INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT PROPOSAL

TITLE	PROTECTION AND RESTORATION OF FOREST LANDS FOR WATER CATCHMENT, REGULATION AND RECHARGE IN THE UPPER SALINAS RIVER WATERSHED, GUATEMALA, AS A CLIMATE CHANGE ADAPTATION MEASURE TO ENSURE WATER SUPPLY FOR THE GUATEMALAN POPULATION
SERIAL NUMBER	PD 936/24 Rev.1 (F)
COMMITTEE	REFORESTATION AND FOREST MANAGEMENT
SUBMITTED BY	GOVERNMENT OF GUATEMALA
ORIGINAL LANGUAGE	SPANISH

SUMMARY

The Department of Quiché is located in the northwestern region of the country, covering an area of 8,378 km² (7.67% of the national territory), with approximately 42.5% of its land under forest cover. The project's area of intervention covers the following four municipalities: San Antonio Ilotenango, Santa Cruz del Quiché, San Bartolomé Jocotenango and San Andrés Sajcabajá, all located in the upper reaches of the Salinas River Watershed. According to the 2016 forest cover map, these four municipalities combined have an area of 1,509 hectares under forest cover.

The legal water regime refers to water as a vital necessity as well as a useful resource for the economy and a fundamental element for the environment; 83.3% of the population in the Department of Quiché and its municipalities has better access to improved water supply sources. However, only 38.5% of this population has improved sanitation services, a condition of crucial importance to reduce the incidence of infectious diseases in children, as well as the levels of chronic, acute and overall malnutrition.

Aware of the significance of forests and their link to water-related environmental services, the association Water for People (WFP), in coordination with the National Forest Institute (INAB), has developed this proposal with a view to maintaining, restoring and increasing forest cover over at least 800 hectares, in areas of high to very high-water recharge significance in the Upper Salinas River Watershed, as well as implementing two compensation mechanisms for environmental water services as a way of strengthening water resource governance in the area and ensuring the social, economic and environmental sustainability of water resources.

All project activities will be jointly carried out in coordination with local municipal councils, communities and other stakeholders, promoting municipal and community empowerment through the planning and implementation of municipal participatory plans for the protection of water sources and water recharge areas.

EXECUTING AGENCY	WATER FOR PEOPLE (WFP)
COLLABORATING AGENCY	NATIONAL FOREST INSTITUTE (INAB) AND LOCAL MUNICIPAL COUNCILS
DURATION	24 MONTHS
APPROXIMATE STARTING DATE	UPON APPROVAL

BUDGET AND PROPOSED SOURCES OF FINANCE:

Source	Contribution in US$
ITTO	**496,959.10**
WATER FOR PEOPLE	74,472.00
INAB & LOCAL MUNICIPAL COUNCILS	43,600.00
TOTAL	**615,031.10**

TABLE OF CONTENTS

PROJECT BRIEF

1. Current situation and problems to be solved by the project

According to the forest cover dynamics map for 2016-2020, Guatemala has an estimated forest cover of 3,601,567 hectares, amounting to 33.3% of the national territory, with a gross loss of 61,098 hectares of forest per year, and a forest cover restoration of 47,915 hectares per year, which represents a net annual change of -13,184 hectares, corresponding to an annual deforestation rate of -0.36% with respect to the forest cover recorded in 2016 (INAB and CONAP 2023).

The project's target area covers the following four municipalities in the Department of Quiché: San Andrés Sajcabajá, San Antonio Ilotenango, San Bartolomé Jocotenango and Santa Cruz del Quiché, all of them located in the Upper Salinas River Watershed. These prioritized municipalities contain dry forests and pine-oak forests under varying degrees of degradation and are of vital importance for water filtration and landslide prevention (Jolon et al. 2009 in CONAP 2011, ICC 2018).

The loss of forest cover affects the quantity and quality of water available to supply the population, resulting in water shortages causing an impact on living standards. This situation has become particularly critical at the national level since Guatemala has been identified as one of the planet's most vulnerable countries to extreme weather events and other consequences of climate change.

