INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT PROPOSAL

TITLE:	TROPICAL FOREST GOVERNANCE IN THE REGION OF DARIEN, PANAMA
SERIAL NUMBER:	PD 602/11 Rev.3 (F)
COMMITTEE:	REFORESTATION AND FOREST MANAGEMENT
SUBMITTED BY:	GOVERNMENT OF PANAMA
ORIGINAL LANGUAGE:	SPANISH

SUMMARY

This project proposal is aimed at following up one of the outputs of ITTO-financed project PD 405/06 Rev.3 (F): "*Extending the area under sustainable forest management in the forest lands of the Emberá-Wounaan Comarca, Darien, Panama"*, which characterized and described institutional, administrative and socioeconomic factors promoting illegal logging in the region of Darien and, as a result, produced a framework document on guidelines and strategies requiring immediate institutional action to counteract incremental forest **degradation**, which leads to illegal logging related practices and other unsustainable activities.

Thus, the main aim of this project proposal is to support the implementation of the Strategy for Illegal Logging Prevention and Control, as the problem of illegal logging has become out of control. Its negative effects not only hinder any forest land management initiatives through unfair price competition and non-payment of stumpage fees but, most importantly, lead to a drastic reduction of the forest cover and continued loss of biodiversity in the country, including in the Darien National Park and other protected areas. Expected project outcomes at the macro level are:

- ✓ Establishment of an institutional and governance framework for illegal logging prevention and control based on a cross-sectoral agreement and the adjustment of harvesting permits to the size of forest management units (FMU), the allocation of technical and legal responsibilities to forest professionals (forest regency system) and the revision of harvesting standards by local governments (Comarcas and Municipalities);
- ✓ Incorporation of an efficient timber flow monitoring and control mechanism, including: a) origin and legality; b) rotational forest permit verification systems; c) checking of timber volumes both at processing centers and transport points; d) development of software for production and transport control; and e) establishment of a traceability and chain of custody system;
- ✓ Development of a proposal on financial mechanisms to promote responsible forest management and trade in the natural forests of Panama by: a) exploring various incentive mechanisms; and b) promoting responsible purchasing policies as an incentive for stakeholders involved in sustainable forest management practices;
- ✓ Development of a responsible purchasing campaign so as to raise awareness on the administrative and institutional provisions of the Strategy and promote the certificate of origin "*Darién Responsable"* (*Responsible Darien*) for timber products and by-products from forests under good management practices in the region of Darien.

EXECUTING AGENCY:	WWF – PANAMA OFFICE	
COOPERATING GOVERNMENTS:	---	
DURATION:	24 MONTHS	
APPROXIMATE STARTING DATE:	UPON APPROVAL	
BUDGET AND PROPOSED SOURCES OF FINANCE:	**Source**	**Contribution in US$**
	ITTO	**350,842.00**
	WWF – Panama	101,961.00
	ANAM	163,800.00
	TOTAL	**616,603.00**

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PROJECT BRIEF

The success of this project will depend to a great extent on its implementation strategy. The strengthening of ANAM's capacity, particularly for the forest administration program, which includes forest monitoring, supervision and control actions, as well as the encouragement of the participation of forest production chain stakeholders and other civil society groups. Improving forest governance involves consensus-building and coordination among forest sector stakeholders. This will require a restructuring of the relationships between the sector's regulatory authorities, forest owners, the industry and civil society groups, and the services of an independent body will be needed to facilitate the coordination process, without restricting – and indeed strengthening – ANAM's monitoring capacity as the national agency with legal powers to administer and regulate the forest sector.

ANAM is committed to the close cooperation links established with WWF since the implementation of the ITTO-financed project to extend sustainable forest management in the Emberá-Wounan Comarca [PD 405/06 Rev.3 (F)], which has prompted a change in the forest resource harvesting model used in the lands of the Embera Wounan Comarca, now extended to other areas such as the Kuna Wargandi Comarca. Given this experience, ANAM considered that WWF, from its Panama Office, should continue this collaborative process as the project's co-executing agency to administer the funds provided by the International Tropical Timber Organization and build on the experience gained through other similar initiatives, particularly in neighbouring countries such as Colombia. This will ensure the cooperation of an independent organization that will provide guidance and facilitate the necessary consensus-building spaces so that the key stakeholders of the Panamanian forest sector may reach agreements to contribute to the achievement of project objectives. Furthermore, WWF has experience in the design of sustainable forest management instruments that can help strengthen ANAM for improved forest sector administration and control.

ACRONYMS

ANAM	Autoridad Nacional del Ambiente (*National Environmental Authority)*
ANARAP	Asociación Nacional de Reforestadores de Panamá (*National Reforestation Association of Panama*)
APAMEX	Asociación Nacional de Agro-exportadores (*National Association of Agro-Exporters*)
CFP	Cámara Forestal de Panamá (*Forestry Chamber of Panama)*
CONAGEFOR	Comisión Nacional de Gestión Forestal (*National Forest Management Commission)*
DEMAFOR	Departamento de Manejo Forestal (*Forest Management Department)*
DFID	Department for International Development
EC	European Commission
FAO	Food and Agriculture Organization of the United Nations
FMU	Forest Management Unit
ITTO	International Tropical Timber Organization
MEF	Ministerio de Economía y Finanzas (*Ministry of Economics and Finance)*
MICI	Ministerio de Industria y Comercio (*Ministry of Industry and Trade*)
NGO	Non-government organization
PPP	Plan Puebla Panamá (*Puebla-Panama Plan)*
PSC	Project Steering Committee
RFMT	Responsible Forest Management and Trade
SEMAFOR	Servicio Forestal de la ANAM (*Forest Service of ANAM)*
SENACYT	Secretaria Nacional de Ciencia, Tecnología e Innovación (*National Secretariat for Science, Technology and Innovation)*
SFM	Sustainable Forest Management
USAID	US Agency for International Development
WWF	World Wildlife Fund

1. PROJECT CONTEXT

1.1 Origin

The project proposal hereby submitted to the International Tropical Timber Organization (ITTO) stems from the need to focus institutional efforts on reducing ongoing illegal logging practices and selective harvesting of high-value timber species in the forests of Darien, which are currently leading to a sharp reduction in the national forest cover. A preliminary analysis of the situation suggests that this kind of problems are mainly due to poor law enforcement (rules and regulations); and inefficient control mechanisms at the main government levels (national, province, comarca and municipality). As a result, the few remaining forests in the area have been designated as indigenous territories or *comarcas* and protected areas, making up the largest forest estate in the country, which is commonly known as the "tapón de Darién" (*the Darien Bottleneck*).

This project proposal has also been derived from the implementation of the ITTO-financed project PD 405/06 Rev.3 (F): "*Extending the area under sustainable forest management in the forest lands of the Emberá-Wounaan Comarca, Darien, Panama"*, which conducted an analysis and produced a proposal for addressing the problem of illegal logging under the title: "Strategy for illegal logging prevention and control in the Province of Darien, Panama". This proposal, the formulation of which was finalized in March 2010, stresses the urgent need to develop actions aimed at strengthening forest governance in the region. This need was assessed during a sectoral survey carried out with various stakeholders, including forest consultants, ANAM officers, DEMAFOR, timber sale outlets, forest industry, timber traders, transport operators, forest workers, community timber producers, timber trade intermediaries, leaders of community forest enterprises, WWF staff, and the Municipal Authorities of Cemaco and the Embera-Wounaan Comarca.

Furthermore, the proposal is based on the actual raw material supplies required by the local forest industry to operate, which amount to an annual average of 130,000 m^3 of timber from natural forests (Arguelles 2010).

In addition, it should be pointed out that given the population and infrastructure growth in major urban centers of the country, this figure is likely to increase. However, official records show very controversial data regarding the supply of raw materials, which has been decreasing since 2002 (ANAM Records 2002). According to ANAM's statistics for 1982-2002, roundwood (raw material) production peaked in 1990 at an estimated volume of 165,000 m^3, while by 2002 only 20,000 m^3 was reported in the official records, with a similar trend recorded up until 2006. This dismal situation of the forest sector of Panama can be explained by one of the following causes:

a) Official records do not report total conventional production volumes due to a lack of control and traceability tools and, in particular, a lack of resources to implement an adequate monitoring and control system; or

b) The raw material supply to the forest industry is increasingly scarce and remaining natural forests are limited to increasingly remote areas, thus leading to a substantial reduction in raw material supply and gradual closure of most local industries whose processing is only focused on a few tropical timber species.

However, for the purposes of this project proposal, only the first of these causes is addressed on the basis of comparative time-series analyses by Del Gatto, F. (2004) and Arguelles, A. (2010), who assessed these trends during two different periods and concluded that illegal logging levels in the country range from 30% to 51% based on conservative estimates. Their analysis showed that there is no effective reporting and control on timber volumes in the country and therefore the authors concluded that there was substantial illegal timber trade and a sharp increase in unsustainable harvesting practices.

1.2 Relevance

1.2.1 Conformity with ITTO's objectives and priorities

In accordance with the International Tropical Timber Agreement (2006), ITTO actions (2008)[1] are aimed at the achievement of two major objectives:

- to promote the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests, and

- to promote the sustainable management of tropical timber producing forests.

The proposed actions to be implemented within the forest governance framework in the tropical forests of the Darien Region are consistent with these objectives as they will promote the management, harvesting and legal trade of forest products. To this end, the project will work to improve the capacity of public institutions responsible for regulating the harvesting of forest resources and establishing the conditions to streamline the granting of harvesting permits, in addition to facilitating access to information on the legal origin of products entering the market.

1.2.2 Relevance to Panamanian forest sector policies

This project proposal is directly related to ITTO guidelines and ANAM's administrative provisions, particularly regarding the targets defined in the National Forest Strategy. In addition, the proposal is administratively and institutionally consistent with the following legal provisions:

❖ **National Forest Policy and Legislation**

Article 1 of Act No. 41 of 1 July 1998 states that: "Environmental management is a duty of the State. To this end, basic principles and standards are established for the protection, conservation and restoration of the environment, promoting the sustainable use of natural resources". The National Environment Authority - ANAM was established under this mandate as the agency responsible for the management of natural resources in the country.

Since this project proposal is aimed at controlling the loss of forest resources that is currently taking place as a result of the lack of governance prevailing in the sector and especially in the region of Darien, it is highly relevant to the country's legal framework, including the national forest policy. The proposal is also consistent with other forest development initiatives promoted by ANAM, which, with the support of ITTO, WWF, USAID-FCD and the European Commission, are making progress towards forest management. In this context, ANAM's target is to bring a total of 350,000 ha under sustainable management to comply with the provisions of the *National Environmental Strategy*, which was drafted as a result of the commitments arising from the General Environmental Law No. 41, with a view to formulating clear, consistent policies for the achievement of environmental goals. The National Environmental Strategy has set the target of meeting the local forest industry's demand for raw materials by the year 2020.

Furthermore, Article 49 of the Panamanian Forestry Law supports initiatives aimed at addressing irregularities associated with illegal timber transport by establishing *"(....) forest checkpoints, which will receive the support of the Police Force and will seize all products being transported without a corresponding waybill, pending investigation and eventual decision by ANAM authorities (....)"*.

In accordance with the United Nations Framework Convention on Climate Change (UNFCCC), to which Panama is a signatory party, several actions have been launched for the mitigation of climate change, including promoting adjustments to production models in order to arrest deforestation and forest degradation. One of these actions is the Integrated Management Strategy for the Chucunaque River Basin, aimed at reducing the vulnerability of the area and promoting climate change adaptation and mitigation. This Action is being developed under the UN-REDD Programme and has identified as a positive measure the community forest management initiative promoted by ANAM in association with the General Congress of the Comarca, with the technical assistance of WWF and financial support from ITTO. These community forest management experiences help strengthen forest governance as a way of creating favourable conditions for investments in REDD+ projects to support the development of local communities.

[1] ITTO Action Plan 2008-2011. ITTO Policy Development Series No. 18.

The proposal to strengthen forest governance in the tropical forests of the Darien Region, Panama, is fully consistent with the objectives of the country's strategy in this field.

1.3 Target area

1.3.1 Geographic location

According to Gomez N.F. *et al* (2004), the Darien Region is located in the outermost eastern sector of the Republic of Panama, covering a total area of 16,263.6 km^2, which accounts for 22.2% of the country's national territory. This area includes the Darien Region and the Embera Wounaan and Kuna Wargandi indigenous comarcas, which together cover 30% of the Darien Region. In this context, it is important to point out that although the indigenous comarcas are autonomous territories, they are under the administrative jurisdiction of the Darien Region, which is bound by the Province of Panama and the Kuna Yala Comarca to the north, the Pacific Ocean and Colombia to the south, Colombia to the east and the Pacific Ocean and the Province of Panama to the west.

The project's direct target areas are the indigenous comarcas of the Darien region where 100% of sustainable forest management plans in the country are found and are being implemented with the support of ANAM, after being developed with the cooperation of WWF, ITTO, EC and USAID. The participation of WWF has been a key factor in the progress that has been achieved, given the experience of this organization in the development of similar processes and its technical capacity. The indirect target areas include the province of Darien, the Bayano region and the cities of Chepo and Panama, where the country's forest industries are located. As much as 42.8% of Panama's native forests are found in the Darien region and more than 80% of these are located in indigenous territories.

According to studies carried out by Arguelles (2010), there were discrepancies between the information provided by industry on annual timber consumption figures and the figures provided by ANAM on the volumes of timber being mobilized. Studies carried out by PROARCA and IUCN, which cite Arguelles' study on illegal logging in the Darien region of Panama, are being used as the basis to calculate the timber volume used annually for industrial purposes, which is estimated to range from a minimum of 95,000 m^3 to a maximum of 130,000 m^3.

In ANAM's 2004-2008 statistical report, the annual average volume of harvested timber was 62,986 m^3 (2006, 2007 and 2008 data). However, Arguelles (2010) established that the volume of timber used for industrial purposes in Panama ranged from a minimum of 95,000 m^3 to a maximum of 130,000 m^3, which clearly demonstrates the increasing volume of illegal timber being harvested, as this range is much higher than the figures reported by ANAM. This flow of illegal timber represents an enormous burden on forest management initiatives by the local communities, as they cannot compete with the price paid by the industry for illegal timber in the market.

Source: WWF, 2011.

Figure 1. Direct area of influence of the Project

1.3.2 Social, cultural, economic and environmental aspects

- **Natural and environmental factors**

Because of its biological diversity, Panama is one of the most important tropical areas of the world. Out of the more than 6,000 flora species recorded in Panama, 1,977 have been reported in the target region of this project. Furthermore, Panama constitutes both a land bridge between North and South America and a barrier between the Pacific and Atlantic oceans. In addition, the country is like an atmospheric funnel for the transfer of moisture from one ocean to the other. The land-bridge nature of the Isthmus of Panama makes it rich in plant and animal species from both North and South America, as well as endemic species[2].

However, the expansion of deforestation and forest degradation is seriously threatening this wealth of biodiversity and jeopardizing the possibility of its sustainable utilization for the benefit of the local communities. According to the GEO, as quoted by Alfaro e Hidalgo (2005), there are about 1,222 endemic and 1,302 threatened plant species in Panama.

The National Association for the Conservation of Nature (*Asociación Nacional para la Conservación de la Naturaleza* – ANCON[3]) has reported that the Darien Region (which includes both the province of the same name and the Embera-Wounaan Comarca) has the largest forest cover in Panama because, while it only accounts for 21.7% of the total national territory, it contains 37.2% of all national forests, although this percentage is decreasing as a result of deforestation. ANAM's forest cover report states that from 1992 to 2000, Darien's rate of deforestation was 1.6 times faster than the national average, with a deforestation rate of 1.74% compared to 1.12% at the national level. From 1992 to 2008, Panama lost approximately 451,000 hectares of forest, losing 121,279 of these in the period 2000 - 2008, which in addition to causing the degradation of the forest cover and other related socio-economic impacts, has led to the loss of biodiversity in general.

Although in most cases deforestation is caused by factors external to the forest sector, forest degradation on Panama, and particularly in the Darien forests, is a result of the unsustainable exploitation of forest resources, which has concentrated on the irresponsible trade of a limited number of species, taking these species to the brink of extinction in the region. This is the case with species such a mahogany, spiny cedar and, currently, balsa wood and cocobolo wood.

- **Social, economic and cultural aspects**

Traditionally, the economic activities of Darien's communities have been based on low impact production systems, including subsistence agriculture, in particular banana, yam, rice, avocado and bean crops, among others. Trade activities under these traditional production systems rely mainly on the harvesting of natural resources such as fishing and the incipient exploitation of high commercial value timber species such as mahogany, spiny cedar and cocobolo.

In the indigenous communities, who live in conditions of extreme poverty, the family economies are based on subsistence farming of their lands for self-consumption, supplemented with backyard animal farming and wildlife hunting. Education, among other needs, requires a source of cash money to provide for their children who are studying outside of the community, and the same applies to health care expenses and other products needed from the cities. The only sources of income available to these communities to meet these needs are the sale of bananas, avocados in the near future and timber. Banana harvests are sometimes lost due to flooding and this increases the pressure on timber resources. This means that with or without logging permits from ANAM, the indigenous communities are forced by necessity to harvest timber to cover their financial needs.

At present, and as a result of the legal recognition of indigenous territories, the largest forest reserves are located in the main Comarcas, protected areas and communal lands. The main Comarcas found in the Province of Darien are the Embera-Wounaan Comarca, which covers a total area of approximately 430,000 ha and is divided into two main districts (Cemaco and Sambu) and the Wargandi Comarca, which covers an area of approximately 72,000 ha and is home to three communities – Wala, Nurra and Morti.

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[2] Supplement Nº5 of a series prepared by the Smithsonian Tropical Research Institute and published in the La Prensa newspaper. August 26, 1994.

[3] From http://www.ancon.org/index.php?option=com_content&view=article&id=219%3Adeforestacion-darien-contexto-nacional&catid=79%3Adeforestacion-&Itemid=208&lang=en. Access date: 4 January 2011.

There are groups of settlers who migrated to the region from the provinces of Chiriqui, Los Santos and Veraguas in search of land. The first groups migrated to Darien following the colonization policy promoted by the Government of Panama in the 1960s and the second wave of migrants came in 1978, after the opening of the Bayano-Yaviza highway. In 1970 (Dikison 1984, according to Perafan and Nessim 2001) the Latino population was only 10% of the total population of the province and today it is over 47% of the population of Darien. Although the Latino settlers prefer the river valley areas, they are progressively penetrating rainforest areas, where they continue to practice their farming life styles, including corn production, intensive cattle raising and backyard animal breeding. These groups are the main agents of land-use change in the Darien Region. To them, the forest is an obstacle that must be cleared to establish their traditional production systems based on large areas of grazing lands. They further consider that the logging and sale of timber is a means of financing the development of their cattle ranching activities and have therefore become intermediaries in the unsustainable forest exploitation chain.

There are virtually no forest industry enterprises in Darien, but the majority of forest industries located in the Provinces of Chepo and Panama get their timber supply from the Darien Region. According to the National Environmental Strategy report (although even ANAM (2002) recognizes that the figures are not up to date) there are 44 old and inefficient sawmills, 3 plywood factories and 354 further processing plants in those provinces, with an estimated installed capacity of 200,000 m^3 per year and a used working capacity of 62.5%. It should be pointed out that this means that the benefits of potential employment generation provided by the forest industry is therefore transferred from Darien to other provinces (Arguelles, 2010). As a rule, these industries get their supplies from a network of intermediaries and for their forestry operations they rent machinery and trucks from around the areas where they are established and located.

There are a number of transport operators in Darien who are also timber buyers. They also operate 40 - 50 mules that are exclusively used for timber transport, including mules from the provinces of Chepo and Panama that work in the industry supply chain in these provinces.

There are two coexisting forest harvesting models currently used in Darien (Arguelles, 2010): a) Traditional logging operations, which combine chainsaw logging and animal-based transport, and b) Machinery based logging operations used to harvest timber in logs. As a rule, machinery based logging is used in the short summer season or dry season, which lasts from three to four months, while in the rest of the year, which corresponds to the winter season, traditional logging methods are used. However, the softwood logs accumulated in summer can be transported by river in winter, particularly from Cativo and Espave.

The forest value chain is made up of a complex network of commercial and institutional relations that make it possible for both forest operational models to coexist. A characterization of the main forest sector stakeholders is given below in an attempt to explain the flow of the complex timber process that takes place in Darien:

- **Farmers:** Landowners or indigenous communities who have scattered trees on their lands or who simply sell the right to harvest trees growing on their properties so that the rights holder can then obtain the required subsistence permits. In general terms, local timber merchants help them to obtain these forest logging permits. If the farms are located within indigenous territories, they require the approval of the traditional authorities, which they can easily obtain in exchange for the payment of some type of fee for the certification of the required documents.

- **Network of micro-loggers**: As a rule, these are people from the communities concerned, who are involved in the harvesting and chain-sawing of timber. They are usually family teams who saw the timber, river transport it and sell it at the river ports of the Chucunaque and Tuira rivers. The micro-loggers are usually financed by a local timber merchant or by a timber transporter. The capital of micro-loggers is made up of their manpower, a chainsaw and horses for the transport of logs.

