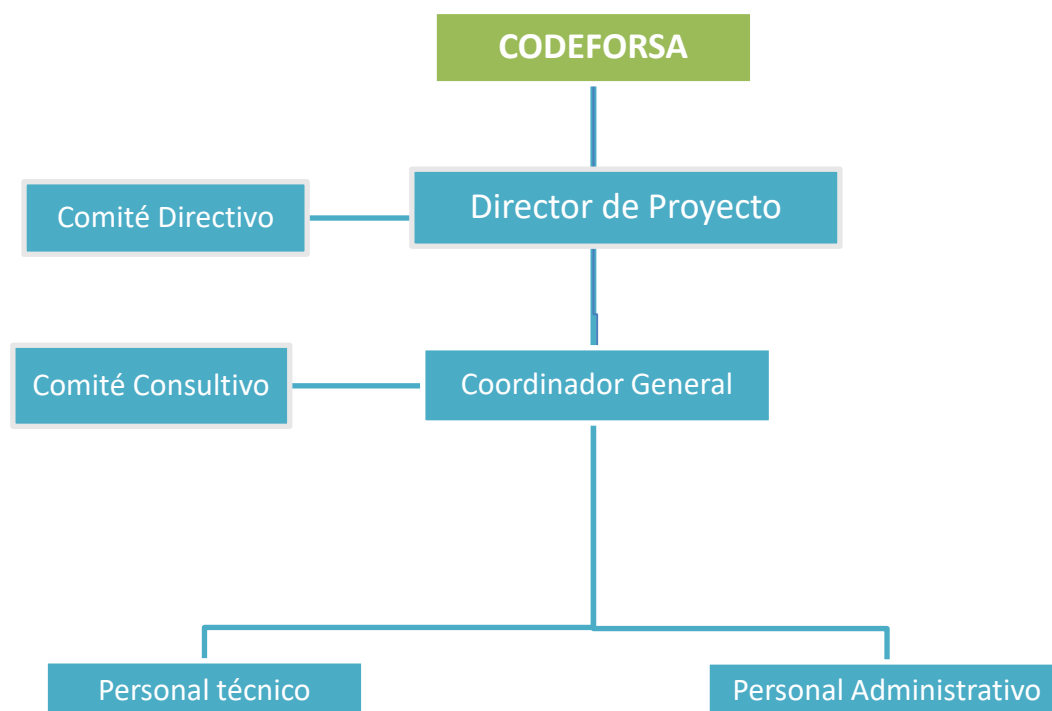


Figure 6. Organizational structure of the Project.

4.1.3 Steering committee of the project.

CODEFORSA, as the executing agency of the project, will be supported by a steering committee, which will be mainly in charge of ensuring the execution of the project in terms of its supervision, in addition to approving the control mechanisms of budgeted execution of the project and the mechanisms of administrative control of the project.

The coordination of the Project Director with the Steering Committee will be vital for the good execution of the project and in addition to the contributions of the General Coordinator regarding the planning of the activities proposed in the project with the budgetary content assigned to each of them and of any changes that need to be requested and approved.

It is up to the Steering Committee to be very clear about both the logical framework and the work plan of the project so that in the coordination meetings progress reports can be requested from the general coordinator and, if necessary, from the technical and administrative teams of the project. .

The Steering Committee will be composed as follows:

Table 3. Project Steering Committee.

Committee member	Function	Budgeted to:
ITTO Assessors	Evaluate ex-post the execution of the project.	ITTO
President of the CODEFORSA Board of Directors	Maximum person in charge as Executing Agency	CODEFORSA
Project Director	Responsible for coordinating and planning all project activities. He will be the chairman of the committee.	CODEFORSA
Chief coordinator	Support of the Project Director in the execution of the activities.	CODEFORSA
INISEFOR-UNA official	Project manager collaborator.	INISEFOR-A
ITTO Focal Point in Costa Rica	ITTO Liaison	FONAFIFO
AFE	Project Support	Minae, SINAC

4.1.4 Mechanisms for stakeholder/beneficiary participation.

The participation of stakeholders in the project comes from the process of formulating and defining the problems that afflict the forestry sector in the northern zone. Where consultation workshops were held for actors from the public sectors, made up of State institutions and the private sector, made up of forest owners, industrialists, and people involved in harvesting work as contractors. At the external level, officials from key institutions such as ONF, FONAFIFO, INISEFOR-UNA, and SINAC met. At that time, all the necessary information was collected from each of them to create the problem tree and from there to design a project that would solve the primary needs of the forestry sector and SFM in the Northern Zone.

Once the project was formulated and presented, representatives of these same institutions

became members of the consultative committee with active participation, INISEFOR-UNA, as directing actor together with CODEFORSA of the execution of the project itself and the institutions ONF, FONAFIFO, the AFE through the GMF and SINAC through the Arenal Huetar Norte Conservation Area, who together with the CODEFORSA associates, who are all small and medium-sized forestry producers from the ZN, will be advisory members of the project and directing collaborators in the execution of the activities, You will be able to request and receive information about the project, and it will be through this committee that the actors will be able to access the Steering Committee and make decisions about the project.

4.1.5 Participating institutions

San Carlos Forestry Development Commission Association (CODEFORSA): It is the executor of the project and responsible for coordinating the activities and giving the technical and administrative follow-up to the project, producing the didactic material for:

Small and medium forest owners: The families that own the farms within the area of influence of the project will be responsible for allocating part of their farm to sustainable forest management. These small and medium producers are members of CODEFORSA and therefore will be defined as directing actors of the project and the beneficiaries of the activities to be carried out and with access to the information generated by the project.

Institute of Research and Forest Services (INISEFOR):INISEFOR is an Academic Unit belonging to the Faculty of Earth and Sea Sciences of the National University, which was created on July 23, 1992 and since then has focused on the development of applied research that allows making a contribution substantial to the forestry sector.

His work falls within two strategic areas: the comprehensive management of natural forest ecosystems (forests) and the comprehensive management of forest plantations. In addition, since 2010, INISEFOR has taught the Comprehensive Farm Management Diploma, in conjunction with the Sarapiquí Academic Program, in the Huetar Norte (ZN) region of the country. Researchers, teachers and extensionists carry out projects in fields as diverse as the in vitro reproduction of forest species, monitoring of forest ecosystems, conservation and propagation of endangered forest species, Agroforestry Systems, efficient timber cultivation, forest soils, genetic improvement and the use and industrialization of wood. See Annex 3.