Over the last 25 years, the Government of Guatemala through the National Forest Institute (INAB) has been striving to maintain and manage forests in strategic water catchment and regulation areas, through the implementation of programs and projects aimed at strengthening and improving forest management, such as the Forest Incentives Program (PINFOR) which ended in 2016 after 20 years of operation, the Forest Incentives Program for Small Forest or Agroforestry Landholders (PINPEP) and the PROBOSQUE Program established under the Law on the Promotion of Forest Establishment, Recovery, Restoration, Management, Production and Protection in Guatemala. The latter two are currently in force, and have to date promoted a total of 52,489 projects under different modalities, covering an area of 526,368 hectares under management with an investment of more than US$471 million.

Water for People (WFP) operates in 9 countries globally, including Honduras, Guatemala, Peru and Bolivia in Latin America as well as Malawi, Rwanda, Tanzania and Uganda in Africa, and India in Asia. It has operated in Guatemala since 2007, to facilitate water access for local communities in the Department of Quiché, more specifically in the Upper Salinas River Watershed, in the western highlands of Guatemala. This service is directly associated with forests through water resource management.

According to the forest cover dynamics study for 2016-2020, the Department of Quiché has had an annual loss of 805.2 hectares of forest, which represents a deforestation rate of -0.29% per year. This decrease is mainly due to agricultural encroachment, illegal logging, and the high incidence of forest fires. In recent years, Quiché has become the department most affected by fire-related loss of forest cover, with a total of 1,974 hectares impacted in 2023 (CONRED). This forest degradation process has had several important effects, including:

a) Degradation of forests in water catchment, regulation and recharge forest lands;
b) Reduction of quality and quantity of water available to the population in the Department.

The project "Protection and restoration of forest lands for water catchment, regulation and recharge in the Upper Salinas River Watershed, Guatemala, as a climate change adaptation measure to ensure water supply for the Guatemalan population" is an effort to help solve the above problem. This is a local project, since its work will focus mainly on four municipalities in the Upper Salinas River Watershed in the Department of Quiché, implementing actions aimed at the conservation and restoration of areas of high to very-high water recharge rates in these

municipalities, as well as the establishment of compensation mechanisms for water environmental services that help improve water quality and quantity for the population.

Water For People (WFP) will be the executing agency of this project; to this end, it will take on responsibility for the coordination and production of outputs, ensuring compliance with the main indicators and assumptions described in the logical framework matrix of this proposal. Furthermore, the project will receive technical support from the National Forest Institute (INAB) as the collaborating agency, with direct involvement from the target municipalities and communities, which will be responsible for following up on future actions to ensure the continuity and sustainability of the outcomes achieved through this project.

Development and specific objectives:

The project's development objective is: "Contribute to the management, protection and restoration of forest resources in high to very high-water recharge areas to help ensure water security in four municipalities in the Upper Salinas River Watershed in the Department of Quiché.

The specific objectives of the project are:

1. Ensure the conservation and restoration of forest areas in water recharge zones and implement compensation mechanisms for environmental services to increase people's resilience in the target municipalities.
2. Strengthen local governance for the integrated management of water resources to contribute to the supply of water for human consumption in the target municipalities.

Beneficiaries and Outcomes:

The main beneficiaries will be 100 communities located in the Upper Salinas River Watershed, in the municipalities of San Antonio Ilotenango, San Andrés Sajcabajá, San Bartolomé Jocotenango and Santa Cruz del Quiché.

Expected outcomes at project completion are as follows:

- **Conservation and restoration of 800 hectares in high to very high-water recharge areas in the Upper Salinas River Watershed.**
- **Improvement of water quantity and quality for human consumption in 100 communities located in the participating municipalities.**
- **Establishment of 2 compensation mechanisms for water environmental services in the Upper Salinas River Watershed.**
- **Strengthening of water resource governance through the local organization of communities in the area of intervention.**

Implementation approaches and methods and stakeholder involvement:

Project activities will be implemented by strengthening the capacities of Water For People and of key partners in project implementation, particularly INAB and municipal technical offices dealing with forest and water resources. The project will be based on a participatory approach involving stakeholders/beneficiaries and strengthening the capacity of landowners and landholders in high to very high-water recharge areas, as well as water project beneficiaries.