- **Local timber merchants:** Merchants who buy timber at the river ports of the Chucunaque and Tuira rivers. They usually have teams of micro-loggers who regularly sell them their timber at the river ports. Local timber merchants hire mules and/or trucks to transport the timber to Chepo or Panama. As a rule, local timber merchants are linked to a timber financing agent who provides them with the resources required to buy the timber. It is quite common for local timber merchants to be responsible for securing the timber permits that are required to obtain the necessary timber transport waybills. To this end, they have arrangements with officials who help them with the required procedures to obtain subsistence permits, and these permits are then used to “legalize” the timber regardless of its source of origin.

- **Timber transport agents:** Transport agents who rent their trucks or mules for the transport of timber. They provide services to both local timber merchants and industrial companies in summer, when timber transport operations are land based. Timber transport operators also buy timber at the river ports or have teams of micro-loggers working in the forests of the comarcas or in the national forests.

- **Timber financing agents:** Traders or industrialists who lend capital to local timber merchants and timber transport agents. They accept loan payments in kind with timber, which they then sell to industrial companies or use in their own timber industry.

- **Timber industrialists:** Although they are located outside of Darien, they are connected to the network of local intermediary timber merchants, timber transport agents and timber financing agents, who they rely on to supply timber to their timber industries. As a rule, timber industrialists make advance payments in exchange for timber to several local timber merchants and timber financing agents to ensure continued timber supply throughout the year. However, it is quite common for timber industrialists to have their own forest machinery that they either use themselves or that they supply to timber merchants in exchange of a secured supply of timber.

- **Timber outlets:** Small timber selling outlets in Panama City, Chepo and surrounding cities in central Panama, that generally buy timber from timber transport agents or get their timber supply from a local timber merchant. However, in some cases they have re-sawing equipment and are directly connected with teams of micro-loggers.

- **Carpentry and cabinet-making workshops:** As a rule, they obtain their timber from timber outlets. However, they also buy timber from timber transport agents and sometimes directly from small timber merchants. In those cases where their workshops are located in Darien, they normally buy their timber directly from micro-loggers using the same mechanisms as the local timber merchants.

1.4 Expected outcomes at project completion

First year:

1. All users directly or indirectly involved in the forest sector (consumers of primary products, suppliers, community groups, public and private institutions) will be fully aware of the illegal timber trade prevention strategy and the impacts of responsible timber purchasing (through an aggressive information campaign using all possible dissemination tools aimed at reaching relevant target groups).

2. The project will have achieved increased levels of good governance **through institutional strengthening and** by breaching the main legal and institutional gaps that encourage illegal logging, through the adjustment of rules and regulations at all levels of government (national, municipal and comarca) in accordance with the size of the FMU. This will include **a proposal for forest policy adjustment and** the integration of a governance strategy as well as the development of 3 administrative resolutions duly adopted by each of the Comarcas (Wargandi and Embera-Wounaan) and the municipalities involved.

3. The monitoring and control system for the transport of timber will have been strengthened along the Pan-American Highway and in river ports through the establishment of mobile checkpoints, the development of a monitoring mechanism based on the implementation of a traceability system, a chain of custody system and the design and operation of a software package for the control of timber stocks in transit and at processing centers.

4. The project will have achieved the gradual incorporation of the area under responsible forest management, to a level of at least 150,000 ha, as a result of the full participation of support organizations such as WWF, ITTO, USAID-FCD and the European Commission as well as other cooperation agencies.

5. Forest harvesting operations in the Comarca will have been duly regulated to avoid illegal timber logging and transport operations (through an administrative resolution adopted by the General Congress of the Embera-Wounaan Comarca **and the use of community forest monitoring mechanisms**).

Second year:

6. Forest management activities in the field will have been delegated to the professionals registered and accredited as forest regents, who will duly submit technical reports on the implementation of forest operations so as to ensure strict compliance with the relevant legislation (a forest regency system and its relevant regulations will have been developed, adopted and implemented with the active participation of CONAGEFOR and the Society of Forest Engineers of Panama).

7. At least five (5) responsible purchasing policies will have been developed and signed **with local and/or national industries/consumers** and a feasible proposal will have been developed for the re-investment of municipal taxes and fees in community forest management initiatives, with the support of relevant government agencies.

8. An effective mass outreach and awareness campaign will have been consolidated on the social, economic and environmental importance of sustainable forest management **and the conclusion of a Darien agreement will have been promoted for responsible purchasing and forest governance, specifying the roles, responsibilities, obligations and rights of all forest chain stakeholders so as to improve forest governance in the region and in the country as a whole.**. Furthermore, the trademark *Darien Siempre Verde* ("Darien Evergreen") will have been established to support producers and industrialists committed to responsible forest management.

9. CONAGEFOR will have negotiated **and facilitated** ANAM's approval and institutional implementation of all instruments and administrative provisions that will arise from the implementation of this project.

10. Illegal logging rates will have been reduced by at least 50% **in the Darien Region** and, as a result, Panama will become part of the group of countries with an institutional and political framework (improved rules and regulations) that supports responsible timber trade.

2. PROJECT RATIONALE AND OBJECTIVES

2.1 Rationale

Within the framework of the Institutional Strategy for Illegal Logging Prevention and Control formulated for the region of Darien by WWF-Panama with the support of ITTO **in March 2010**, it has been stated that illegal logging is one of the factors hindering sustainable forest development in the region. One of the strategic lines of action outlined in that document stresses the importance and urgency of developing and implementing an automated traceability and monitoring system in order to verify the origin of timber and timber products.

According to the data presented by **Del Gatto (2004)** in the above strategy document, 75% of the timber marketed at the national level comes from the forests of Darien and the average volume of illegal timber from that region is estimated at 116,000 m^3/year. These figures point to the urgent need to address the problem through the implementation of a strict control system with the involvement of multiple stakeholders.

Furthermore, the above strategy is based on the need to promote better governance in the country for the implementation of environmental and climate change policies through the development of sustainable initiatives aimed at strengthening forest governance and reducing greenhouse gas emissions. This will in turn translate into increased economic development with a positive impact on all stakeholders concerned, in particular, municipalities, indigenous territories, local communities and the community forest enterprises set up as a result of the ITTO-sponsored project on "Extending the Area Under Sustainable Forest Management in the Forest Lands of The Embrea-Wounaan Comarca, Darien".

2.1.1 Institutional set-up and organizational issues

The strengthening of forest governance involves consensus-building and coordination among forest sector stakeholders. This will require a restructuring of the relationships between the sector's regulatory authorities, forest owners and the industry, and the services of an independent body will be needed to facilitate the coordination process. **With the active participation of the stakeholders described below, the project will promote not only the implementation of the strategy for legal timber trade adopted by the Government of Panama, but also the signing of a legal timber agreement specifying the role, contribution and obligations of each stakeholder so as to achieve good forest governance and**

mechanisms to support the competent authority – ANAM – with a view to ensuring the sustainability of proposed actions.

WWF: Given its experience, WWF-Panama Office has been selected as the agency in charge of administering project resources so as to expedite the flow of funds. WWF has already signed cooperation agreements with ANAM and the traditional authorities of the Emberá-Wounan Comarca. As an experienced independent organization, WWF will be able to provide technical assistance and facilitate the necessary consensus-building spaces so that the key stakeholders of the Panamanian forest sector may reach agreements to contribute to the achievement of project objectives. Furthermore, WWF has the technical capacity required to support the design of sustainable forest management instruments and promote responsible consumption.

ANAM: Agency responsible for promoting policies and developing policy instruments to encourage sustainable management and responsible forest trade in the country; it is in charge of issuing harvesting permits and processing information to support management actions.

CONAGEFOR: Consultative agency comprising government representatives (Ministry of Economics and Finance, Ministry of Industry and Trade, and ANAM), private sector representatives (Forestry Chamber, National Exporters' Association and trade associations) and civil society representatives (indigenous communities and NGOs). A fundamental role of CONAGEFOR in this project will be to act as communicator of private sector needs to promote forest development as well as the participation of this sector's stakeholders in the implementation of instruments to support forest governance and promote responsible consumption.

COMARCAS: Represented by traditional authorities, the Comarcas are forest owners and producers that will supply products to the local industry under a sustainable forest management and responsible forest trade scheme.

INDUSTRY: Represented by the Forestry Chamber **and as a member of CONAGEFOR, the industry will be a key source of information for forest policy adjustment and management process streamlining. The continued increase of the demand for forest products and the decrease of resources constitute a strong incentive for the forest industry to actively participate in the implementation of this project. The industry will be a key stakeholder in the planning and establishment of incentives for responsible forest resource production and management given its knowledge of market trends (i.e. current trends in responsible markets for certified products) and resource needs. By working in close cooperation with the industry, it will be possible to** stimulate responsible forest harvesting and forest trade **in the country**.

CIFP: The Society of Forest Engineers of Panama (*Colegio de Ingenieros Forestales de Panama* – CIFP) is an umbrella association grouping forest professionals. This association will support the implementation of the forest regency system, setting up a regents' committee, providing training, issuing certification and evaluating the performance of forest regents.

CONSUMERS: Consumers are increasingly demanding forest products from responsibly managed forests and industries, which will promote investments in forest management. **The communication strategy as an instrument for stakeholder awareness-raising will be aimed at the signing of a cross-sectoral agreement for legal and responsible timber trade in Darien. Target groups will not only include end-consumers but also local industrialists and intermediaries, local timber producers/merchants, transport operators, timber financing agents, timber outlets and carpentry and cabinet-making workshops, as each of these stakeholders has a duty and a role to play within the forest governance structure to ensure, in particular, the sustainability of the strategy in the long term. Therefore, it is essential to ensure the involvement of the industry at the local, regional and national levels, not only as a target audience of the campaign but also as active stakeholders and participants in any forest governance agreement to be reached.**

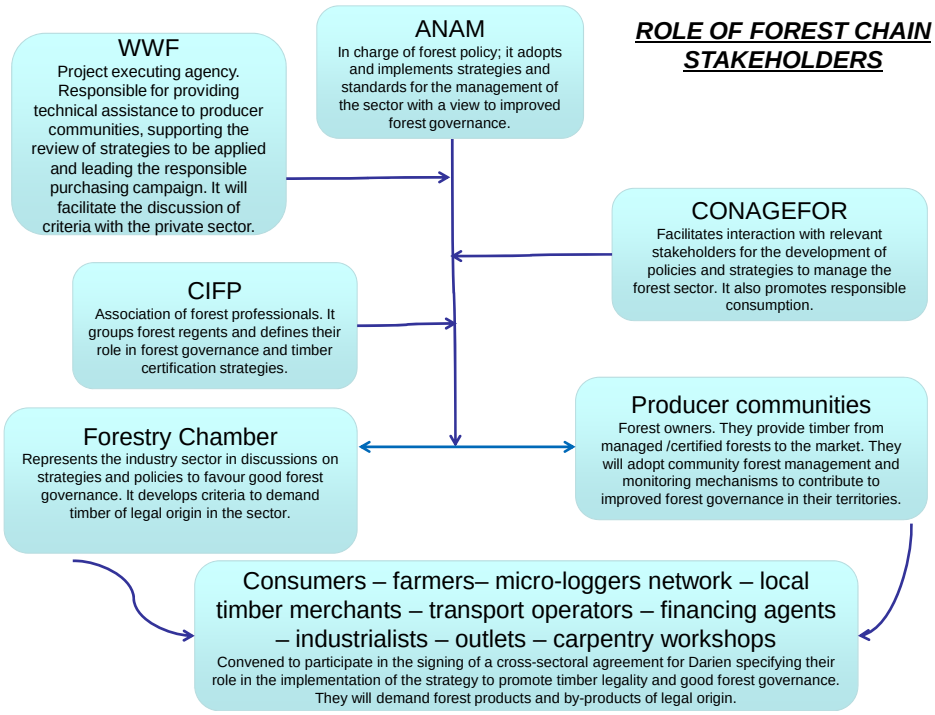

Figure 2. Stakeholder interaction model to strengthen forest governance

2.1.2 Stakeholder analysis

The following stakeholders will be involved in or will contribute to the implementation of the project. Details about their nature and role in the project are shown in the table below:

Table 1. Relevant (primary and secondary) stakeholders

Stakeholder Group	Characteristics	Problems, needs, interests	Potential	Involvement in project
ANAM	Institutional mandate for the conservation and sustainable management of national natural resources .	Low contribution of the forest sector to the country's GDP A marked reduction of forest cover Increased illegal logging and low revenue levels from stumpage fees and other taxes	A national forest strategy Responsible for the implementation of forest rules and regulations	Primary institutional stakeholder and beneficiary in accordance with its institutional and legal mandate. The implementation of this project will strengthen its monitoring and control capacity.
Municipalities	Institutional mandate to promote community development and the conservation of natural resources within the municipality	Limited participation in natural resource conservation initiatives Low revenue levels from forest harvesting agreements Limited monitoring and control capacity	Established administrative structure and legal power to charge municipal taxes	Primary stakeholder. The implementation of this project will strengthen their revenue collecting capacity as forest production monitoring will improve.

Stakeholder Group	Characteristics	Problems, needs, interests	Potential	Involvement in project
Comarcas	Traditional governments of indigenous territories with the country's largest forest cover	Low contribution of forest activities to the economy of the rural communities High level of illegal timber trafficking in their territories	A traditional government of chiefs and sahilas with their own legislation Two comarcas (Embera-Wounaan and Wargandi) making progress with the sustainable management of nearly 100,000 ha of their forests	Primary stakeholder in responsible forest production activities. The implementation of this project will strengthen their revenue collecting capacity as forest production monitoring will improve, and will also provide additional income as responsible consumption also increases.
Security forces	Responsible for law and order and the legal transport of natural products	They do not have a direct mandate to verify the origin and legality of forest products being transported	They have the infrastructure and the required elements and mandate for land and sea control activities	Primary stakeholders in monitoring the transport of products
Timber industries	They have sawmilling infrastructure and some harvesting equipment	A lack of timber obtained from sustainable and secure sources Obsolete equipment and lack of access to financing	Experience in timber harvesting and primary and secondary industrialization processes. **Can strengthen and encourage sustainable forest management through responsible purchasing policies. Knowledge of market trends.**	Key primary project stakeholders. **Can help create demand for responsible forest production. At present, many are directly involved in illegal trade and promote illegal logging through their demand for products.**
Local transport operators and intermediaries	They have primary and secondary (mules) transport equipment and infrastructure	Marked shortage of timber to be transported They operate within a fluctuating framework of primary product availability and illegality of products	They have the means and experience for the transport of timber	Key secondary project stakeholders, because of their participation in timber transport activities.
Local NGOs	Institutional influence in conservation and development initiatives	Relatively limited experience in forest management activities	Physical presence and institutional influence in the Darien Region	Key secondary stakeholders in promoting forest management and responsible forest trade.
WWF-Panama	Pioneer organization in promoting forest management and responsible forest trade as conservation tools	Interested in achieving the goals of the National Forest Strategy	Experience in community forest management processes, the strengthening of forest governance and public policies.	Primary stakeholder. An independent, internationally recognized organization that provides technical assistance and facilitates dialogue spaces. Furthermore, it will manage project resources.

Stakeholder Group	Characteristics	Problems, needs, interests	Potential	Involvement in project
Local and national media	They have an active network and communication means at the national and regional levels	They continuously voice their concerns about the degradation of natural resources, but they lack additional resources	Timely and effective communication of institutional decisions for the prevention and control of illegal logging	Key secondary stakeholders in promoting forest management and responsible forest trade.
Society of forest engineers	Body responsible for grouping forest sector professionals	A lack of participation in the technical and legal aspects of forest management	Joint responsibility in forest harvesting and management activities	Primary stakeholder because of its role in the adoption of the forest regency system.
CONAGEFOR	Implementation and definition of Panama's forest strategy targets	Representative of Panama's forest sector, interested in achieving the targets of the National Forest Strategy and in actively participating in the forest sector	Political and institutional involvement at the public and private sector levels	Primary stakeholder with a high level of institutional and private sector influence given its role in increasing forest sector visibility.

2.1.3 Problem analysis

The problem to be addressed through the implementation of this project is the reduction and/or control of illegal logging in the Darien region, which according to Dames & Moore 1998, Cordova 2002, Del Gatto 2004 and Arguelles 2010, contributes around 75-80% of the total national timber supply required by the industry. Furthermore, the region now accounts for approximately 21% of the national target established by ANAM of reaching a total of 350,000 ha of forests under sustainable forest management and has the potential to contribute close to 50% of this target area. However, the project will indirectly contribute to a large extent to the reduction of forest degradation by monitoring illegal logging and promoting forest management and responsible forest trade, thus also contributing to the reduction of deforestation.

In order to achieve this objective, however, it will be necessary to ensure a clear understanding of the concept of "illegal logging". Just like any other ecological crime, illegal logging is a social behavioral problem with economic, social and, of course, environmental consequences, that threatens the State's priority and essential efforts aimed at ensuring the conservation, protection and management of natural forests and at fostering the utilization, industrialization and promotion of the country's forest resources in conformity with the principle of adequate and sustainable use of renewable natural resources (Campos Arce et al, 2001).

In this context, it is important to point out that "illegal logging" is not the same thing as deforestation nor can it be considered to be the same as unsustainable or technically unacceptable logging, as there may be some legal logging operations that may not be accepted as a sustainable management practice by some experts. "Illegal logging" is any logging operation that is banned by the current forest legislation i.e. logging or harvesting operations that do not comply with existing legal provisions of the forestry law, that do not comply with the necessary requirements or regulations, or that violate existing bans or prohibitions (Campos Arce et al., 2001).

In Panama, illegal logging is considered to be any action involving the felling of trees without the authorization of the relevant authority, which is currently ANAM according to the legislation in force. However, illegal logging as part of the deforestation problem should be distinguished from illegal logging activities geared to trade in forest products and by-products. Illegal forest operations take place when timber is harvested, transported, processed, purchased and/or sold in violation of the national legislation. Illegal logging is specifically limited to felling and harvesting (and sometimes primary processing) actions carried out in the forest in breach of the country's legal framework. Furthermore, illegal logging activities carried out for commercial purposes by local timber merchants, financing agents and/or industrialists should be distinguished from the illegal logging actions carried out by micro-loggers for subsistence purposes due to a lack of opportunities and facilities to develop a formal production activity. In the latter case, illegal logging is classified as *informal logging*. Informal logging can take place as a result of not knowing the law and/or because

of the legitimacy that is believed to be inherent in land tenure rights i.e. if a community member has land tenure, he/she believes that the resources available on the land are also covered by the same land rights and therefore he/she can legally utilize those resources without requesting authorization from the authorities other than those that granted his/her land tenure rights. In these cases, the concept of what constitutes a legitimate or illegitimate act should be defined.

Illegal logging is generally understood to be an action that is carried out in violation of existing legal standards in a given country: it is a violation of a strict logging ban or of the procedures established for logging activities. Informal logging and trade are usually distinguished from illegal logging and trade, but in fact "informal activities" are those conducted without "complying with prescribed rules" and, therefore, all informal logging or trade activities are illegal. The term "informal" has traditionally been used in reference to an activity that has been carried out outside the law but that also has social implications i.e. there is a significant number of offenders and they resort to these activities for subsistence purposes and due to a lack of opportunities and facilities to organize themselves to be incorporated into the formal production chain.

Timber sourced from "illegal logging" operations opens the door to illegal forest trade and therefore this project proposal seeks to combat both illegal forest logging and trade. The statistics reported for the region of Darien are clear evidence of the growing trend in the volume of illegal timber being mobilized in Panama. Arguelles (2010) estimates these volumes to range between a minimum of 95,000 m^3 and a maximum of 130,000 m^3. In addition, ANAM's statistical report for 2004-2008 indicates that the annual average volume of timber transported amounted to 62,986 m^3 (2006, 2007 and 2008 figures). This information clearly shows that the volume of timber consumed for industrial purposes in Panama is larger than the volume reported by ANAM. Figure 2 shows the main illegal timber transport routes in the Darien Region.

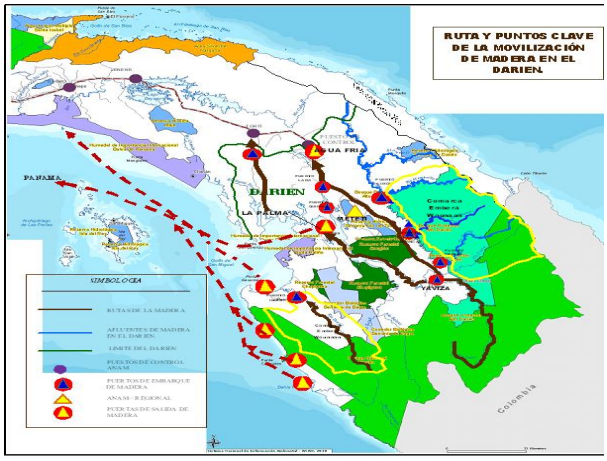

Figure 2 Main illegal timber transport routes

In addition, the statistical analysis has shown that out of the average timber volume transported in the past three years (ANAM's official records for 2009), the estimated minimum percentage of illegally logged timber is 33.7% while the maximum is 51.55% (see Table 2). This suggests that about half the timber that is being mobilized in the country could have been illegally harvested. The Darien Region has the highest illegal logging rates in the country, with an estimated volume of up to 67%.

Table 2 Transported timber volume as reported by ANAM and annual consumption as reported by the local industry

Year	Transported volume m3	Local industry consumption 95,000 m3/year (PROARCA and IUCN, 2005).		Local industry consumption 130,000 m3/year (Del Gatto , 2004).	
		Shortage in m3	Shortage %	Shortage in m3	Shortage %
2006	50,840	44,160	46.48 %	79,160	60.89%
2007	76,463	18,537	19.51%	53,537	41.18%
2008	61,656	33,344	35.10%	68,344	52.57%
Average	**62,986**	**32,014**	**33.70%**	**67,014**	**51.55%**

Source: Arguelles, 2010.