National Forestry Office (ONF): It was created by Forestry Law No. 7575 of 1996, as a non-state entity, with its own legal personality, with the aim of promoting forestry activities and the use of public timber as a valid formula to conserve and harvest these resources, revealing great environmental, social and economic benefits, of national and global impact.

At the national level, the ONF is made up of 40 organizations. This makes it a forum for agreement and coordination of the private forestry sector, with strong participation in the management of the national forestry policy.

National Fund for Forest Financing (FONAFIFO):Public entity in charge of financing small and medium-sized producers of forestry goods and services, managing and administering financial resources of national and international origin to support the development of the forestry sector.

State Forestry Administration (AFE):Article 5 of Forest Law 7575 indicates. "The Ministry of the Environment and Energy will govern the sector and will carry out the functions of the State Forestry Administration in accordance with this law and its Regulations. The organic structure of the State Forestry Administration will be established in the Regulation of this law. This Administration will be Regionalized, for which the country will be organized into Forest Regions."

National System of Conservation Areas (SINAC):Dependency of the Ministry of Environment, Energy, created by article 22 of the Biodiversity Law No. 7788, of 1998. SINAC is a concept of integral conservation, which offers the possibility of developing responsible public management, with the participation of the State, Civil Society, private companies, and each individual in the country interested in and committed to building a healthy and ecologically balanced environment.

The advisory committee will work ad honorem and the project will be in charge of covering the administrative cost of the consultation meetings that will be held during the life of the project. CODEFORSA will provide the meeting room and the technological equipment for projections as a counterpart, or transportation in case meetings or visits to the field outside the CODEFORSA facilities, the advisory committee will be integrated as follows:

Table 4. Committee of project office.

Representatives of:
National Forestry Office (ONF)
Small and medium forest owners, members of CODEFORSA
Institute of Research and Forest Services (INISEFOR)
National Forest Financing Fund (FONAFIFO)
State Forestry Administration (AFE):
National System of Conservation Areas (SINAC)
Project General Coordinator

The general coordinator of the project will be the president of said committee and there may be more than one representative for small and medium-sized owners.

4.2. Reporting, review and evaluation.

All the reports to be submitted to the ITTO will be based on the Annual Operating Plans submitted to this organization, where the operational objectives of the project to be developed will be detailed, so the indicators and assumptions of the project must be executed and verified through the presentation of project results in the respective reports.

Within the first month of the project work, the initial report of the project will be used, where the names of the work team will be kept, from the selected Project Director to the field technical staff and the administrative staff in charge of carrying out The work is done with the presentation of this initial report, the baselines will be established for the start of both technical and administrative activities for the proper development of the project.

Together with the initial report, the operational plan for the first year will be presented, which will consist of the scheduling of the activities of the Work Plan to be executed in the first year of the project with those responsible for each activity and the assigned budget.

Project progress reports will be completed based on ITTO requirements, which will be every six months and at the end of each operational plan the annual report for ITTO monitoring visits will be produced. These reports will contain information on the results of the activities carried out, analysis of estimated assumptions and if the estimated risks were mitigated and how. In addition to all the means of verification of the execution of the activities and their evaluation by the actors involved. These reports also made the memory aids of the meetings of the steering and consultative committees on the progress of the work of the project and the fact that no activity to be carried out is not left out or that no interest group is left out within the area. of influence of the project.

The schedule for monitoring and reporting on the progress of the project is presented below.

Table 5. Project monitoring and reporting schedule

Activities	Technical and administrative monitoring of the project																								
	Month																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Initial Report	X																								
POA	X												X												
Presentation of progress reports						X						X						X							X
ITTO inspection visit			X																						X
Final report																									X

4.3 Dissemination and socialization of project experiences

4.3.1 Dissemination of project results

As a means of disseminating the results, several activities will be carried out, among which the following stand out:

1. Guidelines on local radio stations, where the objectives of the project and the results to be obtained will be explained:
2. An annual program of 1-hour duration, on a local television, where the scope of the project and the activities are detailed.
3. Publication of two posters in print runs of 300 units each and two informative brochures, in print runs of 200 units each, which will be distributed throughout the region.
4. Annual calendar with images of trees and forest management.
5. Elaboration of decals for the consumption of forest wood and to avoid illegal logging.
6. Participation in national and regional fairs and events to promote SFM.
7. External signs for promotion (caps, key chains, pens, etc.)
8. An annual workshop to promote SFM and to standardize criteria will be held.
9. An annual field day will be held with regents and owners on SFM techniques.

The actors, whether farm owners, timber merchants, industrialists, forest regents, public officials, etc. who will receive training on the issues to be discussed during the development of the project, will be beneficiaries of the new knowledge and skills received so that they become disseminators of knowledge to other owners and actors in the forest value chain to promote practices of sustainable forest management, to achieve the highest possible profitability and extend the practices throughout the region either through CODEFORSA or private forest engineers, who are also empowered by Costa Rican legislation to carry out Sustainable Forest Management in forests, for through management plans in mature forest.

4.3.2 Socialization of project experiences

As a result of the socialization of experiences:

1. The Costa Rican State maintains a policy that favors Forest Management in the Northern Zone and the model used is institutionalized at the national level.
2. In the Northern Zone, the governing body for forestry is SINAC and it carries out actions to promote SFM.
3. The forest cadastre in the ZN is institutionalized and there is an inventory of forests with the potential to be managed in the ZN in a polycyclic manner.
4. At least 500 ha of forests are sustainably managed per year in the ZN.
5. Management standards for secondary forests in the ZN are applied

As a result of the teachings of the project:

1. The Forest Cadastre is in operation and the processing times before the AFE are reduced.
2. 20 forest owners are trained in SFM and apply their knowledge on their farms.
3. The profitability of the SFM of the forests in the RHN and its key factors, access to PSA, use of residues, etc., are known.
4. Scientific information on the SFM of forests generated by the project is made available to forest owners, the AFE, NGOs, institutions, universities and the general public.

Likewise, training and training are aimed at giving farm owners opportunities to find commercial options for the sale of wood, obtain income from their forests and thus avoid the change in land use that is generated when the forest is not conceived as a productive area of the farm. Despite the fact that, in Costa Rica, the change of land use has been prohibited by law since 1996, the owners eliminate the forests because they do not generate income, we believe that sustainable forest management is the activity that can help the forests to be able to remain standing, generating all the environmental benefits to its owners, the country and the entire world. All this strengthens the commitment on the part of the producers with forest areas and thus avoid land conversions that in some places are particularly acute.