In the implementation of this approach, the project will carry out the following actions:

a. **Strategic partnerships:** Work meetings will be held with municipal authorities, government institutions (associated with water and forest issues), technicians from municipal forest offices (*Oficinas Forestales Municipales*–OFM), technicians from Municipal Water and Sanitation Offices (*Oficinas Municipales de Agua y Saneamiento*–OMAS) and representatives of water committees (service providers), to establish the mechanisms for coordination and effort alignment.

b. **Protection and restoration of degraded forest lands in the Upper Salinas River Watershed:** degraded forest lands will be identified in areas of high to very high-water recharge rates to develop protection and restoration management plans to benefit from forest incentive programs;

c. **Monitoring of water quantity and quality in the communities that are running water harvesting projects for consumption:** Annual monitoring of the quantity (gauging) and quality (bacteriological testing) of water sources used by the communities.

d. **Strengthening of the Municipal Water and Sanitation Offices (OMAS) and Municipal Forest Offices (OFM):** This will be done by providing equipment and inputs to carry out water quantity and quality monitoring and other activities related to the protection and restoration of degraded areas in the Upper Salinas River Watershed. In addition, the project will provide training on forest and water resource issues.

e. **Establishment of compensation mechanisms for water environmental services:** Potential sites will be identified for the establishment of compensation mechanisms and negotiation with municipal authorities and community and private sector leaders, to eventually establish two compensation mechanisms.

f. Technical and financial sustainability: Sustainability will be ensured by strengthening the installed capacity of municipal agencies, communities and government institutions involved in forest and water management through the provision of equipment and technical training. In addition, protection and restoration areas will be integrated into government financial mechanisms, such as forest incentive programs, thus ensuring the long-term continuity and sustainability of the project.

Sustainability of project outcomes:

The protection and restoration of areas of high to very high-water recharge significance will contribute to improving the quantity and quality of water in the sources supplying the communities of the four target municipalities in the Upper Salinas River Watershed. By involving the communities in these actions, their commitment to the conservation of natural resources on which they depend for their livelihoods will be reinforced.

The strengthening of the Municipal Water and Sanitation Offices (*Oficinas Municipales de Agua y Saneamiento* –OMAS) will enable local communities to continuously monitor water quantity and quality, thus ensuring autonomous local management. In addition, the Municipal Forest Offices (*Oficinas Forestales Municipales* –OFM) will follow up on the areas benefiting from forest incentives, thus guaranteeing long-term technical support.

Compensation mechanisms for environmental services will promote cooperation agreements between water users and landowners in water recharge areas, thus strengthening community collaboration. This will guarantee the sustainability of forest cover and associated water supply, while encouraging participatory and sustainable management of water resources.

Institutional sustainability:

In Guatemala, INAB is the government institution responsible for forests outside of protected areas and for implementing public policy instruments such as the PINPEP and PROBOSQUE forest incentive programs, which promote forest management, restoration and conservation, with regulations establishing special management for the upper reaches of watersheds and high and very high-water recharge areas.

INAB will serve as a collaborating agency in this project and through its Department for the Conservation of Strategic Forest Ecosystems (CEFE) and its Regional Directorate VII, in the Northwestern Region, **it will promote compensation mechanisms and incentive modalities, providing technical assistance and financial support to ensure the implementation of the project in the field.**

Financial sustainability:

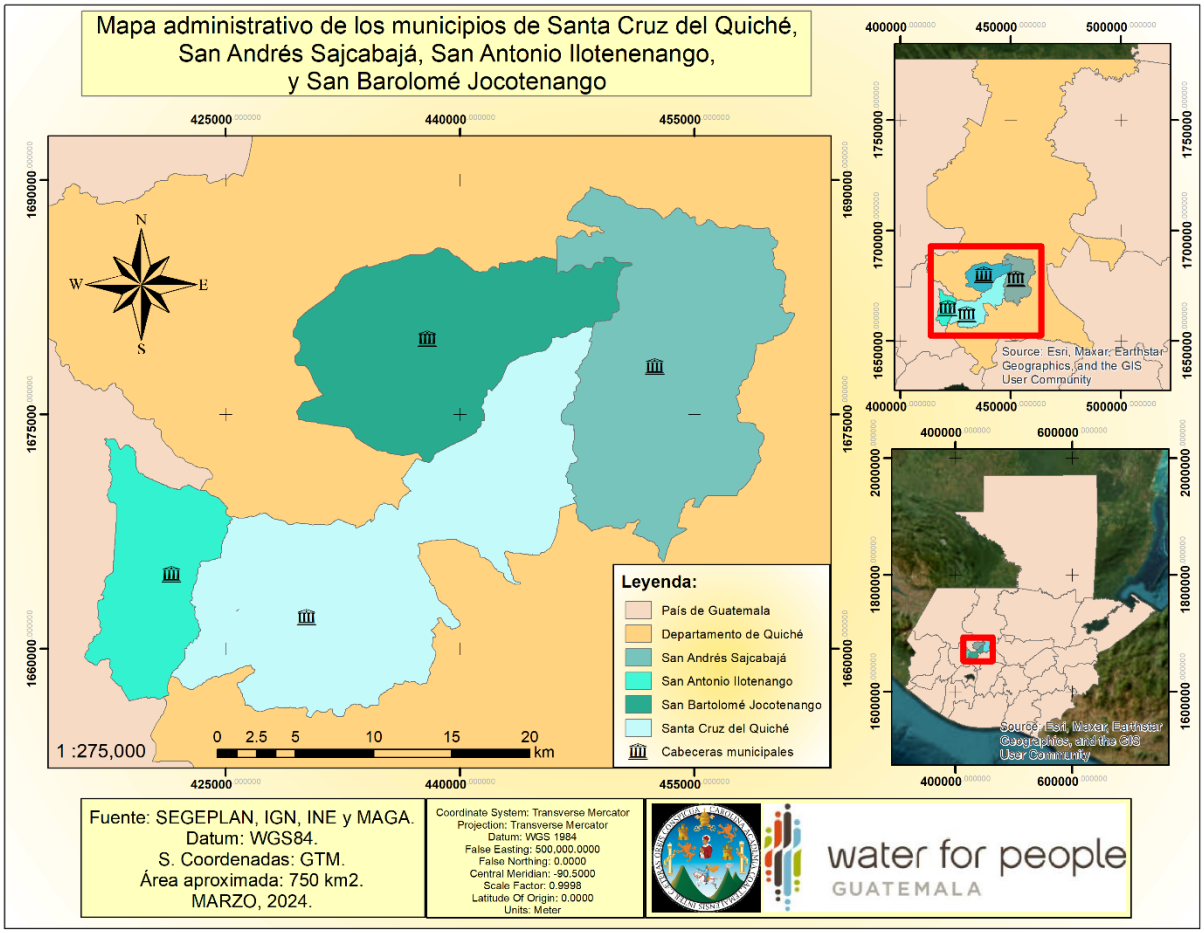
Water For People develops project initiatives and implements them in the field, supporting institutions under an efficient and transparent management approach that guarantees the appropriate use of the resources obtained. Projects are aimed at facilitating water supply in its areas of action, as well as promoting sustainable sanitation. Furthermore, at the community and municipal levels, it promotes and incorporates water resource management into system sustainability, through a diversity of actions such as payment of fair fees, covering the costs of water system administration, operation and maintenance, integrated watershed services and savings to cover the costs of system replacement, as a way to ensure that water sources are sufficient for the population; it also engages the community in integrated management to restore, maintain and increase vegetation cover in upper, middle and lower micro-watersheds.

Complementary to these actions, forest incentives will provide financial support to facilitate the implementation of protection and restoration initiatives in areas of high to very high-water recharge significance over the next 10 years, thus guaranteeing the sustainability of planned interventions. Furthermore, compensation mechanisms for environmental services will make it possible to establish financial and/or in-kind contributions, providing ongoing support for the conservation and restoration of target areas, and ensuring their long-term preservation.