Based on the results reported by Arguelles, the causes of illegal logging in the Darien province are linked to a complex set of factors, including social factors (land tenure and forest ownership), economic factors (poverty, high cost of sustainable forest management) and political-institutional factors (lack of governance in different government structures, which translates into a series of gaps in the implementation of rules, regulations and in the administration of justice, and there is also a lack of technical capacity to control timber transport activities), which all combine to have an incremental effect on this problem.

A brief summary of the discussion and information provided by Arguelles (2010) is given below:

Institutional causes:

- **Administration of the forest estate**

Panama's forest legislation (Act No.1 of 3 February 1994)[4] stipulates that natural forests are part of the national heritage and on this basis organizes forest activities through forest concessions granted to third parties. In this context, the role of the forest authority is to monitor and ensure that concession holders comply with the terms of the concession contract and to secure the payment of fees to the government based on logs felled and transport waybills.

According to Article 27 of the Forestry Law, there are several types of permits issued for the harvesting of resources from the country's forest estate:

a. Through special forest harvesting permits granted by ANAM for personal or subsistence use by the applicant, after confirming the lack of financial resources.

b. Through direct or delegated administration by ANAM, under agreements signed with organizations and public and private enterprises in State-owned forest plantations.

c. Through forest harvesting concessions granted by ANAM to private individuals or companies.

Harvesting permits in indigenous community areas are subject to virtually the same conditions as forest concessions, with the only difference being that concession holders are asked to obtain the approval of the local congress. It should also be noted that subsistence permits are granted at the discretion of the forest

[4] Law No.1 of 3 February 1994: "Which establishes the forest legislation in the Republic of Panama and includes other relevant provisions". (G.O. 22,470 of 7 February 1994).

authority on a case-by-case basis. In most cases, these permits should be granted in light of the poverty situation prevailing in the region, although this factor is not considered in practice.

The reality is that most of the remaining natural forest areas are in the hands of indigenous communities as a result of a decision of the State of Panama. The forest industry has limited possibilities to invest in the management of these lands, unless it is through an agreement with the local communities. Under such forest tenure conditions, the forest industry stopped being a strategic partner associated with ANAM for forest management operations, because timber companies are not interested in investing in lands that are part of the national forest estate. As a result, today there are no forest concessions and nobody finances the forest management plans and environmental impact assessments required by ANAM to authorize sustainable forest harvesting operations.

In view of this, even ANAM, which is considered to be the sector's governing, regulatory and supervisory body, does not have a policy to finance forest management plans and environmental impact assessments, and therefore the lack of approvals for sustainable management plans results in the lack of a long-term supply of timber for the sector. The only exceptions are the forests that are under sustainable management in the Embera-Wounaan Comarca, which are receiving technical assistance from WWF with the financial support of ITTO, USAID, the European Commission and the Natura Foundation of Panama, but these forests are not sufficient to supply all of the local industry.

- **Weak institutional capacity**

Although Panama has a national environment strategy, the implementation of this strategy has not reached the required levels. The National Forest Policy was designed in early 2003 and the country has worked on the development of instruments such as the National Environmental Information System, the valuation of forest resources and their incorporation into the National Accounting System, the Forest Development Plan, and other instruments that should contribute to the implementation of sustainable forest management. The Forestry Law provides incentives for the establishment and maintenance of forest plantations; however, there is no system of incentives for the management of native forests.

The lack of financial resources to invest in the forest sector has contributed to a great extent to limiting the adoption and use of appropriate technologies in forest activities. Furthermore, very few changes have been introduced in the technology used and thus, industrial activities are considered to be of little importance to the national economy.

Illegal logging has its roots in the insufficient political significance that sustainable forest development has historically had in Panama. This attitude is probably based on the limited contribution of the forest sector to the Gross Domestic Product, a contribution that is less than 1% and that is reflected in the institutional plan designed for the forest sector.

There are a number of difficulties in carrying out field checks for the issuing of forest permits and for the follow up of forest harvesting operations, due to the limited number of appropriately trained personnel that ANAM's forestry department has available in the region. There is no forest authority presence in harvesting areas and therefore the preferred practice is to carry out timber scaling operations when the timber goes through the control points without having a precise idea about its source. In fact, this is the reason why forest permits can be used indiscriminately to cover up timber sourced from sites other than those authorized by the permits ("timber laundering") or in other words, timber originating from forests in the comarcas and probably even from protected areas.

According to the current forest legislation, the transport of national and/or imported forest products and by-products should be conducted on the basis of forest transport waybills issued by ANAM. The Authority should establish forest control posts, which are to operate with the support of the Police Force and should seize all products transported without a corresponding transport waybill. In this context, the law regulations also stipulate the following:

a. Any individual or company that is the holder of a forest permit, forest concession or any other forest authorization, should register a mark with ANAM, and should mark all timber pieces before their transport.
b. To obtain a transport waybill for forest products and by-products, the applicant should produce a corresponding permit, authorization or contract as well as proof of payment of relevant fees if required.

c. Transport operators should carry the corresponding transport waybills when transporting forest products and by-products and these waybills will only apply to specified products and by-products in terms of species, form, quality, quantity, origin and destination.
d. Transport waybills should specify the marking code of the holders of forest permits, contracts or authorizations. These waybills cannot be deferred and will only be valid for 72 hours in the case of land transport or 96 hours in the case of sea transport.
e. All industries should keep a record of the origin of forest products and by-products, with a detailed description of permits, contracts, waybills and other relevant documentation applicable to those products. Processed and/or packed volumes per species should match the data specified in those documents.

The same factors limiting ANAM's presence in forest harvesting sites constitute an obstacle in the processing of transport waybills. In brief, the above discussion clearly shows that the country's forest legislation has the foundations to support timber traceability to track the timber produced from its point of origin to its destination, and to facilitate the accounting of timber-related incomings and outgoings required from the forest industry.

- **Dual role of ANAM's control posts**

At least in the case of ANAM's control post in Agua Fría, which is considered to be the land gate for the timber leaving the Darien Region, inspectors have the following roles to play: field checks as required for the processing of subsistence permits; measuring of timber for its official scaling; charging fees per m^3 of timber as stipulated by ANAM; and filling out transport waybills they must issue after payment of the corresponding fees. In addition, they must respond to general enquiries and feed ANAM's forest databases as needed.

This means that the inspectors in this control post are both judge and jury as it were, as they are responsible not only for verifying if the timber is being transported in accordance with the provisions of the forestry law (transport waybills and timber marking) but also for other law enforcement functions that are under the responsibility of ANAM's regional administration, for example inspections for the issuing of forest permits.

This situation is a breeding ground for corruption, as ANAM's tax collection and administration functions are delegated to these inspectors, including the issuing of transport waybills without prior field scaling of timber to guarantee that it was extracted from the site specified in the corresponding forest permit.

- **Weak institutional capacity in the Indigenous Comarcas**

Although the government recognized the rights of the different ethnic groups to their autonomous territories under the concept of *Indigenous Comarcas*, it does not provide them with the financial support required to develop the institutional capacity required to manage their natural resources nor to promote rural development aimed at getting these indigenous communities out of the marginalized and poverty state in which they find themselves in.

As a result, although there is a natural resources directorate in the organizational structure of the Comarcas (as is the case in the Embera-Wounaan Comarca, for example), these institutions have no resources to make their administrative structures operational in their territories. The result is that the Comarcas have limitations in the control of their territories, they do not provide technical assistance for the communities to organize forest activities, and they do not provide support for the formulation of management plans and environmental impact assessments.

Although the Indigenous Comarca Territories are considered to be part of the national natural heritage, ANAM can grant forest concessions on these lands according to Article 44 of the Forestry Law: "Forest harvesting permits and concessions in the areas of the Indigenous Comarcas or Reserves and Indigenous Communities, shall be jointly authorized by INRENARE (now ANAM) and the respective Congresses, after due consideration of a scientific management plan". Furthermore, although the communities have been granted possession and rights over their lands, the law does not recognize their rights over the forest cover capital. If they want to harvest forest resources on a long-term basis, they are treated as if they were concessionaires and are therefore subject to the same fees and regulations as any other concessionaire. In summary, ANAM charges fees for the technical and legal services it provides and also collects stumpage fees from users, because the forests are the property of the State of Panama.

The payment of stumpage fees clearly puts forest management at a disadvantage vis-à-vis other land uses, and this situation promotes land-use changes throughout the whole of the territory. Furthermore, it generates discontent in the Indigenous Comarcas as they do not understand why they have to pay for the

use of something that was granted to them as their heritage, something that is quite clearly stated in Law No.22, which created the Embera-Wounaan Comarca and states in its Article 2 that: "*The lands referred to in this Law, with the exception of those that are under private property, are considered to be the heritage of the Embera Comarca and are for the collective use of the Embera-Wounaan indigenous groups, for agricultural and industrial purposes, as well as for other programs aimed at promoting their integrated utilization; the law therefore prohibits the private appropriation or annexation of the said lands under any title*".

- **Lack of Inter-institutional coordination**

At least in the case of the Embera-Wounaan Comarca, there are three governing bodies that have an interest in forest harvesting operations and, of course, each one of them tries to collect revenue for their respective forest harvesting fees: a) ANAM as the government agency responsible for forest activities, b) the municipality, which charges stumpage fees, and c) the Comarcas (General Congresses) that charge fees for harvesting activities within their territories. To this end, ANAM has forest control posts; the municipality has its own tax collectors; and the Comarcas collect their fees from the communities through a *Noko*, who also receives part of the fees charged by the Comarca. However, each of these institutions acts independently, without coordinating with the others, a fact that does not favor the promotion of forest management in these areas.

- **Leniency in forest law enforcement**

Until recently[5], ANAM did not require forest permit holders to use timber marking as stipulated by the current forest legislation. Although this is required by a recently adopted resolution, there are serious gaps in this instrument given that it only requires information on the type of harvesting permit involved (concession, community permit, or others) and the origin of the timber as per geographic region (province, comarca and district), as well as useful information for a reliable chain of custody system that would include information about the species, the management unit and authorized coupe area. Similarly, it does not require the owners of timber yards to declare the origin of the stored timber. Because of this, any site or port can become a timber loading/unloading yard, and it also facilitates the free transit of timber throughout the entire Darien Region without any timber marking control or transport waybills, given that the latter are only required when the timber goes through a control post when leaving Darien.

Socio-economic causes

- **Rural poverty**

Both the indigenous communities and the residents of population centers live in poverty conditions[6], and have no employment opportunities or new sources of income not related to forest activities. As a result, the local communities solve their problems in the fastest way possible, which is cutting and selling timber (**which is considered to be informal logging**) or allowing the timber to be logged in their territories through the network of forest intermediaries operating in the area. Faced with this reality, the authorities of the Comarcas simply stay away from forest activities and whenever possible charge a fee per square meter of timber extracted as established by the Comarca Congresses.

- **Community forest production organization**

As a general rule, there has not traditionally been a community forest organizational structure in Darien. Timber harvesting and sawing has been carried out by families or small forest teams. In this context, the communities that own forest resources are easy prey for the network of intermediaries operating in the area.

[5] Resolution N^0 AG-0244-2011 stipulating the use of timber marking was promulgated on 21 April 2011.

[6] ANAM's National Environmental Strategy document states that "Indigenous community areas have an alarming poverty rate and difficult access, with over 90% of the population living in these conditions... As much as 16% of children under 5 years of age in the country are suffering from malnutrition in varying degrees. The situation is even more critical in indigenous community areas, where 50% of the children are malnourished".

- **Excessive intermediation**

High transaction costs in the timber business resulting from the need to obtain timber supplies from intermediaries increase the cost of raw materials for the industry while at the same time decreasing the payment received by the local communities for their timber. Ultimately, this leads to a promotion of unsustainable actions related to indiscriminate forest logging.

- **Lack of competitiveness of the forest industry**

It is generally recognized that the local forest industry is based on obsolete technology using inefficient machinery with high energy consumption levels to obtain a good timber production yield. This coupled with the liberalization of trade makes the forest industry not competitive in the current economic scenario of free market conditions. In addition, there are no institutional incentives for industry retrofitting. Under these conditions, the industry makes no distinction between sustainable timber and illegal timber as the priority is to obtain the timber at the lowest possible cost and with short capital investment return periods.

- **Forest management profitability**

Sustainable forest production involves high costs of preparation of forest management plans and environmental impact assessments, which are not recovered within a year of operation. In these conditions, no company will risk the funding of these studies knowing that the agreements concluded with the communities are only short-term and not stable. In addition, the cost of yearly plans of operation and fees charged by ANAM, municipalities and Comarcas should also be factored in. And this is without considering the cost of delays in the granting of forest permits and/or approval of forest management plans. As a result, forest management is not seen as a profitable activity by the communities or industrialists, especially considering that legal timber from sustainable sources must compete with illegally sourced timber in the market.

This problem was previously identified by the International Tropical Timber Council (2004), which noted that in the year 2000 the country authorized a harvesting volume of 26,594 m^3 of timber but the estimated roundwood production in the country exceeded 90,000 m^3, reflecting a marked difference of approximately 70%.

- **Limited civil society involvement**

The establishment of CONAGEFOR was an important step forward towards strengthening forest governance, but until now it has kept a low profile in the discussion about illegal logging, despite the fact that when this body was established the objective was to increase the participation of different stakeholders in the decision making process so as to achieve an efficient and effective forest management system. However, there are some important civil society stakeholder representatives who are not represented in this agency (associations of professional foresters, indigenous organizations and NGOs, among others).

Therefore, the impacts of illegal logging affect all environmental, social and economic sectors. At the environmental level, it is a well-known fact that illegal logging causes disturbances to the remaining forest cover as a result of the lack of implementation of appropriate harvesting techniques, which reduces the production capacity for environmental goods and services. In addition, the selective logging of scarce timber species threatens the remaining forest with potential genetic erosion. Furthermore, there are high levels of waste (45%) generated as a result of using precarious tools (hand-held chainsaws or frame saws) for the processing of harvested timber. At a social level, illegal logging contributes to social conflicts, which in isolated cases can have disastrous results as a consequence of unfair competition or a lack of transparency in the transactions. Finally, at an economic level, it can result in a serious blow to the country's economy. According to Alfaro (2002), Panama's forest sector has an estimated deficit of just over US$73 million, with illegal logging representing a threat to the sustainability of natural forests and under the current conditions, a serious threat to the sustainability of forest management initiatives that are being promoted in indigenous community lands in the province of Darien. Table 3 shows data on the loss of revenue arising from technical services, transport waybills and municipal taxes.

Table 3. Estimated economic losses caused by illegal logging

Description	Amount (USD)	Estimated value (USD) of losses due to non-payment of taxes based on 130,000 m^3 of illegal timber/year[7]
Technical services	• $20 per m^3 of roundwood for high-value and hardwood timber species • $10 per m^3 of roundwood for softwoods • $15 per m^3 for Balsamo	1.950,000
Transport waybills	$ 1 per m^3 of roundwood	130,000
Municipal tax	$ 0.5 per m^3 of roundwood[1]	65,000
		2.145,000

Source: Own estimates based on Del Gatto 2004.

Figure 4 shows the main causes and consequences of the problem of illegal logging in Darien based on a study carried out by Arguelles (2010), Del Gatto (2004) and the International Tropical Timber Council (2004): "Achieving the ITTO Objective 2000 and sustainable forest management in Panama. Report of the ITTO Diagnostic Mission", Japan, 87pp.

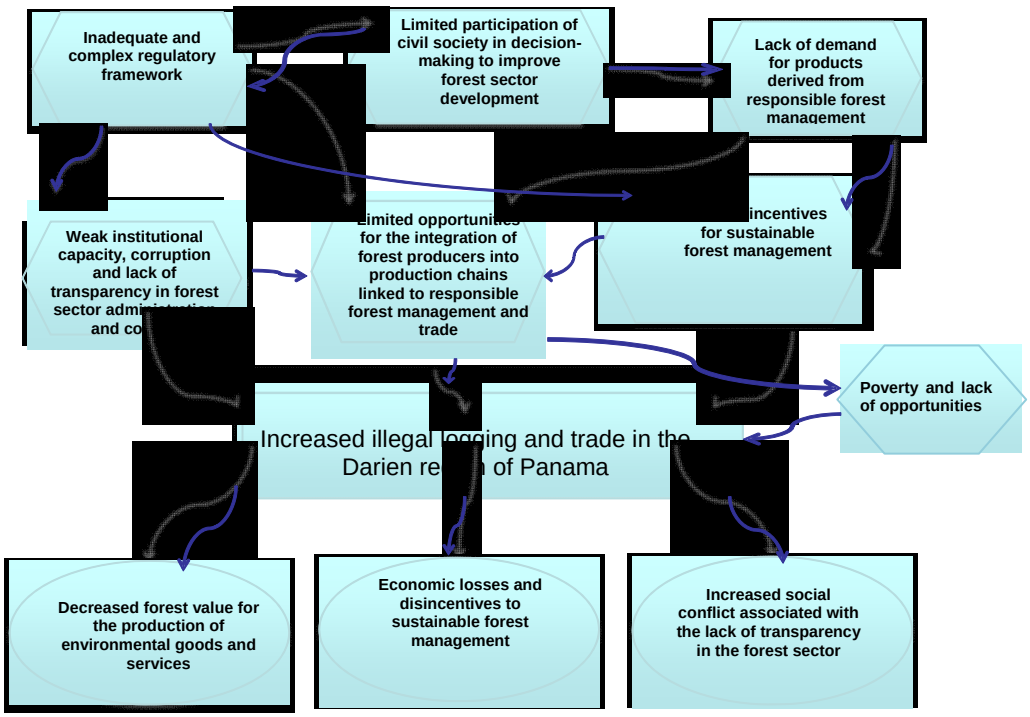

Figure 4: Problem tree related to illegal logging in Darién, Panamá.

[7] Volume estimated by Arguelles (2010).

2.1.4 Logical Framework Matrix

STRATEGY OF INTERVENTION	IMPACT INDICATORS	MEANS OF VERIFICATION	KEY ASSUMPTIONS
DEVELOPMENT OBJECTIVE: Strengthen governance mechanisms through policy frameworks for the valuation of all goods and services from natural forests, with a view to benefitting local communities and reducing illegal activities as well as deforestation and degradation in the region of Darien, Panama.	By the end of 2013, forest industry production chains, particularly in the areas of plywood and flooring (forest – industry – consumer) will have been strengthened thus improving the production system and contributing to sustainable forest management while supporting the communities involved in these initiatives.	Responsible purchasing policies agreed on by industry and consumers. Supply agreements between producers and industry and between industry and consumers under implementation.	Cross-sectoral agreement signed against illegal forest logging and trade with the involvement of various forest sector stakeholders.
Specific objective 1: Implement a participatory integrated strategy for illegal logging prevention and control in the forests of the Darien Region, Panama, as a viable measure to ensure the conservation and sustainable management of remaining natural resources.	Cross-sectoral agreement concluded between forest users organizations and relevant authorities and stakeholders along the marketing chain by the end of the second year of the project. Agreed strategy under implementation towards the end of year 1 of the project for illegal logging prevention and control in the area of intervention.	Government resolutions related to illegal logging prevention and control. Cross-sectoral agreements signed. Annual reports by authorities, forest chain stakeholders and social stakeholders. Involvement mechanisms (strategies, plans, reports).	Comarcas, municipalities and forest chain stakeholders express interest in participating in the improvement of forest governance structures. **The cross-sectoral agreement is reached as a result of the forest stakeholders' will to curb illegal activities. The agreement specifies the role, responsibilities, mechanisms and obligations of each stakeholder of the forest production chain while promoting forest governance and supporting the environmental authorities in their mission.**
Output 1: An institutional governance strategy for the prevention and control of illegal logging in the region of Darien adopted by multiple social, institutional and private stakeholders.	By the end of year 1, there are community systems of control and civil society support for the incorporation of the illegal logging prevention and control strategy, integrating measuring, transparency and/or transport mechanisms agreed with public environmental and municipal authorities. By the second year of the project, there are **draft** standards, regulations and resolutions **to be approved** by government agencies. By month 9 of the project, there are intra- and inter-institutional agreements and amendments concluded for illegal logging prevention.	**Standards and regulations in the process of being approved and/or operational** and communication media disseminating the strategy. Reports and resolutions of consultation workshops. Certified document containing institutional commitments. Resolutions and amendments approved and published for implementation. Standards and agreements validated and/or amended.	There are no objections to the adjustments to the legislation. Relevant government agencies are committed to the development and implementation of the strategy. Interested groups actively participate in the relevant processes.