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Annex 1. Profile of the Executing Agency

CODEFORSA CURRICULUM CODE

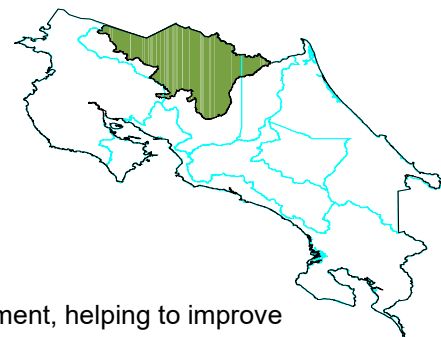
The San Carlos Forestry Commission (CODEFORSA) is a non-profit, non-governmental organization (NGO), founded in July 1983, whose actions are oriented towards achieving sustainable development and the provision of services in the forestry field.. It is made up of more than 300 associates of different natures: Farmers (small, medium and large), Timber Transporters, Forest Harvesting Entrepreneurs, Forest Owners, Forest Industrialists and Reforesters.

Its structure is made up of a General Assembly, which is the highest authority of the organization; a Board of Directors made up of 7 members appointed by the General Assembly and the Prosecutor's Office, which is in charge of ensuring compliance with the Regulations and Policies of the Organization.

It operates through a Technical Department, made up of forestry engineers and field assistants, in charge of providing technical assistance, and an Administrative Department, in charge of developing administrative and financial mechanisms, as necessary support for institutional activities.

Area of influence

CODEFORSA's direct area of influence is mainly the North Zone of Costa Rica. The predominant area is lowland tropical humid forests. The area is equivalent to approximately 20% of the national territory.



Mission

We are a leading NGO in the promotion of sustainable forestry development, helping to improve the standard of living of the inhabitants of the Huetar Norte region.

Vision

To be a solid organization that promotes forestry production, to achieve the social and economic growth of its associates and collaborators, thus contributing to the forestry development of the country.

Services offered by CODEFORSA

- forests
 - Production (Forest Management)
 - Protection (PSA procedure)
- Forest Plantations (PSA Procedure)
- Agroforestry (PSA Procedure)
- Extension and Environmental Education
- Tree nursery
- Collection and sale of Seeds
- Certificates of Origin in Plantations
- Forest inventories in pastures
- Forest regencies
- Consulting
- Plantation establishment
- Maintenance plantings
- Marketing of plantations

As shown in Table 1, CODEFORSA in the years from 1994 to 1999 was the leading forestry organization in Costa Rica in the promotion of forest management. Since 2010, it has worked hard to increase the participation of forest management in the contribution of the wood that is used in our country, the response is lukewarm, so additional contributions are needed in the promotion of forest management

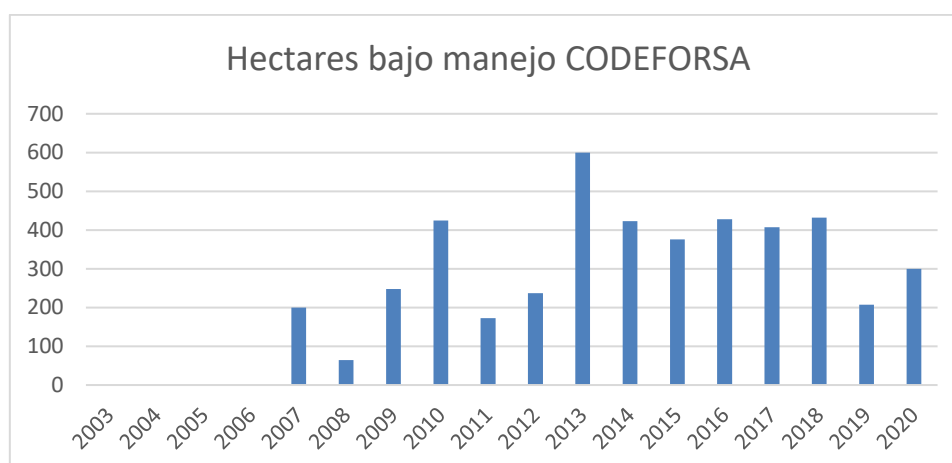


Table1. Number of hectares processed by CODEFORSA, from 2003 to 2020, in forest management plans

Annex 2: Recognition of COFALC-FAO for excellence in the implementation of sustainable forest management processes and practices and its contribution to the sustainability of the region's forests.



Annex 3: Curriculum vitae of the personnel provided by the executing agency.

Gilberth Solano Sánchez

Gilbert Solano Sanchez. Forestry Engineer Graduated from the Technological Institute of Costa Rica (ITCR), as well as a university Technician in Business Administration from the I.T.C.R.; 22 years of experience in forest regencies for payment for environmental services in the modalities of natural forest protection, reforestation, agroforestry systems; geographic information systems (gis), experience in environmental certification (FSC, ISO: 14001),; establishment and management of reforestation projects with teak, melina, acacia and native species; experience in preparation and processing of permits for forest exploitation and forest inventories before MINAE and SETENA; experience in preparation, processing and execution of management plans for the use of natural forest, inventories in pastures, reforested areas, experience in watershed management and environmental education.

Luis Fernando Perez Obando

Luis Fernando Pérez Obando is a forest engineer graduated from the Technological Institute of Costa Rica, he has been a CODEFORSA official for more than 24 years, where he has carried out technical assistance work in reforestation projects, forest management, agroforestry systems, forest exploitation. He has participated in projects such as REFORMA, which was financed by AID, and forestry extension projects financed by the Canje Costa Rica Canada Fund. He has had training on forest management, reforestation, forest pest management, project formulation, GIS systems at UNA, evaluation of plantations, weed control, agroforestry systems, forest certification, forestry regencies, environmental impact assessment,

Annex 4: Profile of the Collaborating Agencies of the Project.

15/2/2016

¿qué es la oficina nacional forestal? | Oficina Nacional Forestal (ONF)



Sobre la institución

¿Qué es la Oficina Nacional Forestal?

La ONF fue constituida con el fin de proponer al MINAET políticas y estrategias para el desarrollo de las actividades forestales del país.

La Oficina Nacional Forestal (ONF) fue creada por la Ley Forestal N° 7575 de 1996, como un ente público no estatal, con personalidad jurídica propia, con el fin de promover las actividades forestales y el uso de la madera como una fórmula válida para conservar y cosechar estos recursos, generando grandes beneficios ambientales, sociales y económicos, de impacto nacional y global.

A nivel nacional, la ONF está conformada por 40 organizaciones. Lo que la convierte en un foro de concertación y coordinación del sector forestal privado, con fuerte participación en la gestión de la política nacional forestal.

Misión

"Fomentar la competitividad de la actividad forestal privada para garantizar su sostenibilidad y rentabilidad".

Visión

"Seremos la Institución líder que asegura las mejores condiciones y oportunidades para la sostenibilidad de la actividad forestal privada costarricense".

Objetivos estratégicos

- [1.] Consolidar la gestión estratégica y operativa de la ONF en el largo plazo.
- [2.] Incidir sobre las Instituciones del Estado para el fortalecimiento del sector forestal privado.
- [3.] Propiciar la sostenibilidad de las actividades forestales, en especial el abastecimiento de madera.
- [4.] Posicionar favorablemente las actividades forestales ante la opinión pública.

Funciones

Las presentes funciones son las desempeñadas por la ONF en acatamiento a la Ley Forestal N°7575, artículo 10.

- a) Proponer, al Ministro del Ambiente y Energía, políticas y estrategias para el desarrollo adecuado de las actividades forestales.
- b) Ejecutar y apoyar programas de capacitación tecnológica y estudios e investigaciones aplicadas a los recursos forestales del país, para su mejor desarrollo y utilización.
- c) Impulsar programas de prevención para proteger los recursos forestales contra incendios, plagas, enfermedades, erosión y degradación de suelos y cualesquiera otras amenazas.
- d) Impulsar programas para el fomento de las inversiones en el sector forestal y promover la captación de recursos financieros para desarrollarlo.
- e) Divulgar, entre todos los productores, información nacional e internacional sobre mercados, costos, precios, tendencias, compradores, existencias y otros, para la comercialización óptima de los productos del sector; además, dirigir, en el país y fuera de él, la promoción necesaria para dar a conocer los productos forestales costarricenses.
- f) Promover la constitución y el fortalecimiento de asociaciones y grupos organizados para el desarrollo del sector forestal, con énfasis en la incorporación de los campesinos y pequeños productores a los beneficios del aprovechamiento y la comercialización e industrialización de las plantaciones forestales.
- g) Incentivar programas orientados a las comunidades rurales, para incorporar a los pequeños propietarios en los programas de reforestación.
- h) Efectuar campañas de divulgación y capacitación, dirigidas a la comunidad nacional, sobre los beneficios que pueden generar el manejo adecuado y la conservación e incremento de las plantaciones forestales.
- i) Presentar, ante la Contraloría General de la República, un informe anual en el que detallará el uso de los recursos públicos asignados mediante esta ley. Asimismo, remitirá un informe anual a la Administración Forestal del Estado sobre las actuaciones de la Oficina en cuanto a la promoción del sector.
- j) Nombrar sus representantes ante los organismos establecidos en esta ley.
- k) Cooperar al cumplimiento de las disposiciones de esta ley.

Lima, 15 Febrero 2016

UNA INISEFOR

INICIO
ACERCA DE INISEFOR
SERVICIOS Y PRODUCTOS OFRECIDOS
CONTÁCTENOS



Publicaciones



Recurso Humano



Docencia



Laboratorios

Proyectos Vigentes



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Instituto de Investigaciones y Servicios Forestales

El INISEFOR es una Unidad Académica perteneciente a la Facultad de Ciencias de la Tierra y el Mar de la Universidad Nacional, que fue creada el 23 de julio de 1992 y desde ese momento se ha enfocado en el desarrollo de investigaciones aplicadas que permitan hacer un aporte substancial al sector forestal.

Nuestro trabajo se enmarca en dos áreas estratégicas: el manejo integral de ecosistemas forestales naturales (bosques) y el manejo integral de plantaciones forestales. Adicionalmente, desde el año 2010 el INISEFOR imparte el Diplomado en Gestión Integral de Fincas, en conjunto con el Programa Académico Sarapiquí, en la región Huetar Norte del país.

Un grupo selecto de investigadores, docentes y extensionistas llevan a cabo proyectos en campos tan diversos como la reproducción in vitro de especies forestales, el monitoreo de ecosistemas forestales, la conservación y propagación de especies forestales en vías de extinción, los Sistemas Agroforestales, el cultivo eficiente de madera, los suelos forestales, el mejoramiento genético y el aprovechamiento e industrialización de la madera.

Los invito a conocer más sobre nuestro quehacer a través de una visita a nuestro sitio web y los invito a comunicarse con nosotros para plantear sus propuestas, dudas, observaciones o recomendaciones, con miras a un mejor futuro forestal para Costa Rica.

Ana Isabel Barquero Elzoondo
Directora INISEFOR

Galería de Imágenes



FCTM

UNA

Facultad de Ciencias de la Tierra y el Mar



SISTEMA NACIONAL DE ÁREAS DE CONSERVACIÓN





Conózcenos Competencias Áreas de Conservación Normativa Trámites y Consultas Documentación

Inicio ► Conózcenos

- Misión y Visión
- Valores y Compromisos Impulsores
- Estructura Organizacional
- Plan Estratégico Institucional y Plan de Acción
- Convenios y Alianzas

Sistema Nacional de Áreas de Conservación (SINAC)

Es una dependencia del Ministerio de Ambiente, Energía y Telecomunicaciones (MINAET), creado mediante el artículo 22 de la Ley de la Biodiversidad N° 7788, de 1998.

El SINAC posee personalidad jurídica instrumental, y ejerce sus funciones como un sistema de gestión y coordinación institucional, descentrado y participativo, que integra las competencias en materia forestal, vida silvestre, áreas protegidas y la protección y conservación del uso de cuencas hidrográficas y sistemas hídricos con el fin de dictar políticas, planificar y ejecutar procesos dirigidos a lograr la sostenibilidad en el manejo de los recursos naturales del país.

El SINAC es un concepto de conservación integral, que ofrece la posibilidad de desarrollar una gestión pública responsable, con la participación del Estado, la Sociedad Civil, la empresa privada, y de cada individuo del país interesado y comprometido con la construcción de un ambiente sano y ecológicamente equilibrado.