STRATEGY OF INTERVENTION	IMPACT INDICATORS	MEANS OF VERIFICATION	KEY ASSUMPTIONS
Output 2: Traceability and chain-of-custody system for verification of origin and movement of timber and timber products from production sites to final processing centers.	During the first year of the project, 40 beneficiaries have received training on traceability and chain-of-custody systems. In year 2, ANAM is implementing a mechanism to verify the origin of timber through a traceability system. By the end of year 2 of the project, an assessment is conducted on the functioning and effectiveness of the adopted traceability and chain-of-custody mechanism.	Integrated chain-of-custody and control system for authorized timber operational and disseminated among various stakeholders Traceability information systems operational Information system reports by regents and institutional control officers	Origin verification mechanisms are duly authorized. Continued willingness of interested stakeholders to adopt the system in all production stages.
Output 3: A streamlined system (and formats) for the issuing of forest harvesting permits according to the size of Forest Management Units (FMU) or management category, and development of a regency scheme.	During the first year of the project, approval procedures and types of forest permits are reviewed so as to prepare a proposal for governance strengthening. By the end of the second year of the project, the forest regency scheme is officially incorporated into the forestry legislation of Panama.	Map of ANAM's processing times for management plans and baseline of current processing times. Revised and approved resolution for authorizations/permits by type of operation. Resolutions of Congresses and Sahilas of Comarca territories. Reports and lists of participants from the Comarcas and/or communal lands. Administrative resolution by ANAM and the Society of Forest Engineers. Regency regulations document approved.	Approval from all institutions concerned.
Output 4: Two fully equipped checkpoints installed at major ports and road points.	By the end of the first half of year 2, at least two key checkpoints for timber movement monitoring and control have been equipped. By the end of year 1 of the project, **40** stakeholders have been trained in resource monitoring and control.	Fully equipped checkpoints. Timber transport history and reports. Trained personnel and operational control systems. ANAM resolution on re-structuring of checkpoint duties and responsibilities.	Administrative and financial approval by ANAM. Availability of reliable information from relevant sources. Continued institutional support. **The checkpoints serve to strengthen ANAM's authority and reinforce prevention and control, thus ensuring the future sustainability of actions.**

STRATEGY OF INTERVENTION	IMPACT INDICATORS	MEANS OF VERIFICATION	KEY ASSUMPTIONS
Output 5: Economic and market incentives system established for producers committed to sustainable forest management.	During the first quarter of year 2 of the project, an incentives proposal has been evaluated and submitted to the relevant authorities. By the end of the first half of the project implementation period, 5 responsible purchasing policies (RPP) are signed by producers (community-industry partnership) and government institutions or the construction sector and/or the furniture industry.	Incentives system under implementation. Proposal for re-investment of forest incentives approved by the government. RPP certificates. Outreach campaign under implementation.	Institutional approval and involvement. **The incentives system generates higher value added and promotes the legality of activities thus strengthening forest governance and contributing to the sustainability of the strategy over time.**

2.2 Objectives

2.2.1 Development objective

Strengthen governance mechanisms through policy frameworks for the valuation of all goods and services from natural forests, with a view to benefitting local communities and reducing illegal forest activities and forest degradation in the region of Darien, Panama.

2.2.2 Specific objective

Implement a participatory integrated strategy for illegal logging prevention and control in the forests of the Darien Region, Panama, as a viable measure to ensure the conservation and sustainable management of remaining natural resources.

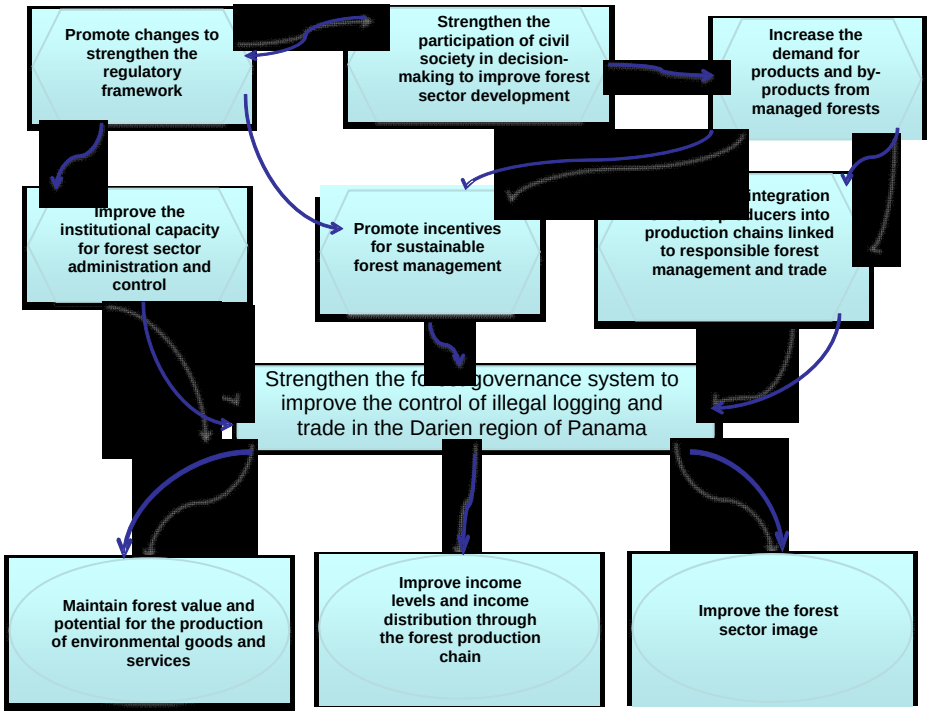

Figure 5: Objectives Tree

3. DESCRIPTION OF PROJECT INTERVENTIONS

3.1 Outputs and activities

Output 1: An institutional governance strategy for the prevention and control of illegal logging in the region of Darien adopted by multiple social, institutional and private stakeholders.

Activity 1.1 Promote at least 2 fora with the participation of various private and public social stakeholders on the significance of adopting a strategy and reaching agreements to reduce illegal logging and on factors influencing and affecting forest goods and services.

Activity 1.2 Identify major gaps in government standards and regulations as well as in governance structures.

Activity 1.3 Propose administrative and institutional resolutions so as to facilitate and promote the adoption of community mechanisms for illegal logging control and enhance forest governance and accountability levels.

Activity 1.4 Disseminate and validate proposed standards and regulations to ensure the endorsement of changes and compliance with institutional agreements.

Output 2: Traceability and chain-of-custody system for verification of origin and movement of timber and timber products from production sites to final processing centers.

Activity 2.1 Design a chain-of-custody system for timber authorized by different levels of government (comarca, municipality and national) and under different size categories of harvesting operations.

Activity 2.2 Implement a traceability system (labeling) so as to verify the legality of timber flows from production sites (origin) to the final destination through the development of a participatory methodology for the strengthening of forest management capacities.

Activity 2.3 Develop a system for timber volume control at the production site, transport and processing center levels.

Activity 2.4 Implement at least 3 training workshops for users on the use of the chain-of-custody, traceability and timber control system, especially at the community stakeholders and municipal and ANAM officers levels.

Output 3: A streamlined system (and formats) for the issuing of forest harvesting permits, and development of a forest regency scheme.

Activity 3.1 Characterize and arrange forest activities by operation size so as to identify fast-track mechanisms for the issuing of harvesting permits.

Activity 3.2 Negotiate administrative resolutions for the issuing of harvesting permits in the territories of the Comarcas.

Activity 3.3 Implement at least 3 information workshops on provisions for the issuing of harvesting permits in the Comarcas.

Activity 3.4 Develop a regency system for the co-enforcement of standards and regulations established by government agencies with the participation of the national association of forest professionals.

Activity 3.5 Develop and institutionalize regency regulations.

Output 4: Two fully equipped checkpoints installed at major ports and road points.

Activity 4.1 Characterize and quantify timber flows throughout the year.

Activity 4.2 Training of personnel in charge of checkpoints.

Activity 4.3 Equip at least 2 checkpoints with communication systems and timber chain-of-custody and traceability software.

Output 5: Economic and market mechanisms system established for producers committed to sustainable forest management.

Activity 5.1 Develop a proposal for incentives to promote sustainable forest management and responsible forest trade in the native forests of Panama.

Activity 5.2 **Facilitate the signing of a cross-sectoral forest governance agreement specifying mechanisms, roles and commitments for illegal forest trade prevention and control for each forest chain stakeholder and promote** at least 3 purchasing policies /agreements /programs /plans between organized producers and the local forest industry for the use of timber from sustainably managed forests.

Activity 5.3 Develop a viable communication and outreach strategy for the promotion of timber in responsible markets (including development of responsible purchasing awareness campaign and production of outreach materials).

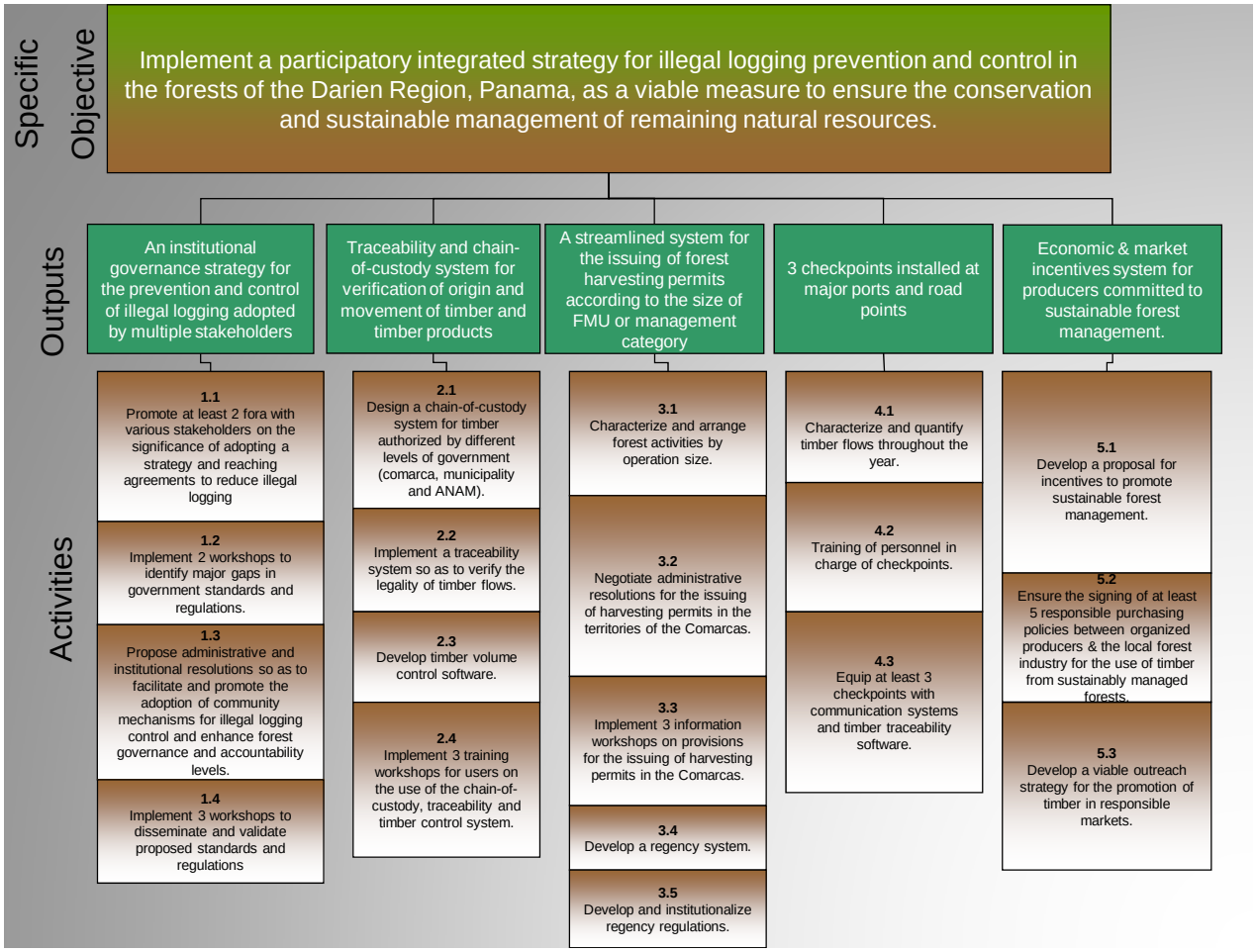

Figure 6. Work Breakdown Structure

3.2 Implementation approaches and methods

The project will seek to integrate local governments (municipalities and comarcas) with the initiatives and strategies of the national government, with special emphasis on the natural resource conservation and development policies established in the National Forest Strategy and with a high level of civil society involvement. The project will promote the strengthening of the National Forest Management Commission (CONAGEFOR) by incorporating other stakeholder groups such as indigenous communities, the Society of Forest Engineers of Panama and environmental NGOs. The following general actions will ensure the implementation of the strategy:

Participatory workshops: Aimed at identifying the institutional and administrative gaps that currently facilitate illegal logging activities in the Darien Region and at establishing consensus-based solution strategies and agreements. These agreements will be reached at two main levels: a) internal agreements between government agencies (at the comarca, municipal and national levels), and b) inter-governmental agreements and commitments with the active participation of civil society and the integration of inter-sectoral spaces for the adoption of agreements and coordination of actions, based on improved governance and institutional commitment. The analysis of this context and the review of solution mechanisms will be carried out with the support and active participation of secondary stakeholders (NGOs, local forest industry, forest professionals and transport operators, among other stakeholders along the timber production chain). The main emphasis and participatory thrust of the proposal shall be aimed at improving the decision-making process and at providing technical assistance for the strengthening and development of local governments (municipalities and comarcas).

Revision and updating of forest legislation: The primary objective of this activity will be to highlight the main administrative and institutional actions that provide incentives for illegal logging and, on that basis, to propose amendments to the three levels of government (comarca, municipal and national). A specific example of a potential decision that indigenous comarcas could make would be to charge a special levy or tax for the harvesting of timber in their territories, as compensation for the continued exploitation of timber by settlers.

Development of a chain of custody and traceability system: The implementation of the project is aimed at producing a labeling and chain of custody system and software so as to identify the origin and final destination of timber and timber products

Development of a regency system: Given the wide geographic area and dispersed nature of forest harvesting operations, it is almost impossible for ANAM technical staff to monitor the compliance of these operations with the provisions and requirements established in the management plans, environmental impact assessments and harvesting plans, particularly in the Darien Region. To this end, the project seeks to assign joint responsibility to the forest professionals in charge of submitting forest planning and harvesting documentation, which includes the preparation of regular reports on production volumes and final harvesting volumes, so as to avoid the illegal use of logging licenses or transport waybills for unauthorized sites.

Development of an economic incentives system: This action is primarily aimed at stimulating private investment and at establishing corporate partnerships between community producers and the forest industry in order to improve forest sector production and market access (at the national and international levels). In addition, the project seeks to negotiate with the Finance Ministry for the exemption of at least 50% of timber taxes, if they are invested in sustainable forest management activities. Furthermore, a proposal for negotiation is being prepared for the reduction of fees charged by ANAM for its technical services for the development of management plans and environmental impact assessments. Finally, the project will also design and develop a “responsible trade” campaign so as to use it as a market strategy for competitiveness and recognition of SFM efforts.

Equipment required for the monitoring checkpoints: This initiative is aimed at providing training and the required equipment for monitoring checkpoints, including appropriate computer hardware and software equipment that will allow them to check the specifications in the licenses issued against the volumes of timber being transported. A unique characteristic of these checkpoints will be the implementation of a mobile monitoring and control system, which will be able to make inspections “without prior warning” in order to verify the source and legality of the timber transported, particularly in those sites with a higher concentration of timber flows. It is recommended that traditional authorities should also establish stationary and mobile checkpoints along the main timber transport routes.

Dissemination system for the illegal logging prevention and control strategy: One of the main pillars of the project will be the development and implementation of an integrated outreach and dissemination system on administrative and institutional decisions related to the implementation of the illegal logging prevention and control strategy. Given the cultural diversity present in the region of Darien, outreach materials will be developed in the main languages of the region (Embera, Wounaan, Kuna and Spanish). These outputs will be disseminated through radio broadcasts (*Voz sin Fronteras*) as well as through printed material such as posters and pamphlets in order to reach the widest possible audience.

3.3 Work plan for the 24-month project implementation period

Outputs /Activities	Responsible Party	SCHEDULE (in quarters)							
		1	2	3	4	5	6	7	8
Output 1: An institutional governance strategy for the prevention and control of illegal logging in the region of Darien adopted by multiple social, institutional and private stakeholders.									
Activity 1.1 Promote at least 2 fora with the participation of various private and public social stakeholders on the significance of adopting a strategy and reaching agreements to reduce illegal logging and on factors influencing and affecting forest goods and services.	Project Coordinator, Strategy Consultant, Legal Consultant, ANAM, Comarcas and WWF								
Activity 1.2 Identify major gaps in government standards and regulations as well as in governance structures.	Project Coordinator, ANAM, WWF, Legal Consultant								
Activity 1.3 Propose administrative and institutional resolutions so as to facilitate and promote the adoption of community mechanisms for illegal logging control and enhance forest governance and accountability levels.	Project Coordinator, ANAM, WWF, Legal Consultant								
Activity 1.4 Disseminate and validate proposed standards and regulations to ensure the endorsement of changes and compliance with institutional agreements.	Project Coordinator, ANAM, WWF, Legal Consultant								
Output 2: Traceability and chain-of-custody system for verification of origin and movement of timber and timber products from production sites to final processing centers.									
Activity 2.1 Design a chain-of-custody system for timber authorized by different levels of government (comarca, municipality and national) and under different size categories of harvesting operations.	Chain-of-custody Consultant, Project Coordinator, ANAM and WWF								
Activity 2.2 Implement a traceability system (labeling) so as to verify the legality of timber flows from production sites (origin) to the final destination through the development of a participatory methodology for the strengthening of forest management capacities.	ANAM and Project Coordinator								
Activity 2.3 Develop a system for timber volume control at the production site, transport and processing center levels.	Consultant and Project Coordinator								
Activity 2.4 Implement at least 3 training workshops for users on the use of the chain-of-custody, traceability and timber control system, especially at the community stakeholders and municipal and ANAM officers levels.	Chain-of-custody Consultant and Project Coordinator								
Output 3: A streamlined system (and formats) for the issuing of forest harvesting permits according to the size of Forest Management Units (FMU) or management category, and development of a regency scheme.									
Activity 3.1 Characterize and arrange forest activities by operation size so as to identify fast-track mechanisms for the issuing of harvesting permits according to size.	Project Coordinator								

Activity 3.2 Negotiate administrative resolutions for the issuing of harvesting permits in the territories of the Comarcas	ANAM and Comarca Congresses								
Activity 3.3 Implement at least 3 information workshops on provisions for the issuing of harvesting permits in the Comarcas	Strategy Consultant and Project Coordinator								
Activity 3.4 Develop a regency system for the co-enforcement of standards and regulations established by government agencies with the participation of the national association of forest professionals.	Project Director and ANAM								
Activity 3.5 Develop and institutionalize regency regulations	International Consultant, Project Coordinator and ANAM								
Output 4: Two fully equipped checkpoints installed at major ports and road points.									
Activity 4.1 Characterize and quantify timber flows throughout the year	Project Coordinator								
Activity 4.2 Training of personnel in charge of checkpoints	Project Coordinator								
Activity 4.3 Equip at least 2 checkpoints with communication systems and timber chain-of-custody and traceability software	ANAM and CoC and Traceability Consultant								
Output 5: Economic and market incentives system established for producers committed to sustainable forest management.									
Activity 5.1 Develop a proposal for incentives to promote sustainable forest management and responsible forest trade in the native forests of Panama.	Project Coordinator								
Activity 5.2 **Facilitate the signing of a cross-sectoral forest governance agreement specifying mechanisms, roles and commitments for illegal forest trade prevention and control for each forest chain stakeholder and promote** at least 3 purchasing policies /agreements /programs /plans between organized producers and the local forest industry for the use of timber from sustainably managed forests	Project Coordinator, Communications Consultant, ANAM and WWF								
Activity 5.3 Develop a viable communication and outreach strategy for the promotion of timber in responsible markets (including development of responsible purchasing awareness campaign and production of outreach materials)	Project Coordinator and Communications Consultant								

3.4 Budget

3.4.1 Master Budget

Item	Budget Components	UNIT COST	Unit	ITTO	ANAM	WWF	TOTAL $
10	Project Personnel						
	11. National Experts						
	Project Coordinator 1/24 months (Forest Engineer)	3,755	month	45,061		45,061	90,122
	One Forest Engineer /Regional Director ANAM Metetí 1/24 months	1,200	month		28,800		28,800
	One Finance Accountant 1/24 months (assigned to project)	2,502	month	30,029			30,029
	One Administrator – ANAM Regional Office 1/24 months	800	month		19,200		19,200
	Two ANAM technicians for monitoring & control 2/24 months	600	month		14,400		14,400
	12. National Consultants						
	One programmer for development of timber volume checking system	2,000	month	2,000			2,000
	One legal consultant	6,000	consultancy	6,000			6,000
	Outreach strategy consultant	3,357	month	26,857			26,857
	13. Other labour						
	4 Field workers 1/24 (checkpoints) @ $ 400 each	400	month		38,400		38,400
	One boat driver 1/24 months (ANAM supervision)	300	month		7,200		7,200
	Secretary 1/24 months (assigned to project)	1,064	month	25,536			25,536
	14. Fellowships & Training						
	15. International Experts						
	Development of regency system and incentives proposal	8,000	consultancy	8,000			8,000
	16. International Consultants						
	Development of chain-of-custody system – 4 weeks	7,000	consultancy	7,000			7,000
	Development of traceability system - 5 weeks	5,000	consultancy	5,000			5,000
	Initial and final evaluation (2 @ $ 4,000 each)	4,000	consultancy	8,000			8,000
	19 Component Total			163,483	108,000	45,061	316,545
20	Sub-contracts						
	Construction of three checkpoints	3,000	sub-contract	9,000		0	9,000
	15.1.Workshop for participatory development of illegal logging strategy 4	500	sub-contract	2,000			2,000
	15.2 Workshops on chain of custody, traceability and volume control 3	800	sub-contract	2,400		0	2,400
	15.3 Workshops on harvesting regulations 3	1,500	sub-contract	3,000		1,500	4,500
	Communication and outreach system	8,000	sub-contract	4,000		4,000	8,000
	Development of responsible purchasing policies 5	1,500	sub-contract	4,000		3,500	7,500
	29. Component Total			24,400	0	9,000	33,400
30	Duty Travel						
	31. DSA 24 months – project activities	1,000	month	12,000		12,000	24,000
	32. DSA 24 months- ANAM personnel	600	month		14,400		14,400
	33. International travel for experts 10	700	fare	4,900		2,100	7,000
	34. Transport costs charged to project 24 months	500	month	12,000			12,000
	35. Local transport costs – ANAM personnel 24 months	500	month		12,000		12,000
	39. Component Total			28,900	26,400	14,100	69,400