Territorialmente, el SINAC está dividido en once áreas de conservación, en donde se interrelacionan actividades tanto públicas

Noticias

ECOLÓGICO

ACTO PROMOCIONAL TURISMO RURAL COMUNITARIO

CAMINOS DE OSA GANA CONCURSO EN FERIA INTERNACIONAL DE TURISMO

CAMPAÑA ACERCARÁ EL PARQUE NACIONAL CORCOVADO A

CALENDARIO AMBIENTAL

TRANSPARENCIA

Reservas de Biosfera

Enlaces de Interés Contáctenos Glosario Preguntas Frecuentes Mapa del Sitio Intranet Correo Institucional



FONAFIFO
FONDO NACIONAL DE FINANCIAMIENTO FORESTAL
El futuro de ambiente y energía (FONAF)

English | Inicio | ¿Quiénes somos? | Mapa del sitio

Crédito Forestal
Pago de Servicios Ambientales
Inversiones
Proyectos
Documentación
Actualidad
Contáctenos

FINANCIAMOS



SUS PROYECTOS FORESTALES

RECOMPENSAMOS



SERVICIOS AMBIENTALES

INVIERTA



PROYECTOS CON BENEFICIOS SOCIOAMBIENTALES

USTED ES ...

- Propietario de Finca
- Inversionista
- Beneficiario
- Regente Forestal
- Consultor
- Proveedor
- Funcionario
- Comprador de Créditos de Carbono

Pago de Servicios Ambientales
PSA

[Inicio](#) > Pago de Servicios Ambientales

Pago de Servicios Ambientales

El Programa de PSA consiste en un reconocimiento financiero por parte del Estado, a través del FONAFIFO, a los (las) propietarios(as) y poseedores(as) de bosques y plantaciones forestales por los servicios ambientales que éstos proveen y que inciden directamente en la protección y mejoramiento del medio ambiente.

De conformidad con la Ley Forestal No. 7575, Costa Rica reconoce los siguientes servicios ambientales:

- Mitigación de emisiones de gases de efecto Invernadero (fijación, reducción, secuestro, almacenamiento y absorción).
- Protección del Agua para uso Urbano, rural o hidroeléctrico
- Protección de la biodiversidad para su conservación y uso sostenible, científico y farmacéutico, de investigación y de mejoramiento genético, así como para la protección de ecosistemas y formas de vida.
- Belleza escénica natural para fines turísticos y científicos.

La característica más importante de este Programa es que cambió el concepto tradicional de "subsidio" o "incentivo", por el de "reconocimiento económico" por los servicios ambientales que provee el bosque, lo cual a su vez contribuye a aumentar su valor ecológico, social y económico.

Formularios e Instructivos

Mostrar 10 registros Buscar:

- [Instructivo del uso del WebChat para Citas del PPSA](#)
- [Instructivo para el Uso del Sistema de Citas, gePSA](#)
- [Solicitud de Ingreso al programa PSA-SAF](#)
- [Solicitud de Ingreso al programa PSA](#)
- [Volante Informativo 2016](#)
- [Instructivo para habilitar bloqueadores de Pop-Ups](#)

Mostrando desde 1 hasta 6 de 6 registros

Pilares Fundamentales del Programa por Pago de Servicios Ambientales

El Programa por Pago de Servicios Ambientales (PPSA), como mecanismo de financiamiento para el manejo, la conservación y el desarrollo sostenible de los recursos del bosque y de la biodiversidad, se sostiene en cuatro pilares fundamentales: Institucionalidad, Marco Legal, Financiamiento y Monitoreo y Evaluación.

A continuación, se describen los citados pilares:

- > [Institucionalidad](#)
- > [Marco Legal](#)

- > Requisitos para inscribirse en PSA
- > Modalidades de PSA
- > Estadísticas de PSA
- > Inscripción al PSA
- > Consultas

Noticias

27-01-2015

Casa Tropika
El Fonafifo pone en conocimiento que está disponible en forma gratuita los diseños y planos de la Casa Tropika, a fin de que puedan ser utilizados por cualquier persona o empresa, producto del Convenio IICR-Fonafifo.

13-01-2015

PROD HAB
El Fonafifo se encuentra en proceso de inscripción ante la Agencia de Protección de Datos de los Habitantes (PROD HAB)

31-10-2014

Nota importante
El Fondo Nacional de Financiamiento Forestal (Fonafifo) y el proyecto REDD+, así como el Banco Mundial, hacemos un

Annex 5: List of Assistance and Images of Consultation Workshops.



**LISTADO DE ASISTENCIA
TALLER MIERCOLES 09 DE JULIO 2014**



Plan maestro para el reposicionamiento del manejo forestal como uso competitivo de la tierra en el paisaje agroforestal de la RHN de Costa Rica 2015-2021

	NOMBRE	ORGANIZACIÓN	DIRECCION CORREO	TELEFONO
1	Randall Castro Salazar	SINAC ACDAN-SB-Cob	Randall.Castro@sinac.gob.cr	24605611
2	Josue Plamier	Asociación Independiente	jeforales@gmail.com	88160212 24744878
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4	Luis Angel Aguilar Salar	FUNDECOR	Luis@FUNDECOR.org	2290-8818
5	Victor Meza	INISFOR-UNA	victor.meza.picado@una.ac.cr	8872-3795
6	Luis Fdo River Obando	CODEFORSA	lriver@codeforসা.org	2460-1055
7	Alfonso Barrantes R	ONF	abarrantes@onfor.org	2293-5834
8	Randall Herrera G.	FONAFIFO	rherrera@fonafifo.gov.cr	2461-0331
9	Sinthya Corales @	CODEFORSA	codeforসা@codeforসা.org	24601055
10				
11				
12				
13				
14				
15				
16				



**LISTADO DE ASISTENCIA
TALLER JUEVES 10 DE JULIO 2014**



Plan maestro para el reposicionamiento del manejo forestal como uso competitivo de la tierra en el paisaje agroforestal de la RHN de Costa Rica 2015-2021

	NOMBRE	ORGANIZACIÓN	DIRECCION CORREO	TELEFONO
1	Rodrigo Espinoza Mendoza			86822052
2	CARLOS FERNANDEZ R	FERCO S.A.	ASESANTENWANDO@FERCO.CR.	24410876
3	Kurt Schmock Salazar	VINKUNKSA	lagarto@vacsas.co.cr	228898163
4	Alvaro Vargas Viquez	Agrop. Oct. 78 Hacienda La Cueva		83825140
5	Eddy Alfaro Jimenez	Asesamiento LA/COMA		8717095
6	Oldemar Carrillo Perez	COMASA	Carrillooldemar6@gmail.com	71839806
7	Monny Mendoz	CODEFORSA		60669866
8	Victor Meza	INVESEFOR-UNA	victor.meza@invefor.una.cr	8372-3795
9	Gilbath Solano Sanchez	CODEFORSA	gsolano@codefora.org	2460-1055
10	Luis Fdo Ruiz Obando	CODEFORSA	lruiz@codefora.org	2460-1055
11	Synthia Corrala D.	CODEFORSA	codefora@codefora.org	24601055
12				
13				
14				
15				
16				



ANNEX 6. Terms of reference for key positions provided by the executing agency.