Item	Budget Components	UNIT COST	Unit	ITTO	ANAM	WWF	TOTAL $
40	Capital Items						
	41. Office space - ANAM 300 m2 $500/office Meteti	500	month		12,000		12,000
	42. Acquisition of software for timber checking and installation materials	2,000	software	2,000			2,000
	43. Office space - WWF in Panama $600/month	600	month			14,400	14,400
	44. Two 4 x 4 vehicles for checkpoint inspections		vehicle				0
	45. Two canoes for river patrols	800	canoe	1,600			1,600
	46. Two out-board motors 25 HP	3,000	vehicle	6,000			6,000
	47. Capital equipment (comput, printers and forestry equipment) 2	2,000	equipment	2,000		2,000	4,000
	48. Two motorcycles		vehicle				0
	49. Component Total			11,600	12,000	16,400	40,000
50	Consumable Items						
	51. Raw materials 24 months	300	month	3,600	1,800	1,800	7,200
	52. Spares 24 months – project activities	300	month	4,400	1,400	1,400	7,200
	53. Utilities/fuel 24 months	1,000	month	10,000	7,000	7,000	24,000
	54. Office supplies 24 months - project	300	month	3,600	1,800	1,800	7,200
	59. Component Total			21,600	12,000	12,000	45,600
60	Miscellaneous						
	61. Sundry 24 months	300	month	3,600	1,800	1,800	7,200
	62. Auditing 1 per year (total: 2)	5,000	audit	10,000			10,000
	63. Contingencies 24 months	300	month	3,600	1,800	1,800	7,200
	64 Communication services	300	month	3,600	1,800	1,800	7,200
	69. Component Total			20,800	5,400	5,400	31,600
70	Executing Agency Management Costs						
	71 Project administration costs	903	month	21,663		0	21,663
	79. Component Total			21,663	0	0	21,663
	ITTO & WWF Total			292,446	163,800	101,961	558,207
80	ITTO Administration, Monitoring and Evaluation						
	81. ITTO monitoring & review ($ 10,000/year)						20,000
	82. ITTO ex-post evaluation ($ 15,000 final)						15,000
	83. Programme support - 8% of ITTO total						23,396
	89. Component Total						58,396
90	Refund of pre-project costs						0
100	GRAND TOTAL (US $)						616,603

3.4.2 Consolidated budget by component and by year

Consolidated overall and yearly project budget (in US$)

Item	Budget Components	UNIT COST	Unit	Year 1	Year 2	TOTAL $
10	Project Personnel					
	11. National Experts					
	Project Coordinator 1/24 months (Forest Engineer)	3755	month	45,061	45,061	90,122
	One Forest Engineer /Regional Director ANAM Metetí 1/24 months	1200	month	14,400	14,400	28,800
	One Finance Accountant 1/24 months (assigned to project)	500	month	15,015	15,015	30,029
	One Administrator – ANAM Regional Office 1/24 months	800	month	9,600	9,600	19,200
	Two ANAM technicians for monitoring & control 2/24 months	600	month	7,200	7,200	14,400
	12. National Consultants					0
	One programmer for development of timber volume checking system	2000	month	0	2,000	2,000
	One legal consultant	6000	consultancy	4,000	2,000	6,000
	Outreach strategy consultant	3357	month	21,822	5,036	26,857
	13. Other labour					0
	4 Field workers 1/24 (checkpoints) @ $ 400 each	400	month	19,200	19,200	38,400
	One boat driver 1/24 months (ANAM supervision)	300	month	3,600	3,600	7,200
	Secretary 1/24 months (assigned to project)	1,064	month	12,768	12,768	25,536
	14. Fellowships & Training					0
	15. International Experts					0
	Development of regency system and incentives proposal	8,000	consultancy	0	8,000	8,000
	16. International Consultants					0
	Development of chain-of-custody system – 4 weeks	7,000	consultancy	0	7,000	7,000
	Development of traceability system - 5 weeks	5,000	consultancy	5,000	0	5,000
	Initial and ex-post evaluation (2 @ $ 4,000 each)	4,000	consultancy	4,000	4,000	8,000
	19 Component Total			161,665	154,879	316,545
20	Sub-contracts					
	Construction of three checkpoints	3,000	sub-contract		9,000	9,000
	15.1.Workshop for participatory development of illegal logging strategy 4	500	sub-contract	2,000	0	2,000
	15.2 Workshops on chain of custody, traceability and volume control 3	800	sub-contract	1,600	800	2,400
	15.3 Workshops on harvesting regulations 3	1,500	sub-contract	4,500	0	4,500
	Communication and outreach system	8,000	sub-contract	4,000	4,000	8,000
	Development of responsible purchasing policies 5	500	sub-contract	4,000	3,500	7,500
	29. Component Total			16,100	17,300	33,400
30	Duty Travel					
	31. DSA 24 months – project activities	1,000	month	8,000	16,000	24,000
	32. DSA 24 months- ANAM personnel	600	month	8,400	6,000	14,400
	33. International travel for experts 10	700	fare	2,800	4,200	7,000
	34. Transport costs charged to project 24 months local	500	month	11,000	1,000	12,000
	35. Local transport costs – ANAM personnel 24 months	500	month	5,000	7,000	12,000
	39. Component Total			35,200	34,200	69,400

Item	Budget Components	UNIT COST	Unit	Year 1	Year 2	TOTAL $
40	Capital Items					
	41. Office space - ANAM 300 m2 $500/office Meteti	500	month	6,000	6,000	12,000
	42. Acquisition of software for timber checking and installation materials	2000	software	2,000	0	2,000
	43. Office space - WWF in Panama $600/month	600	month	7,200	7,200	14,400
	44. Two 4 x 4 vehicles for checkpoint inspections		vehicle	0		0
	45. Two canoes for river patrols	800	canoe	1,600	0	1,600
	46. Two out-board motors 25 HP	3,000	vehicle	6,000	0	6,000
	47. Capital equipment (comput, printers and forestry equipment) 2	2000	equipment	4,000		4,000
	48. Two motorcycles		vehicle			0
	49. Component Total			26,800	13,200	40,000
50	Consumable Items					
	51. Raw materials 24 months	300	month	5,100	2,100	7,200
	52. Spares 24 months – project activities	200	month	3,600	3,600	10,000
	53. Utilities/fuel 24 months	1,000	month	11,000	13,000	7,200
	54. Office supplies 24 months - project	300	month	3,600	3,600	7,200
	59. Component Total			23,300	22,300	45,600
60	Miscellaneous					
	61. Sundry 24 months	800	month	4,500	2,700	7,200
	62. Auditing 1 per year	5,000	audit	5,000	5,000	10,000
	63. Contingencies 24 months	1000	month	3,600	3,600	7,200
	64 Communication services 24 months	1500	month	3,600	3,600	7,200
	69. Component Total			16,700	14,900	31,600
70	Executing Agency Management Costs					
	71 Project administration costs	903		10,831	10,831	21,663
	79. Component Total			10,831	10,831	21,663
	Total			290,597	267,611	558,207
80	ITTO Administration, Monitoring and Evaluation					
	81. ITTO monitoring & review ($ 10,000/year)					20,000
	82. ITTO ex-post evaluation ($ 15,000 final)					15,000
	83. Programme support - 8% of ITTO total					23,396
	89. Component Total					58,396
90	Refund of pre-project costs					0
100	GRAND TOTAL (US $)					616,603

3.4.3 Budget by activity

DESCRIPTION	Component	Quantity		UNIT OF MEASURE	UNIT COST US$	TOTAL COST US$	Year 1 US$	Year 2 US $	Source
		Year 1	Year 2						
Output 1: An institutional governance strategy for the prevention and control of illegal logging in the region of Darien adopted by multiple social, institutional and private stakeholders.									
Activity 1.1 Promote at least 2 fora with the participation of various private and public social stakeholders on the significance of adopting a strategy and reaching agreements to reduce illegal logging and on factors influencing and affecting forest goods and services						12,557	12,257	300	
Strategy Communication Consultant	131	1		m/month	3,357	3,357	3,357		ITTO
Workshop on participatory development of illegal logging control strategy	151	4		Taller	500	2,000	2,000		ITTO
DSA – project activities	31	2		DSA/month	1,000	1,000	1,000		WWF
DSA – ANAM personnel	32	2		DSA/month	600	1,200	1,200		ANAM
National transport costs	334	2		month	500	1,000	1,000		ITTO
Transport costs - ANAM	35	2		month	500	1,000	1,000	-	ANAM
Raw materials	51	2		unit	300	600	600		ANAM
Fuel	53	1		month	1,000	1,000	1,000		ITTO
Office supplies	54	1		month	300	300	300		ITTO
Spares – project activities	52	1		month	200	200	200		ANAM
Miscellaneous	61	1		month	300	300	300	-	WWF
Contingencies	63	0	2	month	300	600	300	300	ITTO

Activity 1.2 Identify major gaps in government standards and regulations						13,157	10,457	2,700	
Strategy Communication Consultant	131	1		m/month	3,357	3,357	3,357		ITTO
Legal Consultant	131	1		workshop	2,000	2,000	2,000		ITTO
DSA – project activities	31	2		month	1,000	2,000	1,000	1,000	WWF
DSA – ANAM personnel	32	2		month	600	1,200	1,200		ANAM
National transport costs	334	1		m/month	1,000	1,000	1,000		ITTO
Transport costs - ANAM	35	1		m/month	500	500	500	-	ANAM
Raw materials	51	1		m/month	300	600	600		ANAM
Fuel	53	1		month	1,000	1,000	-	1,000	ITTO
Office supplies	54	1		month	300	300	-	300	ANAM
Spares - project activities	52	2		month	200	600	200	400	ITTO
Miscellaneous	61	1		month	300	300	300	-	ITTO
Contingencies	63	1		month	300	300	300	-	WWF
Activity 1.3 Propose administrative and institutional resolutions so as to facilitate and promote the adoption of community mechanisms for illegal logging control and enhance forest governance and accountability levels						13,157	10,157	3,000	
Strategy Communication Consultant	3,357	3,357		m/month	3,357	3,357	3,357		ITTO
Legal Consultant	2,000	2,000		consultancy	2,000	2,000	2,000		ITTO
DSA - project activities	3,000	1,000	2,000	m/month	1,000	3,000	1,000	2,000	WWF
DSA - ANAM personnel	1,200	1,200		m/month	600	1,800	1,200		ANAM
National transport costs	500	500		m/month	500	500	500		ITTO
Fuel	1,000	1,000	-	month	1,000	1,000	1,000		ITTO
Office supplies	600	300	300	month	300	600	300	300	WWF
Spares - project activities	600	200	400	unit	200	600	200	400	ITTO
Miscellaneous	300	300	-	month	300	300	300	-	ITTO
Contingencies	600	300	300	month	300	600	300	300	ITTO

Activity 1.4 Disseminate and validate proposed standards and regulations to ensure the endorsement of changes and compliance with institutional agreements						13,857	10,157	3,700	
Strategy Communication Consultant	3,357	3,357		m/month	3,357	3,357	3,357		ITTO
DSA - project activities	2,000	1,000	1,000	month	1,000	2,000	1,000	1,000	WWF
DSA - ANAM personnel	1,200	1,200		month	600	1,200	1,200		ANAM
National transport costs	1,000	1,000		m/month	500	1,000	1,000		ITTO
Transport costs - ANAM	1,000	1,000	-	month	500	1,000	1,000	-	ANAM
Raw materials	300	300		month	300	300	300		ITTO
Spares - project activities	800	400	400	unit	200	600	400	400	ITTO
Fuel	3,000	1,000	2,000	month	1,000	3,000	1,000	2,000	ITTO
Office supplies	600	300	300	month	300	600	300	300	WWF
Miscellaneous	300	300	-	month	300	300	300	-	WWF
Contingencies	300	300	-	month	300	300	300	-	WWF
Output 2: Traceability and chain-of-custody system for verification of origin and movement of timber and timber products from production sites to final processing centers.									
Activity 2.1 Design a chain-of-custody system for timber authorized by different levels of government (comarca, municipality and national) and under different harvesting size categories						15,600	3,400	12,200	
Chain of custody consultant	134		1	consultancy	7,000	7,000		7,000	ITTO
DSA - project activities	31		1	month	1,000	1,000		1,000	ITTO
DSA - ANAM personnel	32		2	month	600	1,200		1,200	ANAM
International travel	322	1	2	air fare	700	1,400	700	700	ITTO
National transport costs	334	1		m/month	500	500	500		ITTO
Transport costs - ANAM	335	2		month	500	1,000		1,000	ANAM
Raw materials	51	1		month	300	300	300		ANAM
Fuel	53	2		month	1,000	2,000	1,000	1,000	ITTO
Office supplies	54	1		month	300	300	300	-	WWF
Miscellaneous	61	1		month	300	300	300	-	WWF
Contingencies	63	1	1	month	300	600	300	300	ITTO

Activity 2.2 Implement a traceability system (labeling) so as to verify the legality of timber flows from production sites (origin) to the final destination through the development of a participatory methodology for the strengthening of forest management capacities						11,400	7,100	4,300	
Local consultant for traceability system	135	1		consultancy	5,000	5,000	5,000		ITTO
DSA - project activities	31		1	month	1,000	1,000		1,000	ITTO
DSA - ANAM personnel	32		1	month	600	1,200	-	1,200	ANAM
National transport costs	334	1		m/month	500	500	500		ITTO
Transport costs - ANAM	335	3		month	500	1,500		1,500	ANAM
Raw materials	51	1		month	300	300	300		ANAM
Fuel	53	1		month	1,000	1,000	1,000	-	ITTO
Office supplies	54	1		month	300	300	-	300	WWF
Miscellaneous	61	1		month	300	300	300	-	WWF
Contingencies	63	0	1	month	300	300	-	300	WWF
Activity 2.3 Develop a system for timber volume control at the production site, transport and processing center levels						10,300	4,300	6,000	
Programmer for timber checking system	113	1		month	2,000	2,000		2,000	ITTO
DSA - project activities	31		1	month	1,000	1,000		1,000	ITTO
International travel	322	1		fare	700	700	700		ITTO
Transport costs - ANAM	335	3		month	500	1,500	-	1,500	ANAM
Acquisition of timber checking software	441	1		software	2,000	2,000	2,000	-	ITTO
Spares - project activities	52	2		unit	200	600	400	200	ITTO
Fuel	53	1		month	1,000	1,000	-	1,000	WWF
Office supplies	54	1		month	300	300	300	-	ANAM
Miscellaneous	61	1		month	300	300	300	-	WWF
Contingencies	63	0	2	month	300	600	300	300	ITTO
Raw materials	51	1		month	300	300	300		ITTO

Activity 2.4 Implement at least 3 training workshops for users on the use of the chain-of-custody, traceability and timber control system, especially at the community stakeholders and municipal and ANAM officers levels						17,214	7,657	9,557	
Strategy Communication Consultant	131	1	1	m/month	3,357	6,714	3,357	3,357	ITTO
Workshops on chain of custody, traceability and timber volume control	152	3		workshop	800	2,400	1,600	800	ITTO
DSA - project activities	31		1	month	1,000	1,000		1,000	ITTO
DSA - ANAM personnel	32		1	month	600	1,200		1,200	ANAM
International travel	322	2		fare	700	1,400		1,400	ITTO
National transport costs	334	2		m/month	500	1,000	1,000		ITTO
Transport costs - ANAM	335	2		month	500	1,000	1,000	-	ANAM
Spares - project activities	52	2		unit	200	600	400	200	ITTO
Fuel	53	1		month	1,000	1,000	-	1,000	ITTO
Office supplies	54	1		month	300	300	-	300	ANAM
Miscellaneous	61	1	1	month	300	300	300	-	WWF
Contingencies	63	0	1	month	300	300	-	300	WWF
Output 3: A streamlined system (and formats) for the issuing of forest harvesting permits according to the size of Forest Management Units (FMU) or management category, and development of a regency scheme									
Activity 3.1 Characterize and arrange forest activities by operation size so as to identify fast-track mechanisms for the issuing of harvesting permits according to size						8,457	5,457	3,000	
National Coordinator				*					
Project staff				*					
DSA - project activities	31		1	month	1,000	1,000	-	1,000	ITTO
Strategy Communication Consultant	131		1	month/h	3,357	3,357	3,357	-	ITTO
Transport costs - ANAM	335	2		month	500	1,000	1,000	-	ANAM
Spares - project activities	52	2		unit	200	600	200	400	ITTO
Fuel	53	1		month	1,000	1,000	-	1,000	WWF
Office supplies	54	1		month	300	300	300	-	ANAM
Miscellaneous	61	1	1	month	300	600	300	300	ANAM
Contingencies	63	1	1	month	300	600	300	300	ITTO

Activity 3.2 Negotiate administrative resolutions for the issuing of harvesting permits in the territories of the Comarcas						5,400	2,600	2,800	
Project Coordinator				*					
Project staff				*					
DSA - project activities	31		1	month	1,000	1,000		1,000	ITTO
Transport costs - ANAM	335	1	1	month	500	1,000	500	500	ANAM
Raw materials	51	2		month	300	600	600	-	WWF
Spares - project activities	52	2		unit	200	600	200	400	WWF
Fuel	53	1		month	1,000	1,000	1,000	-	WWF
Office supplies	54	1		month	300	300	-	300	ANAM
Miscellaneous	61	1	1	month	300	600	300	300	ANAM
Contingencies	63	0	1	month	300	300	-	300	WWF
Activity 3.3 Implement at least 3 information workshops on provisions for the issuing of harvesting permits in the Comarcas						18,357	10,079	8,279	
Strategy Communication Consultant	131		1	m/month	3,357	3,357	1,679	1,679	ITTO
Workshop on harvesting regulations	153		2	workshop	1,500	3,000	3,000	-	ITTO
Workshop on harvesting regulations	153		1	workshop	1,500	1,500	1,500		WWF
DSA - project activities	31		1	month	1,000	2,000		2,000	ITTO
DSA - ANAM personnel	32		2	month	600	1,200		1,200	ANAM
National transport costs	334	2		m/month	500	1,000	1,000		ITTO
Transport costs - ANAM	335	2		month	500	1,000		1,000	ANAM
Raw materials	51	2	2	month	300	1,200	600	600	ITTO
Spares - project activities	52	2		unit	200	600	400	200	ITTO
Fuel	53	2		month	1,000	2,000	1,000	1,000	WWF
Office supplies	54	1		month	300	300	300	-	ANAM
Miscellaneous	61	1	1	month	300	600	300	300	ANAM
Contingencies	63	1	1	month	300	600	300	300	ITTO

Activity 3.4 Develop a regency system for the co-enforcement of standards and regulations established by government agencies with the participation of the national association of forest professionals						3,400	2,200	1,200	
Project Coordinator					*				
International travel	322		2	fare	700	1,400	700	700	ITTO
National transport costs	334	2		m/month	500	1,000	1,000		ITTO
Spares - project activities	52	2		unit	200	400	200	200	WWF
Office supplies	54	1		month	300	300	-	300	ITTO
Contingencies	63	1		month	300	300	300		WWF
Activity 3.5 Develop and institutionalize regency regulations						15,100	2,400	12,700	
National Consultant (regency and incentives)	131		2	month	4,000	8,000		8,000	ITTO
Legal Consultant	133		1	consultant	2,000	2,000		2,000	ITTO
National transport costs	334		1	m/month	500	500	500		ITTO
Transport costs - ANAM	335		1	month	500	500		500	ANAM
Fuel	53	1	1	month	1,000	2,000	1,000	1,000	WWF
Office supplies	54	2		month	300	600	300	300	ITTO
Miscellaneous	61	1	2	month	300	900	300	600	ITTO
Contingencies	63	1	1	month	300	600	300	300	ANAM
Output 4: Two fully equipped checkpoints installed at major ports and road points									
Activity 4.1 Characterize and quantify timber flows throughout the year						13,000	7,800	5,200	
DSA - project activities	31	3		month	1,000	2,000	1,000	1,000	WWF
DSA - ANAM personnel	32	2	1	month	600	1,200	1,200	-	ANAM
National transport costs	334	2		m/month	500	1,000	-	1,000	ITTO
Transport costs - ANAM	335		1	month	500	500		500	ANAM
Canoes for river patrols	45	1		equipment	800	800	800		ITTO
Out-board motors 25 HP	46	1		equipment	3,000	3,000	3,000		ITTO
Raw materials	51	1		month	300	300	-	300	ITTO
Spares – project activities	52	1		unit	200	400	200	200	WWF
Fuel	53	2		month	1,000	2,000	1,000	1,000	ANAM
Office supplies	54	2		month	300	600	300	300	ITTO
Miscellaneous	61	1	2	month	300	900	300	600	ITTO
Contingencies	63	1		month	300	300	-	300	ANAM

Activity 4.2 Training of personnel in charge of checkpoints						18,800	5,600	13,200	
Strengthening of checkpoints	20	3		checkpoint	3,000	9,000		9,000	ITTO
DSA – project activities	31	1		month	1,000	2,000	1,000	1,000	WWF
DSA – ANAM personnel	32	2		month	600	1,200	1,200		ANAM
National transport costs	334	2		m/month	500	1,000	1,000		ITTO
Transport costs – ANAM	335		1	month	500	500		500	ANAM
Raw materials	51	5		month	300	1,500	600	900	ITTO
Raw materials	51	2		month	300	600	300	300	WWF
Spares – project activities	52	2		unit	200	400	200	200	ANAM
Fuel	53	2		month	1,000	2,000	1,000	1,000	ANAM
Office supplies	54	1		month	300	300	300	-	ITTO
Contingencies	63	1		month	300	300	-	300	ANAM
Activity 4.3 Equip at least 2 checkpoints with communication systems and timber chain-of-custody and traceability software						9,700	6,600	3,100	
Project Coordinator				*					
National transport costs	334	2		m/month	500	1,000	1,000		ITTO
Canoes for river patrols	45	1		equipment	800	800	800		ITTO
Out-board motors 25 HP	46	1		equipment	3,000	3,000	3,000		ITTO
Raw materials	51	1		month	300	300	300		WWF
Spares – project activities	52	1		unit	200	400	200	200	ANAM
Fuel	53	2	1	month	1,000	3,000	1,000	2,000	ANAM
Office supplies	54	1		month	300	300	-	300	ITTO
Miscellaneous	61	0	1	month	300	600		600	ITTO
Contingencies	63	1		month	300	300	300	-	ANAM

Output 5: Economic and market incentives system established for producers committed to sustainable forest management									
Activity 5.1 Develop and negotiate a proposal for re-investing service fees charged by ANAM in sustainable forest management initiatives						2,000	1,500	500	
Project Coordinator				*					
National transport costs	334	2		m/month	500	1,000	1,000		ITTO
Spares - project activities	52	1		unit	200	400	200	200	ANAM
Office supplies	54	1		month	300	300	-	300	ITTO
Miscellaneous	61	1		month	300	300	300	-	ITTO
Activity 5.2 Develop a campaign to ensure the signing of at least 3 responsible purchasing policies /agreements /programs /plans between organized producers and the local forest industry for the use of timber from sustainably managed forests						9,400	4,900	4,500	
Sub-contract – Development of responsible purchasing policies	201		3	RPP	500	4,000	4,000	-	ITTO
Sub-contract – Development of responsible purchasing policies	201		2	RPP	500	3,500		3,500	WWF
International travel	322		1	fare	700	700		700	WWF
Raw materials	51	1	1	month	300	300	300	-	WWF
Office supplies	54	2		month	300	600	300	300	ITTO
Contingencies	63	1		month	300	300	300	-	ANAM
Activity 5.3 Develop a viable communication and outreach strategy for the promotion of timber in responsible markets (including development of responsible purchasing awareness campaign and production of outreach materials)						16,400	8,500	7,900	
Sub-contract Outreach and communication system	20	1	1	strategy	8,000	4,000	2,000	2,000	ITTO
Sub-contract Outreach and communication system	20	1	1	strategy	8,000	4,000	2,000	2,000	WWF
DSA - project activities	31	2	2	month	1,000	4,000	2,000	2,000	ITTO
DSA - ANAM personnel	32	2	2	month	600	2,400	1,200	1,200	ANAM
International travel	322	1	1	fare	700	1,400	700	700	WWF
Office supplies	54	1		month	300	300	300	-	ITTO
Miscellaneous	61	1		month	300	300	300	-	ITTO
TOTAL ACTIVITY-BASED EXPENSES						227,257	123,122	104,136	

Project Coordinator	111	6	6	m/m	3,755	45,061	22,531	22,531	ITTO
Project Coordinator	111	6	6	m/m	3,755	45,061	22,531	22,531	WWF
Regional Forest Engineer	112	12	12	m/m	1,200	28,800	14,400	14,400	ANAM
Finance Accountant	113	6	6	m/m	2,502	30,029	15,015	15,015	ITTO
Administrator ANAM Office	114	12	12	m/m	800	19,200	9,600	9,600	ANAM
Two monitoring & control technicians	115	12	12	unit	600	14,400	7,200	7,200	ANAM
4 checkpoint workers	131	12	12	unit	1,600	38,400	19,200	19,200	ANAM
1 Boat driver - supervision	132	12	12	unit	300	7,200	3,600	3,600	ANAM
1 Secretary assigned to project	133	12	12	m/m	1,064	25,536	12,768	12,768	ITTO
Office space within ANAM off.	41	12	12	unit	500	12,000	6,000	6,000	ANAM
Office space within WWF off.	43	12	12	unit	600	14,400	7,200	7,200	WWF
Capital equipment (comput, printers, etc..)	47	1		unit	2,000	2,000	2,000		ITTO
Capital equipment (comput, printers, etc..)	47	1		unit	2,000	2,000	2,000		WWF
Project administration costs	71	12	12	month	903	21,663	10,831	10,831	ITTO
Communication services	641	6	6	month	300	3,600	1,800	1,800	ITTO
Communication services	641	3	3	month	300	1,800	900	900	WWF
Communication services	641	3	3	month	300	1,800	900	900	ANAM
ITTO monitoring and review	81	1	1	unit	10,000	20,000	10,000	10,000	ITTO
ITTO ex-post evaluation	82		1	unit	15,000	15,000	-	15,000	ITTO
ITTO Programme support costs	83	1	1	unit	23,396	23,396	11,698	11,698	ITTO
Annual auditing	62	1	1	audit	5,000	10,000	5,000	5,000	ITTO
Initial and final evaluation of project	66	1	1	baseline	4,000	8,000	4,000	4,000	ITTO
Overall costs						389,345	189,173	200,173	
Grand total – Overall costs +Activity-based costs						616,603	312,294	304,309	

3.4.4 Budget by component, by year and by source

WWF Contribution (US $)

Item	Budget Component	YEAR 1	YEAR 2	TOTAL US $
10	Project personnel	22,531	22,531	45,061
20	Sub-contracts	3,500	5,500	9,000
30	Duty travel	6,700	7,400	14,100
40	Capital items	9,200	7,200	16,400
50	Consumable items	6,000	6,000	12,000
60	Miscellaneous	3,600	1,800	5,400
70	Executing agency management costs	0	0	-
	SUB-TOTAL US $	51,531	50,431	101,961

ANAM Contribution (US $)

Item	Budget Component	YEAR 1	YEAR 2	TOTAL US $
10	Project personnel	54,000	54,000	108,000
20	Sub-contracts	0	0	-
30	Duty travel	13,400	13,000	26,400
40	Capital items	6,000	6,000	12,000
50	Consumable items	6,500	5,500	12,000
60	Miscellaneous	2,700	2,700	5,400
70	Executing agency management costs	0	0	-
	SUB-TOTAL US $	82,600	81,200	163,800

ITTO Contribution (US $)

Item	Budget Component	YEAR 1	YEAR 2	TOTAL US $
10	Project personnel	85,135	78,349	163,483
20	Sub-contracts	12,600	11,800	24,400
30	Duty travel	15,100	13,800	28,900
40	Capital items	11,600	0	11,600
50	Consumable items	10,800	10,800	21,600
60	Miscellaneous	10,400	10,400	20,800
70	Project administration costs	10,831	10,831	21,663
	SUB-TOTAL US $	156,466	135,980	292,446
80	ITTO Monitoring and Administration			
	81. ITTO monitoring and review ($ 10,000 per year)			20,000
	82. ITTO ex-post evaluation			15,000
	83. Programme support costs - 8% of ITTO total			23,396
	89. Component Total			58,396
90	Refund of pre-project costs			-
	ITTO TOTAL US $			350,842

3.4.5 Consolidated budget by year and by source

Budget Components	YEAR 1			YEAR 2			TOTAL US $
	ITTO	ANAM	WWF	ITTO	ANAM	WWF	
10. Project personnel	85,135	54,000	22,531	78,349	54,000	22,531	316,545
20. Sub-contracts	12,600	-	3,500	11,800	-	5,500	33,400
30. Duty travel	15,100	13,400	6,700	13,800	13,000	7,400	69,400
40. Capital items	11,600	6,000	9,200	-	6,000	7,200	40,000
50. Consumable items	10,800	6,500	6,000	10,800	5,500	6,000	45,600
60. Miscellaneous	10,400	2,700	3,600	10,400	2,700	1,800	31,600
70. Executing agency management costs	10,831	-	-	10,831	-	-	21,663
Subtotal 1	156,466	82,600	51,531	135,980	81,200	50,431	558,207
80. ITTO Administration, monitoring & evaluation							
81. ITTO monitoring and review ($ 10,000 per year)							20,000
82. ITTO ex-post evaluation							15,000
83. Programme support costs - 8% of ITTO total							23,396
89. Component Total							58,396
90. Refund of pre-project costs	-						-
GRAND TOTAL US $							616,603

3.5 Assumptions, risks, sustainability

3.5.1 Assumptions and risks

No.	Assumptions	Potential risks	Mitigation measures
1.	There is agreement and consent among institutional stakeholders and civil society to implement the strategy	The comarca governments and other stakeholders do not support ANAM's initiative	Implement a comprehensive outreach and communication process at project start-up
2.	The forest professional sector accepts the development of a regency system	Key forest professionals are against the idea of a regency system	Implementation of information and training workshops for forest professionals
3.	Illegal loggers and other interest groups get involved in the initiatives related to the strategy	A sector of the production chain does not abide by the provisions of the strategy	Implement an active and ongoing outreach and information process
4.	There is agreement between ANAM and MEF to approve the proposal for timber tax related incentives	Ministries such as the MEF are against this idea	Sufficient communication and dissemination of the proposal before it is submitted
5.	Tangible support from the police force to implement the strategy	Limited participation of the police force	Develop and implement a coordinated institutional communication process
6.	Progress in the planning and administration of forest lands under sustainable forest management	The targets of the National Forest Strategy are not met	International cooperation helps to expand sustainable forest management
7.	Public and/or private agencies agree to sign the RPP	State bureaucratic requirements delay the responsible purchase of timber	Convene public events so as to ensure the achievement of the State's institutional commitments
8.	There is social commitment and social willingness to verify harvesting permits and fight against illegal timber trade	Some stakeholders continue to support the illegal trade of timber and timber products	Implement a functional outreach campaign to promote the benefits and scope of the strategy
9	**Forest governance is based on the commitment and will of forest chain stakeholders such as the local, regional and national industries, environmental and control authorities (ANAM) and the Comarcas.**	**The different priority stakeholders identified are not willing to undertake the commitment to sign a cross-sectoral agreement specifying their individual roles and functions to achieve adequate forest governance.**	**The communication campaign envisaged in the project will be highly instrumental in the conclusion of a cross-sectoral agreement and in raising awareness among all stakeholders concerned about the increased value of forest governance for forest trade and forest cover retention and about their fundamental role in the process.**

3.5.2 Sustainability

The economic, environmental and social sustainability of forest management will depend, to a great extent, on the ability to strengthen forest governance in the country. In order to achieve this type of sustainability, enabling economic, political and social conditions should be established to promote legality in the forest sector as well as the valuation of forests and their goods and services.

With a view to strengthening forest governance, instruments will be designed to streamline the issuing of forest harvesting permits and product transport waybills for the benefit of producer communities and the local industry. The development of a timber volume checking and forest regency system will provide a management tool that will strengthen the administration of forest resources, thus supporting ANAM in its regulatory role. The cross-sectoral agreement to be reached will specify the commitment, role and implementation mechanism of each forest chain stakeholder to contribute to forest governance, which will ensure the future sustainability of actions as illegality prevention and control responsibilities will be shared by all.

The project's outreach campaign will be aimed at raising awareness among consumers and arousing their interest in responsible forest trade practices, on the firm belief that market forces will act as a catalyst in attracting investments to support sustainable forest management and responsible forest trade. In this respect, a strong forest governance can help attract investments through REDD+ initiatives and the voluntary forest carbon market.

The strengthening of forest governance will have a positive impact on ANAM's management capacity by ensuring the involvement of other civil society stakeholders in the search for solutions to the problem of illegality in the forest sector. This will in turn generate economic benefits to the Panamanian State by reducing the loss of resources and to production-chain stakeholders by facilitating resource access. These positive impacts will guarantee the continuity of actions initiated by the project, not only in the Darien region but also at the national level.

4. IMPLEMENTATION ARRANGEMENTS

4.1 Organization structure and stakeholder involvement mechanisms

4.1.1 Executing agency

The WWF office in Panama will be responsible for the administration of project resources and will act as co-executing agency together with ANAM. To this end, and as shown in the budget tables, WWF will make a substantial financial contribution to the implementation of the project, in particular by providing its expertise in the implementation of forest governance strengthening projects. In addition, WWF has proven experience in administrative issues and budget execution for the management of ITTO funds.

Project management will be coordinated from its central office, located in Ciudad del Saber, Clayton, Panama. WWF will hire an accountant who will be responsible for managing project finances and budget executing in accordance with the disbursement schedule established in the work plan and approved by the Project Steering Committee (PSC) and the Executive Council of ITTO. WWF has the support of the legal firm "Sucre, Arias & Reyes", which is in charge of dealing with all legal aspects of the organization. In addition, WWF receives the support of an auditing firm for the preparation of financial statements, which will carry out the auditing of project accounts, including the funds provided by ITTO.

In accordance with ITTO rules and regulations, WWF will open a specific account for the administration of these funds, or will simply make use of the existing account that has already been opened for the implementation of the project: "*Extending the area under sustainable forest management in the forest lands of the Emberá-Wounaan Comarca, Darien, Panama*".

WWF and ANAM will set up a project implementation team that will work from a liaison office based in ANAM's administrative offices in the region of Darien.

4.1.2 Project management team

The project management team will be selected by WWF in agreement with ANAM and will be subject to ITTO's no objection procedures. This team will be made up of the following professionals and external consultants:

Project Director: A forest professional with extensive knowledge of the country's forest sector and the social, political and administrative conditions enabling illegal timber logging in Darien. In addition, the Project Director should have experience in the management of ITTO-funded projects. The Project Director will be responsible for developing project work plans and operational budgets, as well as promoting actions and guidelines for smooth project implementation, with direct responsibilities in the actual implementation of project activities.

Administrative officer: A full-time professional responsible for the management, control, procurement and distribution of the project's financial and material resources. The Administrative Officer will work under the supervision of the Project Director and will be in charge of preparing and submitting the project financial reports, stocktaking and accounting statements to the Project Director. The Administrative Officer will also be responsible for the conduction of annual audits as established in the project budget.

Field staff: A team of ANAM technicians, who will be responsible for the implementation of checkpoint tasks.

Outsourcing or consultancies: Specialized personnel will conduct short-term consultancies and will be responsible for the implementation of specialized actions and processes, particularly the development of the traceability system, timber volume control software, chain of custody procedures, legal assistance, and the national forest regency system.

4.1.3 Project decision-making and participatory mechanisms

Several institutions will participate in the implementation of the project, on the one hand, to ensure compliance with ITTO policies and procedures and approval of budgets and work plans for project implementation (by the Project Steering Committee) and on the other hand, to promote/facilitate implementation and provide for technical, operational and programming/logistic consistency (by the project executing agency – WWF) and ensure the involvement and participation of relevant forest stakeholders, organizations and professional associations (through the Technical Committee). This will

ensure the adoption of the strategy by all stakeholders in the different links of the forest production chain.

a. **Project Steering Committee (PSC): This committee will be responsible for approving budgets and yearly plans of operation. In addition, it will monitor project actions to ensure their consistency with project objectives. The PSC will be made up of representatives of the following institutions:**

ANAM: This agency is ITTO's contact point in Panama. It is responsible for ensuring the sustainable and responsible management of natural resources in the country. In addition to the submission and negotiation of the project with ITTO, ANAM will ensure its adequate implementation **as it is in charge of guiding the national forest policy and adopting and implementing rules and strategies for the management of the forest sector**.

ITTO: The organization responsible for approving and ensuring the necessary financial resources for the implementation of the project. ITTO officials will participate in the Project Steering Committee meetings for the approval of plans and budgets as required.

WWF: A non-political, non-governmental organization of global scope in natural resource conservation policies. It will be responsible for the technical and financial implementation of the project and for submitting technical and financial reports according to schedule. In addition, WWF will be responsible for the conduction of the project's annual audits **and for regularly providing updated information on project progress to the Steering Committee.**

CONAGEFOR: This agency groups public and civil society institutions. It was established as a consultative and coordination agency for the development of policies as required to promote social and economic growth in the forest sector.

b. **Operational Unit: This unit will be responsible for the administration of resources, recruitment procedures, coordination arrangements and technical monitoring of all project activities. It will be made up of the staff of the local WWF office. Itl will have an administrative and a technical coordinator.**

c. **Project Technical Committee: This committee will facilitate the participation and involvement of forest stakeholders, organizations and professional associations.**

The following institutions will participate in this committee:

ANAM: This agency is ITTO's contact point in Panama. It is responsible for ensuring the sustainable and responsible management of natural resources in the country. In addition to the submission and negotiation of the project with ITTO, ANAM will ensure its adequate implementation **as it is in charge of guiding the national forest policy and adopting and implementing rules and strategies for the management of the forest sector**.

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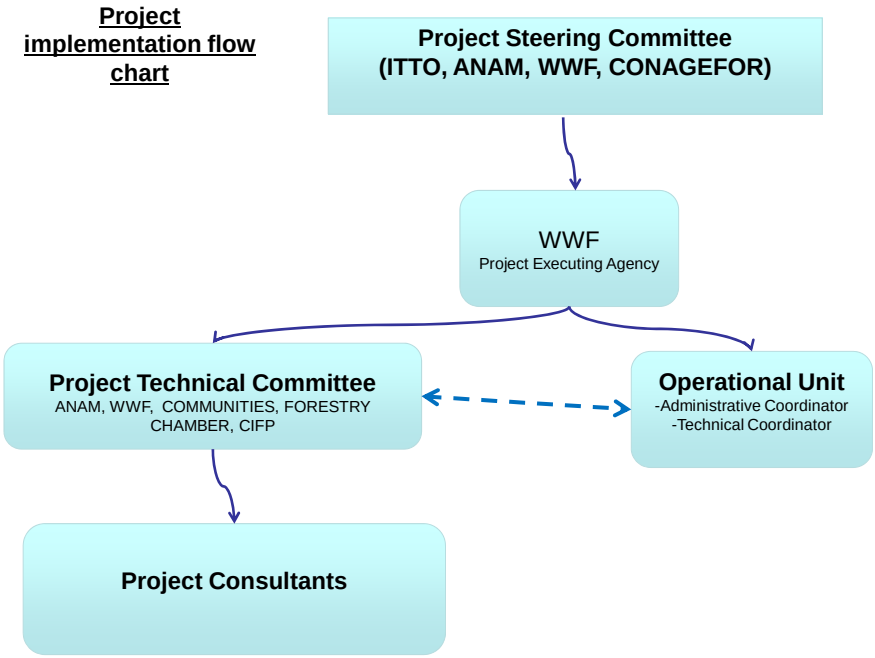
COMMUNITIES: The communities will be represented by the general chiefs of the Wargandi and Embera-Wounaan comarcas. **The communities are both forest owners and producers.**

CIFP: As the umbrella association grouping forest professionals, the Society of Forest Engineers (CIFP) will support the implementation of the forest regency system, setting up a regents' committee, providing training, issuing certification and evaluating the performance of forest regents.

FORESTRY CHAMBER: The Forestry Chamber represents the forest industry.

Figure 6. Project organizational chart



4.2 Reporting, review, monitoring and evaluation

Project progress reports – Six-monthly progress reports will be prepared (four (4) in total) to report on project progress. Such reports will be submitted in the format stipulated by ITTO and according to the schedule of activities approved by the Steering Committee. These progress reports will be available at least 3 weeks before the date planned for the visit of ITTO officers.

Project completion report – This report will be submitted within 1 month of project completion. Both the six-monthly progress reports and the project completion report will be prepared by the Project Coordinator.

Project technical reports – In addition to the six-monthly reports, technical progress reports will be prepared on the implementation of activities and the gradual achievement of outputs. A special article will be prepared every 4 months for the ITTO newsletter *Tropical Forest Update*. The final project report will be based on the final technical report.

Steering Committee monitoring and review visits – The implementation of the Project will be subject to monitoring and evaluation by ITTO officials every six months; ITTO officials will receive progress reports at least 3 weeks before such visits.

Evaluation – Monitoring visits by ITTO officials are expected during the implementation of the project. The dates for these evaluations and supervision visits will be jointly determined by the Project Director and ITTO officials.

4.3 Dissemination and mainstreaming of project learning

4.3.1 Dissemination of project results

The progress and achievement of project outcomes will be communicated and disseminated through the country's communication media, with special emphasis on the target audiences of the province of Darien. A communication and outreach strategy will be developed to disseminate the scope of the Illegal Logging Prevention and Control Strategy. Furthermore, regular (monthly) publications will be prepared for their dissemination through the web pages of WWF, ANAM and CONAGEFOR. An article will be produced every six months for its publication in ITTO's *Tropical Forest Update*.