1. Project Director.

Requirements:

- Gender: male or female.
- University professional in the forestry field, with a specialty in Natural Resource Management or a related field.
- 10 years of experience or more in the field of forestry and forest management.
- Experience in management and personnel management.
- Knowledge of current forest legislation and other related regulations.
- Born leader, with the ability to lead and work in a team.
- Mastery of computing packages.
- Negotiation capacity with political actors in the forestry sector.

Functions:

- Prepare the annual planning, organize and supervise the execution of project activities.
- Supervise the budget execution of the project.
- Participate in the selection of project personnel.
- Prepare with each of the experts the training programs, tasks or research to be carried out during the execution of the project.
- Establish performance evaluation parameters of the personnel in charge.
- Review reports and technical documents.
- Prepare and submit project progress reports.
- Coordinate everything related to the development of the project with the ITTO authorities.
- Coordinate actions with SINAC authorities and other primary and secondary actors in the region.

2. Project Manager.

Requirements:

- Gender: male or female.
- University professional in business administration with knowledge of accounting.
- 10 years of experience in business administration and/or accounting work, ideally in the forestry field.
- Mastery of computing packages.

Functions:

- Administration of the personnel contracted by the project.
- Accounting management of the project, applying national regulations and ITTO procedures.
- Assist the Project Director in monitoring the use of project funds.
- Prepare financial reports in accordance with the formats established by ITTO and national legislation.

3. Forest Engineer In charge of the Technical Department.

Requirements:

- Gender: male or female.
- University professional in the forestry field, with knowledge in Sustainable Forest Management.
- **8 years of experience or more in the field of forestry and forestry management.**
- **Incorporated to the College of Agricultural Engineers.**
- **Knowledge of current Costa Rican forestry legislation and related regulations.**
- **With the ability to lead and work in a team.**
- **Mastery of office computer packages and forest mapping programs.**

- **Negotiation capacity with primary and secondary stakeholders in the forestry sector.**

Functions:

- Follow up on project activities in coordination with the Project Director.
- Accompany and support the execution of the project.
- Assist the Project Director in documentation, activities, workshops, reports and processing and analysis of information in the field.
- Coordinate the administrative part of the project, expense management and accounting information with the Project Administrator.

4. Research Forest Expert.

Requirements:

- Gender: male or female.
- University professional in the forestry field, with knowledge in Sustainable Forest Management.
- At least two published research papers.
- Official of a University where the Forest Engineering career is taught.
- 8 years of experience or more in the field of forestry and forestry management.
- Incorporated to the College of Agricultural Engineers.
- Knowledge of current Costa Rican forestry legislation and related regulations.
- With the ability to plan research work in the forestry field.

Functions:

- Accompany and support the execution of the project.
- Follow up on the research activities of the project in coordination with the Project Director.
- Collaborate in data processing and analysis of information generated in the field regarding research activities.
- Coordinate with the person in charge of the Technical Department, the execution of the research activities approved in the project.

TERMS OF REFERENCE FOR ITTO-FUNDED STAFF AND CONSULTANTS.

1. Forest Expert 1.

Requirements:

- Gender: male or female.
- University professional in the forestry field, with knowledge in Sustainable Forest Management.
- Years of experience in the field of Forest Management and execution of Forest Exploitation Management Plans
- Incorporated to the College of Agricultural Engineers.
- Knowledge of current Costa Rican forestry legislation and related regulations.
- Mastery of office computer packages and forest mapping programs.
- Hiring period: 5 months.

Functions:

- Support the execution of the project.
- Support the preparation of project reports.
- Coordinate with the Head of the Technical Department of the project the development of activities related to the position.
- Manage the field information generated in the field and transfer it to the person in charge of its processing and analysis.

- Other activities that the person in charge of the Technical Department or the Project Director requests.

2. Forest Marketing Expert.

Requirements:

- Gender: male or female.
- University professional in the forestry field, with knowledge in Marketing.
- Years of experience in the field of Forest Management and Marketing activities of forest products.
- Incorporated to the College of Agricultural Engineers.
- Knowledge of current Costa Rican forestry legislation and related regulations.
- Mastery of office computing packages
- Contract period: 14 months.

Functions:

- Support the execution of the project.
- Coordinate with the Head of the Technical Department of the project the development of activities related to the position.
- Other activities that the person in charge of the Technical Department or the Project Director requests.

3. Forest Management Expert.

Requirements:

- Gender: male or female.
- University professional in the forestry field, with knowledge in Sustainable Forest Management.
- Years of experience in the field of Forest Management and execution of Forest Exploitation Management Plans
- Incorporated to the College of Agricultural Engineers.
- Knowledge of current Costa Rican forestry legislation and related regulations.
- Mastery of office computer packages and forest mapping programs.
- Contract period: 24 months.

Functions:

- Support the execution of the project.
- Support the preparation of project reports.
- Coordinate with the Head of the Technical Department of the project the development of activities related to the position.
- Manage the field information generated in the field and transfer it to the person in charge of its processing and analysis.
- Other activities that the person in charge of the Technical Department or the Project Director requests.

4. Forest Extension Expert.

Requirements:

- Gender: male or female.
- University professional in the forestry field, with knowledge in extension.
- Years of experience in the field of Forest Management and outreach, awareness and training activities for producers.
- Incorporated to the College of Agricultural Engineers.
- Knowledge of current Costa Rican forestry legislation and related regulations.
- Mastery of office computing packages
- Hiring period: 3 months.

Functions:

- Support the execution of the project.
- Coordinate with the Head of the Technical Department of the project the development of activities related to the position.
- Other activities that the person in charge of the Technical Department or the Project Director requests.

5. Forestry Expert in GIS.

Requirements:

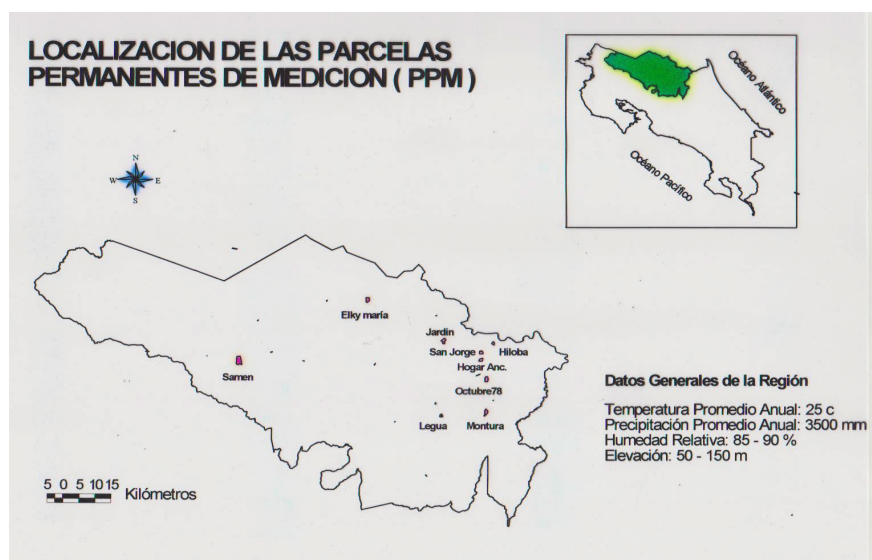
- Gender: male or female.
- University professional in the forestry field, with knowledge in Geographic Information Systems.
- Years of experience in the field of Forest Management and management of GIS computer programs.
- Incorporated to the College of Agricultural Engineers.
- Knowledge of current Costa Rican forestry legislation and related regulations.
- Mastery of office computing packages and GIS programs.
- Hiring period: 2.5 months.

Functions:

- Support the execution of the project.
- Coordinate with the Head of the Technical Department of the project the development of activities related to the position.
- Other activities that the person in charge of the Technical Department or the Project Director requests.

Annex 7: Additional information on the management of permanent test plots

The Permanent Sample Plots (PPM) are located in the Huetar Norte region of Costa Rica, which is bordered to the north by Nicaragua, to the south by the province of Guanacaste and the rest of the provinces of Alajuela and Heredia. The plots are located in the humid lowland forests of the Huetar Norte region, properly on the plains of San Carlos, Guatuso and los Chiles, map 1



Map 1. Location of measurement plots

Selection of sites:

The selection and survey of the plots was made by CODEFORSA, with the objective of putting under study the most important and representative forest associations of the Huetar Norte region. All the forests where the plots are located have had at least one forest harvest. The plots are part of a Permanent Parcels Project established by CODEFORSA from the year 1992, they have been measured periodically, until the year 2010.

Each of the plots has a square shape of 100 m long by 100 m wide. Each plot was subdivided into 100 subplots of 10 x 10 m, which were numbered from 00 to 99. The demarcation of the plot was done by placing beacons every 10 m until completing the subdivision of the plot. There are a total of 6 plots of 1 ha and 27 of a quarter of a hectare, these are square in shape and were demarcated following the same procedure as above. In the Hogar de Ancianos, San Jorge and Hiloba there are plots of 1 ha, but they were only measured in 1992 and 1995.

<u>Drive unit</u>	<u># of ppm</u>	<u>PPM size (ha)</u>
<u>La Legua</u>	<u>1</u>	<u>1.0 ha</u>
<u>Nursing Home++</u>	<u>9</u>	<u>0.25 ha</u>
<u>San Jorge++</u>	<u>9</u>	<u>0.25 ha</u>
<u>Hiloba ++</u>	<u>9</u>	<u>0.25 ha</u>
<u>October 78</u>	<u>1</u>	<u>1.0 ha</u>
<u>Frame</u>	<u>1</u>	<u>1.0 ha</u>
<u>The garden</u>	<u>1</u>	<u>1.0 ha</u>
<u>Elky Maria</u>	<u>1</u>	<u>1.0 ha</u>
<u>Samen</u>	<u>1</u>	<u>1.0 ha</u>
<u>Total</u>		<u>12.75 ha</u>

In the PPM all trees over 10 cm in diameter are enumerated and measured. Each individual within its respective 10 x 10 m subplot is numbered individually, using the number of the subplot in which the tree is found and a consecutive number for each individual. The numbers are painted directly on the tree and also on a metal plate that is fixed to the trunk with a nail, to prevent loss of paint. For the identification of the trees, 90% of them were identified directly in the field at the species level, for those trees where there was doubt about their taxonomy, an herbarium specimen was collected to later be identified by comparison in the Herbarium of the National Institute of Biodiversity (INBIO).

Work sites and experimental design of silvicultural treatments

CODEFORSA installed, between 1992 and 1993, three silvicultural treatment trials, where Permanent Sampling Plots (PPM) were followed, located in the Boca Tapada area of Pital de San Carlos, Alajuela, Costa Rica. The plots are 50 x 50 m, divided into 25 subplots of 10 x 10 m.

The silvicultural trials will take place in Forest Management Units (FMU) associated with the Organization, said FMUs are: Hiloba, San Jorge and Nursing home, in the establishment there was the collaboration of Prof. Juvenal Valerio Garita, from ITCR. Since its establishment, periodic measurements have been made at the PPM, until the year 2010.¹

In each FMU, a reduced-impact forest harvest was carried out: In Hiloba, 50 ha were harvested in 1990, in San Jorge they harvested 53 ha in 1992, and Nursing home, 53 ha were harvested in 1992 (Méndez, 2009). The silvicultural treatments were applied to the exploited surfaces and correspond as follows: in Hiloba 35 Ha were treated, in San Jorge 37 Ha were treated and Nursing home 10 Ha were treated, in all cases the treatments were applied in 1993. Méndez 2006, Cited by Centeno 2010, mentions that the silvicultural treatments applied are oriented to favor the establishment of the regeneration of timber species and to reduce competition in order to promote the growth of the trees selected for the future harvest.