4.3.2 Mainstreaming of project learning

The mainstreaming of project learning will be targeted at two main audiences: a) the country's capital so as to share project outcomes in fora and conferences with the participation of public and private institutions. These fora will be convened by CONAGEFOR and their objective will be to share project experiences, outcomes and impacts. These events are expected to be convened every 6 months; b) the province of Darien, so as to share information on project progress and innovative actions with the direct stakeholders. Mainstreaming tours will also be conducted in the indigenous comarcas so as to provide information on institutional provisions and agreements as well as incentives and benefits associated to the implementation of the Strategy.

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6. ANNEXES

6.1 Profile of WWF

The World Wildlife Fund - WWF is one of the largest and most experienced independent conservation organizations in the world. WWF has approximately 5 million members and a network of offices in over 100 countries. Since its inception in 1961, it has achieved countless conservation successes. Today, WWF is carrying out some 1,300 projects, with over 3,800 officials throughout the world.

WWF-Panama has been promoting sustainable forest management practices in the lands of the Embera-Wounaan Comarca with the financial support of USAID, EC, ITTO and DFID, among other organizations, and has been addressing the challenge of meeting the country's target of bringing 350,000 ha of forest under sustainable management by 2020 so as to boost the contribution of the forest sector to the Gross Domestic Product (GDP) under sustainability standards[8]. However, it is not only necessary to ensure forest land management but also to close the frontiers to illegal timber trade, as its negative effects lead to the loss of the economic value of forests and their consequent conversion to unsustainable land uses.

6.1.1 Mission and priorities

WWF's mission is to arrest the degradation of the planet's natural environment and to build a future in which humans may live in harmony with nature by: ensuring the conservation of the world's biological diversity; guaranteeing the sustained use of renewable natural resources; and promoting the reduction of pollution and wasteful consumption.

6.1.2 WWF Mission

WWF works in partnership with governments, local communities, international agencies, and companies and industries, identifying realistic solutions to the most pressing environmental problems. Furthermore, it reinforces its programme of field projects with policy work and campaigns specifically designed to address some of the underlying causes of ecological degradation. It also uses a rational, science-based approach which focuses on a number of key conservation issues and priorities.

WWF carefully monitors all funds received and endeavours to obtain maximum conservation value for these donations through the support of partner organizations. It promotes the replication of its conservation achievements through education and local capacity building, in partnership with other organizations and through communication and outreach activities throughout the world.

To carry out its work, WWF works in partnership with organizations such as UN, IUCN, development agencies such as the European Commission, USAID, the World Bank and more recently, the ITTO. With the support of ITTO, WWF has extended the area under forest management in the Embera-Wounaan Comarca, in the Darien Region. Since 2004, WWF has been a pioneer organization in promoting sustainable forest management in this region, and the area covered in the Embera-Wounaan Comarca currently amounts to 80,000 ha. The Fund has a field office next to AMAN´s office in the City of Metetí.

6.1.3 WWF-Panama

WWF-Panama Director:	For. Eng. Carlos Enrique Espinosa Peña
Telephone:	00 507 317 1826
Address:	Ciudad del Saber, Edificio 235, Clayton, Código Postal

[8] The current contribution of the forest sector to the national GDP is less than 1.5%.

6.2 PROFILE OF THE PROJECT DIRECTOR

Professional qualifications:

Forest engineer with at least 5 years experience in similar positions; good oral and written communication skills; ability to write executive reports; leadership skills to promote team work; good organizational skills; capacity to contribute to institutional policies and strategies; and thorough knowledge of the Darien Region.

Duties:

- Coordinate and supervise the achievement of project outputs and outcomes.
- Provide support and guidance to the operational team and administrative staff.
- Ensure the rational use of project funds and the timely submission of project audits.
- Prepare and implement yearly plans of operation based on the overall project schedule of activities.
- Liaise with the ITTO Secretariat and project donors.
- Prepare regular progress reports as required by ITTO and the Steering Committee.
- Prepare terms of reference for the project team.
- Ensure the publication and dissemination of project outcomes and lessons learned.
- Disseminate the objectives and achievements of the Illegal Logging Prevention and Control Strategy among different sectors of the population.

WWF, as a leader organization in the promotion of responsible forest management and trade (RFMT) in the region of Darien, will be responsible for the technical implementation of the Strategy. To this end, WWF will follow the guidelines and technical directions provided by the Steering Committee in accordance with the project schedule and work plan. One of the main achievements to be accomplished by the Project Director will be the involvement of the forest professionals of Panama to assume joint responsibility as “Forest Regents” in the forest management and production process, as well as the formulation and approval of rules and regulations to improve timber control systems, in addition to other project-related responsibilities.

6.3 PROFILE OF THE NATIONAL CONSULTANT

Professional qualifications:

Preferably a forest engineer with at least 10 years experience in the management of forest policies and strategies in Panama; good oral and written communication skills for broad-based audiences; and a thorough knowledge of the cultural, institutional and administrative aspects of the Darien Region. In particular, this consultant should be thoroughly familiar with the social, economic and political conditions enabling illegal timber logging in the forests of Darien.

Duties:

- Prepare a work plan and budget for the organization of consultation and consensus-building workshops as well as other activities under his/her responsibility.
- Communicate the objectives and targets of the Illegal Logging Prevention and Control Strategy for Darien to a broad-based audience of both the public and private sectors.
- Show the ability to negotiate and reach consensus on local government provisions to support and participate in the implementation of the Strategy.
- Establish a reference framework for the decisions to be made by each government agency to support the implementation of the Strategy.
- Conclude agreements and submit the provisions agreed on in the consultation workshops for their legal analysis.
- Report to the Project Director on a regular basis on the progress made in the development of the Strategy.
- Ensure the timely preparation and submission of invitations to the relevant agencies for their participation in the consultation workshops.

6.4 PROFILE OF THE EXTERNAL CONSULTANT(S)

Professional qualifications:

Preferably a forest engineer with at least 10 years of proven experience in the development of timber labeling or traceability systems as well as forest-to-mill gate chain-of-custody systems, and the implementation of regency systems. Also desirable is extensive experience in cultural and production aspects in Darien with special emphasis on the forest sector and the policy and institutional framework enabling illegal timber trade.

Duties:

- Prepare a work plan and budget for the organization of consultation and consensus-building workshops on the development of control systems.
- Train both technicians and ANAM officers in the use of timber flow data recording and monitoring systems.
- Design and implement a practical timber and timber product traceability system.
- Design and implement a forest-to-mill gate chain-of-custody system.
- Design and implement a regency system to involve the forest professional sector of Panama in the joint administration and technical coordination of forest planning and harvesting.
- Regularly report to the Project Director on the progress made in these consultancies.
- Ensure the timely preparation and submission of invitations to the relevant agencies for their participation in the consultation and decision-making workshops.
- Prepare terms of reference for the legal consultant in charge of arranging the official establishment of the regency system.

Note: These terms of reference may be applied to one individual consultant or several consultants specialized in each of the consultancy fields.

Annex 6.5. recommendations of the 43rd ITTO Expert Panel and resulting modifications

Assessment by the Forty-third Expert Panel **(Specific Recommen-dations)**	**Response to the EP's comments**
1. Describe in detail the roles and contributions of the forest industry at the national, regional and local levels and their involvement in the project;	Section 2.1, page **11**: **2.1 Rationale** Within the framework of the Institutional Strategy for Illegal Logging Prevention and Control formulated for the region of Darien by WWF-Panama with the support of ITTO **in March 2010**, it has been stated that illegal logging is one of the factors hindering sustainable forest development in the region. One of the strategic lines of action outlined in that document stresses the importance and urgency of developing and implementing an automated traceability and monitoring system in order to verify the origin of timber and timber products. According to the data presented by **Del Gatto (2004)** in the above strategy document, 75% of the timber marketed at the national level comes from the forests of Darien and the average volume of illegal timber from that region is estimated at 116,000 m^3/year. These figures point to the urgent need to address the problem through the implementation of a strict control system with the involvement of multiple stakeholders. Furthermore, the above strategy is based on the need to promote better governance in the country for the implementation of environmental and climate change policies through the development of sustainable initiatives aimed at **strengthening forest governance** and reducing greenhouse gas emissions. **This will in turn translate into increased economic development with a positive impact on all stakeholders concerned, in particular, municipalities, indigenous territories, local communities and the community forest enterprises set up as a result of the ITTO-sponsored project on "Extending the Area Under Sustainable Forest Management in the Forest Lands of The Embrea-Wounaan Comarca, Darien".** **2.1.1 Institutional set-up and organizational issues** The strengthening of forest governance involves consensus-building and coordination among forest sector stakeholders. This will require a restructuring of the relationships between the sector's regulatory authorities, forest owners and the industry, and the services of an independent body will be needed to facilitate the coordination process. **With the active participation of the stakeholders described below, the project will promote not only the implementation of the strategy for legal timber trade adopted by the Government of Panama, but also the signing of a legal timber agreement specifying the role, contribution and obligations of each stakeholder so as to achieve good forest governance and mechanisms to support the competent authority – ANAM – with a view to ensuring the sustainability of proposed actions.** **WWF:** Given its experience, WWF-Panama Office has been selected as the agency in charge of administering project resources so as to expedite the flow of funds. WWF has already signed cooperation agreements with ANAM and the traditional authorities of the Emberá-Wounan Comarca. As an experienced independent organization, WWF will be able to provide technical assistance and facilitate the necessary consensus-building spaces so that the key stakeholders of the Panamanian forest sector may reach agreements to contribute to the achievement of project objectives. Furthermore, WWF has the technical capacity required to support the design of sustainable forest management instruments and promote responsible consumption. **ANAM:** Agency responsible for promoting policies and developing policy instruments to encourage sustainable management and responsible forest trade in the country; it is in charge of

	issuing harvesting permits and processing information to support management actions. **CONAGEFOR:** Consultative agency comprising government representatives (Ministry of Economics and Finance, Ministry of Industry and Trade, and ANAM), private sector representatives (Forestry Chamber, National Exporters' Association and trade associations) and civil society representatives (indigenous communities and NGOs). A fundamental role of CONAGEFOR in this project will be to act as communicator of private sector needs to promote forest development as well as the participation of this sector's stakeholders in the implementation of instruments to support forest governance and promote responsible consumption. **COMARCAS:** Represented by traditional authorities, the Comarcas are forest owners and producers that will supply products to the local industry under a sustainable forest management and responsible forest trade scheme. **INDUSTRY:** Represented by the Forestry Chamber **and as a member of CONAGEFOR, the industry will be a key source of information for forest policy adjustment and management process streamlining. The continued increase of the demand for forest products and the decrease of resources constitute a strong incentive for the forest industry to actively participate in the implementation of this project. The industry will be a key stakeholder in the planning and establishment of incentives for responsible forest resource production and management given its knowledge of market trends (i.e. current trends in responsible markets for certified products) and resource needs. By working in close cooperation with the industry, it will be possible to** stimulate responsible forest harvesting and forest trade **in the country**. **CIFP:** The Society of Forest Engineers of Panama (*Colegio de Ingenieros Forestales de Panama* – CIFP) is an umbrella association grouping forest professionals. This association will support the implementation of the forest regency system, setting up a regents' committee, providing training, issuing certification and evaluating the performance of forest regents. **CONSUMERS:** Consumers are increasingly demanding forest products from responsibly managed forests and industries, which will promote investments in forest management. **The communication strategy as an instrument for stakeholder awareness-raising will be aimed at the signing of a cross-sectoral agreement for legal and responsible timber trade in Darien. Target groups will not only include end-consumers but also local industrialists and intermediaries, local timber producers/merchants, transport operators, timber financing agents, timber outlets and carpentry and cabinet-making workshops, as each of these stakeholders has a duty and a role to play within the forest governance structure to ensure, in particular, the sustainability of the strategy in the long term. Therefore, it is essential to ensure the involvement of the industry at the local, regional and national levels, not only as a target audience of the campaign but also as active stakeholders and participants in any forest governance agreement to be reached.**

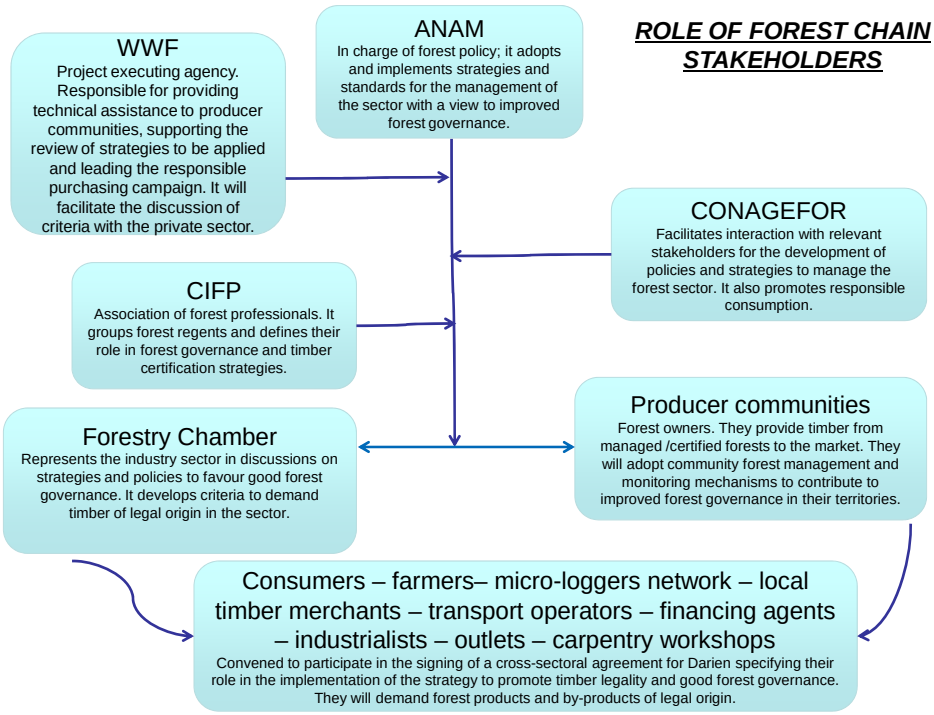

Figure 2. Stakeholder interaction model to strengthen forest governance

2. Include an organizational chart of the project highlighting both ANAM's and the communities' roles;

Section 4.1.1, page **50**:

4.1.3 **Project decision-making and participatory mechanisms**

Several institutions will participate in the implementation of the project, on the one hand, to ensure compliance with ITTO policies and procedures and approval of budgets and work plans for project implementation (by the Project Steering Committee) and on the other hand, to promote/facilitate implementation and provide for technical, operational and programming/logistic consistency (by the project executing agency – WWF) and ensure the involvement and participation of relevant forest stakeholders, organizations and professional associations (through the Technical Committee). This will ensure the adoption of the strategy by all stakeholders in the different links of the forest production chain.

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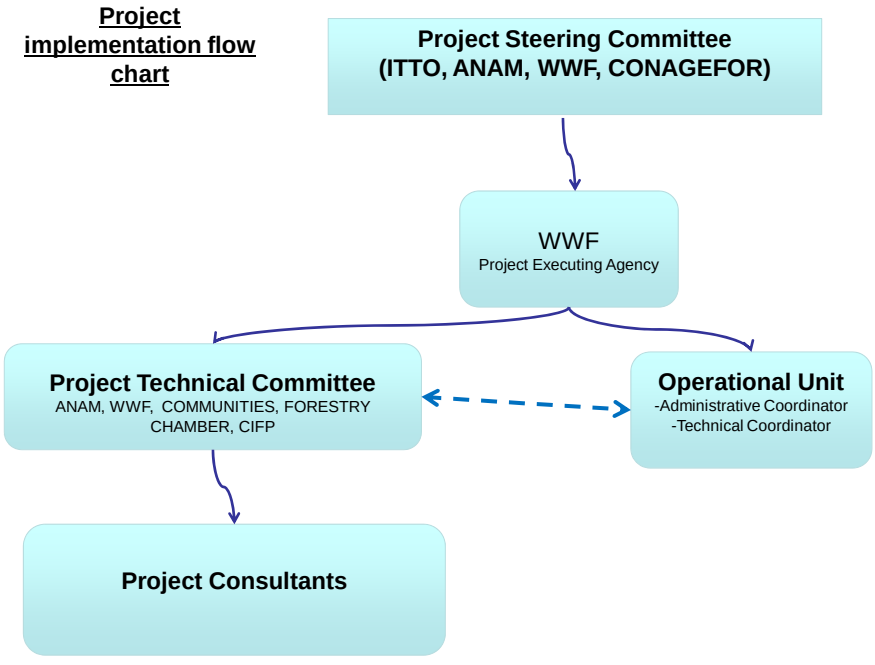
Figure 6. Project organizational chart



3. Further strengthen the problem analysis and streamline the problem tree and the objective tree, as the analysis is weak and the trees are very complex and difficult to follow;	Section **2.1.3**, page **15**: **2.1.3 Problem analysis** The problem to be addressed through the implementation of this project is the reduction and/or control of illegal logging in the Darien region, which according to Dames & Moore 1998, Cordova 2002, Del Gatto 2004 and Arguelles 2010, contributes around 75-80% of the total national timber supply required by the industry. Furthermore, the region now accounts for approximately 21% of the national target established by ANAM of reaching a total of 350,000 ha of forests under sustainable forest management and has the potential to contribute close to 50% of this target area. However, the project will indirectly contribute to a large extent to the reduction of forest degradation by monitoring illegal logging and promoting forest management and responsible forest trade, thus also contributing to the reduction of deforestation. In order to achieve this objective, however, it will be necessary to ensure a clear understanding of the concept of "illegal logging". Just like any other ecological crime, illegal logging is a social behavioral problem with economic, social and, of course, environmental consequences, that threatens the State's priority and essential efforts aimed at ensuring the conservation, protection and management of natural forests and at fostering the utilization, industrialization and promotion of the country's forest resources in conformity with the principle of adequate and sustainable use of renewable natural resources (Campos Arce et al, 2001). In this context, it is important to point out that "illegal logging" is not the same thing as deforestation nor can it be considered to be the same as unsustainable or technically unacceptable logging, as there may be some legal logging operations that may not be accepted as a sustainable management practice by some experts. "Illegal logging" is any logging operation that is banned by the current forest legislation i.e. logging or harvesting operations that do not comply with existing legal provisions of the forestry law, that do not comply with the necessary requirements or regulations, or that violate existing bans or prohibitions (Campos Arce et al., 2001). **In Panama, illegal logging is considered to be any action involving the felling of trees without the authorization of the relevant authority, which is currently ANAM according to the legislation in force. However, illegal logging as part of the deforestation problem should be distinguished from illegal logging activities geared to trade in forest products and by-products. Illegal forest operations take place when timber is harvested, transported, processed, purchased and/or sold in violation of the national legislation. Illegal logging is specifically limited to felling and harvesting (and sometimes primary processing) actions carried out in the forest in breach of the country's legal framework. Furthermore, illegal logging activities carried out for commercial purposes by local timber merchants, financing agents and/or industrialists should be distinguished from the illegal logging actions carried out by micro-loggers for subsistence purposes due to a lack of opportunities and facilities to develop a formal production activity. In the latter case, illegal logging is classified as *informal logging*. Informal logging can take place as a result of not knowing the law and/or because of the legitimacy that is believed to be inherent in land tenure rights i.e. if a community member has land tenure, he/she believes that the resources available on the land are also covered by the same land rights and therefore he/she can legally utilize those resources without requesting authorization from the authorities other than those that granted his/her land tenure rights. In these cases, the concept of what constitutes a legitimate or illegitimate act should be defined.** Illegal logging is generally understood to be an action that is carried out in violation of existing legal standards in a given country: it is a violation of a strict logging ban or of the procedures established for logging activities. Informal logging and trade are usually distinguished from illegal logging and trade, but in fact "informal activities" are those conducted without "complying with prescribed rules" and, therefore, all informal logging or trade activities are illegal. The term "informal" has traditionally been used in reference to an activity that has been carried out outside the law but that also has social implications i.e. there is a significant number of offenders and they resort to these activities for subsistence purposes and due to a lack of opportunities and facilities to organize themselves to be incorporated into the formal production chain. Timber sourced from "illegal logging" operations opens the door to illegal forest trade and therefore this project proposal seeks to combat both illegal forest logging and trade. The statistics

reported for the region of Darien are clear evidence of the growing trend in the volume of illegal timber being mobilized in Panama. Arguelles (2010) estimates these volumes to range between a minimum of 95,000 m^3 and a maximum of 130,000 m^3. In addition, ANAM's statistical report for 2004-2008 indicates that the annual average volume of timber transported amounted to 62,986 m^3 (2006, 2007 and 2008 figures). This information clearly shows that the volume of timber consumed for industrial purposes in Panama is larger than the volume reported by ANAM. Figure 2 shows the main illegal timber transport routes in the Darien Region.