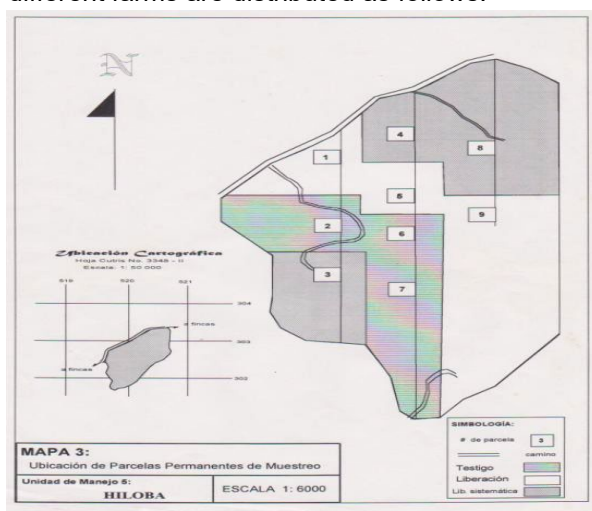
It is clearly appreciated that the silvicultural prescription will take into account the execution of the treatments in the post-harvest phase and these will be applied to unwanted vegetation with diametric dimensions ≥ 10 cm, since this size of vegetation is already established and presents greater advantages for its driving. Another silvicultural prescription was to treat a maximum of 40% of the original basal area greater than or equal to 10 cm dbh.

According to Mendez (2009); The trials in the different farms are distributed as follows:

Hiloba:

Gamboa, 1992, established a total of nine plots, of which three were released, three with the systematic release treatment, and the three remaining plots were abandoned as controls. Harvesting in this management unit was carried out in 1990, applying the treatments three years after harvest.

The type of use according to Quesada (1997), was of medium intensity, an average of 8 trees per hectare were extracted, with a decrease of 17.3% of the basal area.



¹ Méndez, J; Quiros D; Centeno, F Morales, 2016. Evaluation of the application of silvicultural treatments in natural forests of the Northern Huetar Region of Costa Rica. Ciudad Quesada, Costa Rica.70 p.

Figure 2. Map of the Management Unit Hiloba and location of the PPM, Boca Tapada, Pital, San Carlos, Costa Rica

San Jorge:
 Fernández, 1993, for the UMF San Jorge established that release was applied to three plots, refinement to four plots and two control plots; for a total of nine plots in this FMU. See figure 3.

A low impact harvesting was carried out in 1992, the treatments were implemented in 1993.

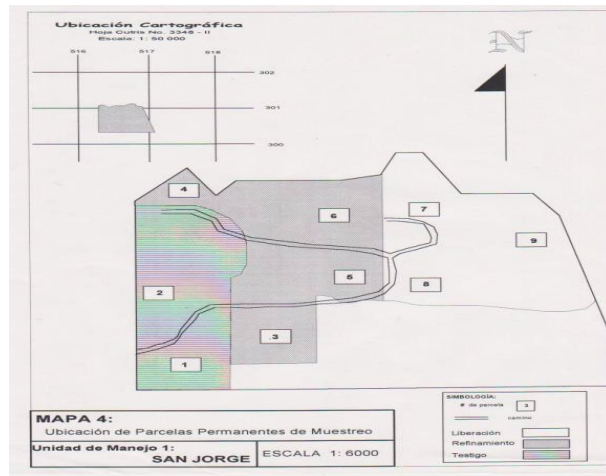


Figure 3. Map of the San Jorge Management Unit and location of the PPM, Boca Tapada, Pital, San Carlos, Costa Rica

Nursing home:
 Sanabria, 1993, established a total of nine plots in this FMU and applied refinement in five plots; and four control plots were produced. See figure 4.

Nursing home was harvested in 1992 and the treatment was applied in 1993. According to Quirós and Méndez (1999); With the refinement, those trees of non-commercial species in the 10-40 cm diameter classes that were generally located in the middle canopy were eliminated. The treatment was applied by ringing the trees in an area of 10 hectares, which corresponded to 20% of the total management area. Unwanted trees were removed by girdling and pesticides were not applied.

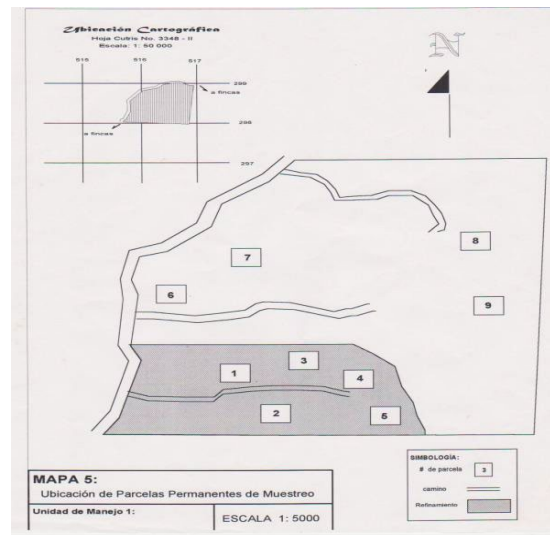


Figure 4. Map of the Nursing Home Management Unit and location of the PPM, Boca Tapada, Pital, San Carlos, Costa Rica

Annex 8: Recommendations of the Ad-hoc EP and Modifications

No.	Recommended	Modified	Page
1	Improve the Section 1.3 (Target area) by adequately describing the social, cultural, economic and environmental background of the target while referring to the relevant elements provided in the ITTO Environmental and Social Guidelines (PS-23), as well as in the ITTO Gender guidelines, in relation to the aim to clearly explain how women would be participating in grant activities;	Improved, the population and the local income, the things about Maleku indigenous people	4, 5
2	Provide information on the Maleku Indigenous Peoples/Reserve as stakeholder or participants, in the Sub-section 2.1.2 (Stakeholder analysis), as they are located in the target project areas so they could be part of solution to the identified key problem that the project implementation could contribute to address	Provided, the information of the Maleku indigenous were indicated not only Sub-section 2.1.2 but in several other parts such as 1.3.2	7
3	Improve the problem analysis with elements describing how the new value change around timber from this project might contribute to exacerbating land colonization and displacement in remaining territories of Maleku indigenous people;	Improved, in particular, the analysis of problems related to the natives of Maleku has been improved	8
4	Refine the quantitative elements of the result indicators of the specific objective with figures which are consistent and in correlation with the outputs and associated activities	Amended(deleted), there were some confusing elements like '5 new demonstration units' in activity 1.2, they were deleted	12, 14
5	Improve the Section 3.5 (Assumptions, risks and sustainability) by considering the comments indicated in the abovementioned overall assessment	Improved. The role of Maleku indigenous people is added	27
6	Include an Annex that shows the overall assessment and specific recommendations of the Ad-hoc Expert Panel and respective modifications in tabular form. Modifications should also be highlighted (bold and underline) in the text.	Included.	56