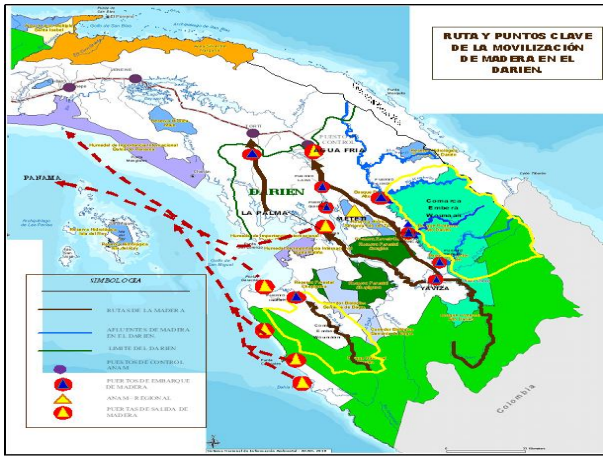


Figure 2 Main illegal timber transport routes

In addition, the statistical analysis has shown that out of the average timber volume transported in the past three years (ANAM's official records for 2009), the estimated minimum percentage of illegally logged timber is 33.7% while the maximum is 51.55% (see Table 2). This suggests that about half the timber that is being mobilized in the country could have been illegally harvested. The Darien Region has the highest illegal logging rates in the country, with an estimated volume of up to 67%.

Table 2 Transported timber volume as reported by ANAM and annual consumption as reported by the local industry

Year	Transported volume m3	Local industry consumption 95,000 m3/year (PROARCA and IUCN, 2005).		Local industry consumption 130,000 m3/year (Del Gatto , 2004).	
		Shortage in m3	Shortage %	Shortage in m3	Shortage %
2006	50,840	44,160	46.48 %	79,160	60.89%
2007	76,463	18,537	19.51%	53,537	41.18%
2008	61,656	33,344	35.10%	68,344	52.57%
Average	**62,986**	**32,014**	**33.70%**	**67,014**	**51.55%**

Source: Arguelles, 2010.

Based on the results reported by Arguelles, the causes of illegal logging in the Darien province are linked to a complex set of factors, including social factors (land tenure and forest ownership), economic factors (poverty, high cost of sustainable forest management) and political-institutional

factors (lack of governance in different government structures, which translates into a series of gaps in the implementation of rules, regulations and in the administration of justice, and there is also a lack of technical capacity to control timber transport activities), which all combine to have an incremental effect on this problem.

A brief summary of the discussion and information provided by Arguelles (2010) is given below:

Institutional causes:

- **Administration of the forest estate**

Panama's forest legislation (Act No.1 of 3 February 1994)[9] stipulates that natural forests are part of the national heritage and on this basis organizes forest activities through forest concessions granted to third parties. In this context, the role of the forest authority is to monitor and ensure that concession holders comply with the terms of the concession contract and to secure the payment of fees to the government based on logs felled and transport waybills.

According to Article 27 of the Forestry Law, there are several types of permits issued for the harvesting of resources from the country's forest estate:

a. Through special forest harvesting permits granted by ANAM for personal or subsistence use by the applicant, after confirming the lack of financial resources.

b. Through direct or delegated administration by ANAM, under agreements signed with organizations and public and private enterprises in State-owned forest plantations.

c. Through forest harvesting concessions granted by ANAM to private individuals or companies.

Harvesting permits in indigenous community areas are subject to virtually the same conditions as forest concessions, with the only difference being that concession holders are asked to obtain the approval of the local congress. It should also be noted that subsistence permits are granted at the discretion of the forest authority on a case-by-case basis. In most cases, these permits should be granted in light of the poverty situation prevailing in the region, although this factor is not considered in practice.

The reality is that most of the remaining natural forest areas are in the hands of indigenous communities as a result of a decision of the State of Panama. The forest industry has limited possibilities to invest in the management of these lands, unless it is through an agreement with the local communities. Under such forest tenure conditions, the forest industry stopped being a strategic partner associated with ANAM for forest management operations, because timber companies are not interested in investing in lands that are part of the national forest estate. As a result, today there are no forest concessions and nobody finances the forest management plans and environmental impact assessments required by ANAM to authorize sustainable forest harvesting operations.

In view of this, even ANAM, which is considered to be the sector's governing, regulatory and supervisory body, does not have a policy to finance forest management plans and environmental impact assessments, and therefore the lack of approvals for sustainable management plans results in the lack of a long-term supply of timber for the sector. The only exceptions are the forests that are under sustainable management in the Embera-Wounaan Comarca, which are receiving technical assistance from WWF with the financial support of ITTO, USAID, the European Commission and the Natura Foundation of Panama, but these forests are not sufficient to supply all of the local industry.

- **Weak institutional capacity**

Although Panama has a national environment strategy, the implementation of this strategy has not reached the required levels. The National Forest Policy was designed in early 2003 and the country has worked on the development of instruments such as the National Environmental Information System, the valuation of forest resources and their incorporation into the National Accounting System, the Forest Development Plan, and other instruments that should contribute to the implementation of sustainable forest management. The Forestry Law provides incentives for

the establishment and maintenance of forest plantations; however, there is no system of incentives for the management of native forests.

The lack of financial resources to invest in the forest sector has contributed to a great extent to limiting the adoption and use of appropriate technologies in forest activities. Furthermore, very few changes have been introduced in the technology used and thus, industrial activities are considered to be of little importance to the national economy.

Illegal logging has its roots in the insufficient political significance that sustainable forest development has historically had in Panama. This attitude is probably based on the limited contribution of the forest sector to the Gross Domestic Product, a contribution that is less than 1% and that is reflected in the institutional plan designed for the forest sector.

There are a number of difficulties in carrying out field checks for the issuing of forest permits and for the follow up of forest harvesting operations, due to the limited number of appropriately trained personnel that ANAM's forestry department has available in the region. There is no forest authority presence in harvesting areas and therefore the preferred practice is to carry out timber scaling operations when the timber goes through the control points without having a precise idea about its source. In fact, this is the reason why forest permits can be used indiscriminately to cover up timber sourced from sites other than those authorized by the permits ("timber laundering") or in other words, timber originating from forests in the comarcas and probably even from protected areas.

According to the current forest legislation, the transport of national and/or imported forest products and by-products should be conducted on the basis of forest transport waybills issued by ANAM. The Authority should establish forest control posts, which are to operate with the support of the Police Force and should seize all products transported without a corresponding transport waybill. In this context, the law regulations also stipulate the following:

f. Any individual or company that is the holder of a forest permit, forest concession or any other forest authorization, should register a mark with ANAM, and should mark all timber pieces before their transport.
g. To obtain a transport waybill for forest products and by-products, the applicant should produce a corresponding permit, authorization or contract as well as proof of payment of relevant fees if required.
h. Transport operators should carry the corresponding transport waybills when transporting forest products and by-products and these waybills will only apply to specified products and by-products in terms of species, form, quality, quantity, origin and destination.
i. Transport waybills should specify the marking code of the holders of forest permits, contracts or authorizations. These waybills cannot be deferred and will only be valid for 72 hours in the case of land transport or 96 hours in the case of sea transport.
j. All industries should keep a record of the origin of forest products and by-products, with a detailed description of permits, contracts, waybills and other relevant documentation applicable to those products. Processed and/or packed volumes per species should match the data specified in those documents.

The same factors limiting ANAM's presence in forest harvesting sites constitute an obstacle in the processing of transport waybills. In brief, the above discussion clearly shows that the country's forest legislation has the foundations to support timber traceability to track the timber produced from its point of origin to its destination, and to facilitate the accounting of timber-related incomings and outgoings required from the forest industry.

- **Dual role of ANAM's control posts**

At least in the case of ANAM's control post in Agua Fría, which is considered to be the land gate for the timber leaving the Darien Region, inspectors have the following roles to play: field checks as required for the processing of subsistence permits; measuring of timber for its official scaling; charging fees per m^3 of timber as stipulated by ANAM; and filling out transport waybills they must issue after payment of the corresponding fees. In addition, they must respond to general enquiries and feed ANAM's forest databases as needed.

This means that the inspectors in this control post are both judge and jury as it were, as they are

responsible not only for verifying if the timber is being transported in accordance with the provisions of the forestry law (transport waybills and timber marking) but also for other law enforcement functions that are under the responsibility of ANAM's regional administration, for example inspections for the issuing of forest permits.

This situation is a breeding ground for corruption, as ANAM's tax collection and administration functions are delegated to these inspectors, including the issuing of transport waybills without prior field scaling of timber to guarantee that it was extracted from the site specified in the corresponding forest permit.

- **Weak institutional capacity in the Indigenous Comarcas**

Although the government recognized the rights of the different ethnic groups to their autonomous territories under the concept of *Indigenous Comarcas*, it does not provide them with the financial support required to develop the institutional capacity required to manage their natural resources nor to promote rural development aimed at getting these indigenous communities out of the marginalized and poverty state in which they find themselves in.

As a result, although there is a natural resources directorate in the organizational structure of the Comarcas (as is the case in the Embera-Wounaan Comarca, for example), these institutions have no resources to make their administrative structures operational in their territories. The result is that the Comarcas have limitations in the control of their territories, they do not provide technical assistance for the communities to organize forest activities, and they do not provide support for the formulation of management plans and environmental impact assessments.

Although the Indigenous Comarca Territories are considered to be part of the national natural heritage, ANAM can grant forest concessions on these lands according to Article 44 of the Forestry Law: "Forest harvesting permits and concessions in the areas of the Indigenous Comarcas or Reserves and Indigenous Communities, shall be jointly authorized by INRENARE (now ANAM) and the respective Congresses, after due consideration of a scientific management plan". Furthermore, although the communities have been granted possession and rights over their lands, the law does not recognize their rights over the forest cover capital. If they want to harvest forest resources on a long-term basis, they are treated as if they were concessionaires and are therefore subject to the same fees and regulations as any other concessionaire. In summary, ANAM charges fees for the technical and legal services it provides and also collects stumpage fees from users, because the forests are the property of the State of Panama.

The payment of stumpage fees clearly puts forest management at a disadvantage vis-à-vis other land uses, and this situation promotes land-use changes throughout the whole of the territory. Furthermore, it generates discontent in the Indigenous Comarcas as they do not understand why they have to pay for the use of something that was granted to them as their heritage, something that is quite clearly stated in Law No.22, which created the Embera-Wounaan Comarca and states in its Article 2 that: "*The lands referred to in this Law, with the exception of those that are under private property, are considered to be the heritage of the Embera Comarca and are for the collective use of the Embera-Wounaan indigenous groups, for agricultural and industrial purposes, as well as for other programs aimed at promoting their integrated utilization; the law therefore prohibits the private appropriation or annexation of the said lands under any title*".

- **Lack of Inter-institutional coordination**

At least in the case of the Embera-Wounaan Comarca, there are three governing bodies that have an interest in forest harvesting operations and, of course, each one of them tries to collect revenue for their respective forest harvesting fees: a) ANAM as the government agency responsible for forest activities, b) the municipality, which charges stumpage fees, and c) the Comarcas (General Congresses) that charge fees for harvesting activities within their territories. To this end, ANAM has forest control posts; the municipality has its own tax collectors; and the Comarcas collect their fees from the communities through a *Noko*, who also receives part of the fees charged by the Comarca. However, each of these institutions acts independently, without coordinating with the others, a fact that does not favor the promotion of forest management in these areas.

- **Leniency in forest law enforcement**

Until recently[10], ANAM did not require forest permit holders to use timber marking as stipulated by the current forest legislation. Although this is required by a recently adopted resolution, there are serious gaps in this instrument given that it only requires information on the type of harvesting permit involved (concession, community permit, or others) and the origin of the timber as per geographic region (province, comarca and district), as well as useful information for a reliable chain of custody system that would include information about the species, the management unit and authorized coupe area. Similarly, it does not require the owners of timber yards to declare the origin of the stored timber. Because of this, any site or port can become a timber loading/unloading yard, and it also facilitates the free transit of timber throughout the entire Darien Region without any timber marking control or transport waybills, given that the latter are only required when the timber goes through a control post when leaving Darien.

Socio-economic causes

- **Rural poverty**

Both the indigenous communities and the residents of population centers live in poverty conditions[11], and have no employment opportunities or new sources of income not related to forest activities. As a result, the local communities solve their problems in the fastest way possible, which is cutting and selling timber (**which is considered to be informal logging**) or allowing the timber to be logged in their territories through the network of forest intermediaries operating in the area. Faced with this reality, the authorities of the Comarcas simply stay away from forest activities and whenever possible charge a fee per square meter of timber extracted as established by the Comarca Congresses.

- **Community forest production organization**

As a general rule, there has not traditionally been a community forest organizational structure in Darien. Timber harvesting and sawing has been carried out by families or small forest teams. In this context, the communities that own forest resources are easy prey for the network of intermediaries operating in the area.

- **Excessive intermediation**

High transaction costs in the timber business resulting from the need to obtain timber supplies from intermediaries increase the cost of raw materials for the industry while at the same time decreasing the payment received by the local communities for their timber. Ultimately, this leads to a promotion of unsustainable actions related to indiscriminate forest logging.

- **Lack of competitiveness of the forest industry**

It is generally recognized that the local forest industry is based on obsolete technology using inefficient machinery with high energy consumption levels to obtain a good timber production yield. This coupled with the liberalization of trade makes the forest industry not competitive in the current economic scenario of free market conditions. In addition, there are no institutional incentives for industry retrofitting. Under these conditions, the industry makes no distinction between sustainable timber and illegal timber as the priority is to obtain the timber at the lowest possible cost and with short capital investment return periods.

- **Forest management profitability**

Sustainable forest production involves high costs of preparation of forest management plans and environmental impact assessments, which are not recovered within a year of operation. In these conditions, no company will risk the funding of these studies knowing that the agreements concluded with the communities are only short-term and not stable. In addition, the cost of yearly plans of operation and fees charged by ANAM, municipalities and Comarcas should also be factored in. And this is without considering the cost of delays in the granting of forest permits and/or approval of forest management plans. As a result, forest management is not seen as a profitable activity by the communities or industrialists, especially considering that legal timber from sustainable sources must compete with illegally sourced timber in the market.

This problem was previously identified by the International Tropical Timber Council (2004), which

noted that in the year 2000 the country authorized a harvesting volume of 26,594 m^3 of timber but the estimated roundwood production in the country exceeded 90,000 m^3, reflecting a marked difference of approximately 70%.

- **Limited civil society involvement**

The establishment of CONAGEFOR was an important step forward towards strengthening forest governance, but until now it has kept a low profile in the discussion about illegal logging, despite the fact that when this body was established the objective was to increase the participation of different stakeholders in the decision making process so as to achieve an efficient and effective forest management system. However, there are some important civil society stakeholder representatives who are not represented in this agency (associations of professional foresters, indigenous organizations and NGOs, among others).

Therefore, the impacts of illegal logging affect all environmental, social and economic sectors. At the environmental level, it is a well-known fact that illegal logging causes disturbances to the remaining forest cover as a result of the lack of implementation of appropriate harvesting techniques, which reduces the production capacity for environmental goods and services. In addition, the selective logging of scarce timber species threatens the remaining forest with potential genetic erosion. Furthermore, there are high levels of waste (45%) generated as a result of using precarious tools (hand-held chainsaws or frame saws) for the processing of harvested timber. At a social level, illegal logging contributes to social conflicts, which in isolated cases can have disastrous results as a consequence of unfair competition or a lack of transparency in the transactions. Finally, at an economic level, it can result in a serious blow to the country's economy. According to Alfaro (2002), Panama's forest sector has an estimated deficit of just over US$73 million, with illegal logging representing a threat to the sustainability of natural forests and under the current conditions, a serious threat to the sustainability of forest management initiatives that are being promoted in indigenous community lands in the province of Darien. Table 3 shows data on the loss of revenue arising from technical services, transport waybills and municipal taxes.

Table 3. Estimated economic losses caused by illegal logging

Description	Amount (USD)	Estimated value (USD) of losses due to non-payment of taxes based on 130,000 m^3 of illegal timber/year[12]
Technical services	• $20 per m^3 of roundwood for high-value and hardwood timber species • $10 per m^3 of roundwood for softwoods • $15 per m^3 for Balsamo	1.950,000
Transport waybills	$ 1 per m^3 of roundwood	130,000
Municipal tax	$ 0.5 per m^3 of roundwood[1]	65,000
		2.145,000

Source: Own estimates based on Del Gatto 2004.

Figure 4 shows the main causes and consequences of the problem of illegal logging in Darien based on a study carried out by Arguelles (2010), Del Gatto (2004) and the International Tropical Timber Council (2004): "Achieving the ITTO Objective 2000 and sustainable forest management in Panama. Report of the ITTO Diagnostic Mission", Japan, 87pp.

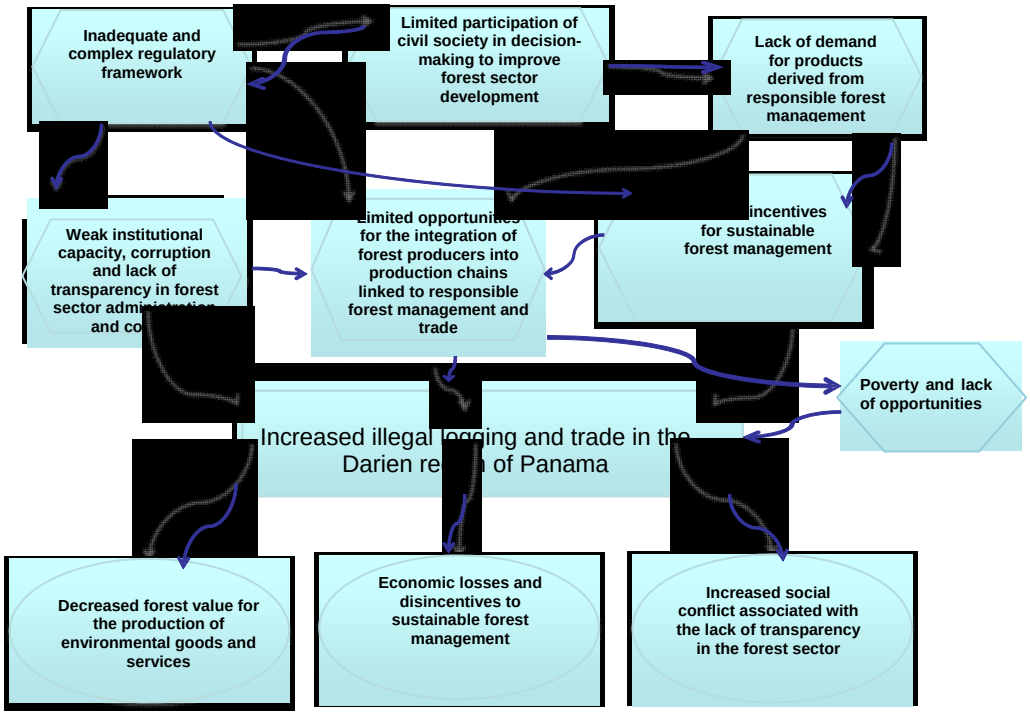


Figure 4: Problem tree related to illegal logging in Darién, Panamá.

4. Clearly describe what is termed illegal logging and informal logging in Panama;

Section **2.1.3**, page 1**5**:

2.1.3 Problem analysis

In Panama, illegal logging is considered to be any action involving the felling of trees without the authorization of the relevant authority, which is currently ANAM according to the legislation in force. However, illegal logging as part of the deforestation problem should be distinguished from illegal logging activities geared to trade in forest products and by-products. Illegal forest operations take place when timber is harvested, transported, processed, purchased and/or sold in violation of the national legislation. Illegal logging is specifically limited to felling and harvesting (and sometimes primary processing) actions carried out in the forest in breach of the country's legal framework. Furthermore, illegal logging activities carried out for commercial purposes by local timber merchants, financing agents and/or industrialists should be distinguished from the illegal logging actions carried out by micro-loggers for subsistence purposes due to a lack of opportunities and facilities to develop a formal production activity. In the latter case, illegal logging is classified as *informal logging*. Informal logging can take place as a result of not knowing the law and/or because of the legitimacy that is believed to be inherent in land tenure rights i.e. if a community member has land tenure, he/she believes that the resources available on the land are also covered by the same land rights and therefore he/she can legally utilize those resources without requesting authorization from the authorities other than those that granted his/her land tenure rights. In these cases, the concept of what constitutes a legitimate or illegitimate act should be defined.

5. Clearly state how the project's activities, particularly the illegal logging prevention and control mechanisms, will be sustained in the long term and by whom (after project completion);	Section 3.5.2, page 48: **3.5.2 Sustainability** **The economic, environmental and social sustainability of forest management will depend, to a great extent, on the ability to strengthen forest governance in the country. In order to achieve this type of sustainability, enabling economic, political and social conditions should be established to promote legality in the forest sector as well as the valuation of forests and their goods and services.** **With a view to strengthening forest governance, instruments will be designed to streamline the issuing of forest harvesting permits and product transport waybills for the benefit of producer communities and the local industry. The development of a timber volume checking and forest regency system will provide a management tool that will strengthen the administration of forest resources, thus supporting ANAM in its regulatory role. The cross-sectoral agreement to be reached will specify the commitment, role and implementation mechanism of each forest chain stakeholder to contribute to forest governance, which will ensure the future sustainability of actions as illegality prevention and control responsibilities will be shared by all.** The project's outreach campaign will be aimed at raising awareness among consumers and arousing their interest in responsible forest trade practices, on the firm belief that market forces will act as a catalyst in attracting investments to support sustainable forest management and responsible forest trade. In this respect, a strong forest governance can help attract investments through REDD+ initiatives and the voluntary forest carbon market. The strengthening of forest governance will have a positive impact on ANAM's management capacity by ensuring the involvement of other civil society stakeholders in the search for solutions to the problem of illegality in the forest sector. This will in turn generate economic benefits to the Panamanian State by reducing the loss of resources and to production-chain stakeholders by facilitating resource access. These positive impacts will guarantee the continuity of actions initiated by the project, not only in the Darien region but also at the national level.