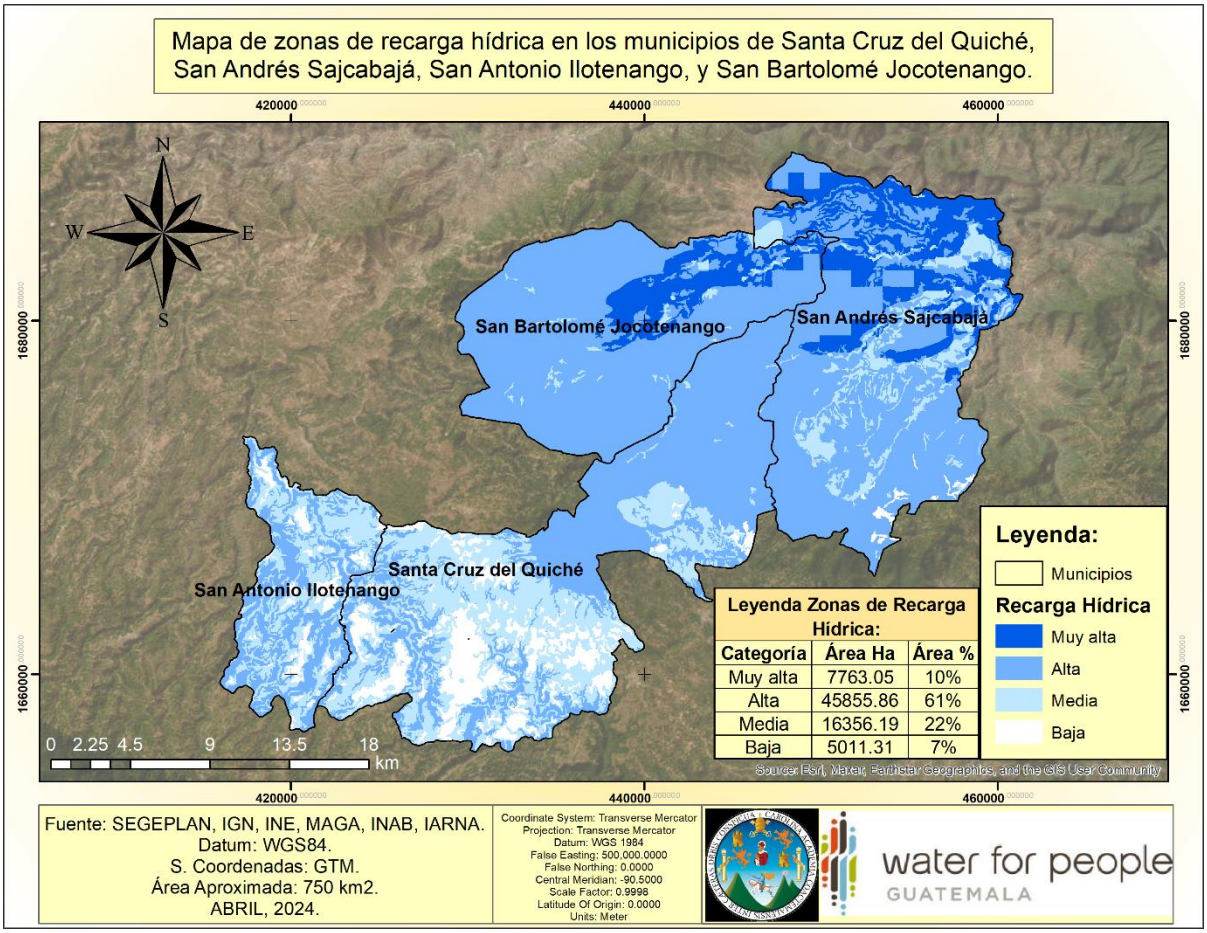
LIST OF ABBREVIATIONS AND ACRONYMS

CC	Climate change
CEFE	Departamento Conservación de Ecosistemas Forestales Estratégicos de INAB *(INAB's Department of Conservation of Strategic Forest Ecosystems)*
INAB	Instituto Nacional de Bosques *(National Forest Institute)*
ITTO	International Tropical Timber Organization
MAGA	Ministerio de Agricultura, Ganadería y Alimentación *(Ministry of Agriculture, Livestock and Food)*
NGOs	Non-governmental organizations
OFM	Oficina Forestal Municipal *(Municipal Forest Office)*
OMAS	Oficinas Municipales de Agua y Saneamiento *(Municipal Water and Sanitation Offices)*
PINPEP	Programa de Incentivos Forestales para Poseedores de Pequeñas Extensiones de Tierras de Vocación Forestal o Agroforestal *(Forest Incentives Programme for Small Forest and Agroforestry Landholders)*
PROBOSQUE	Ley de Fomento al Establecimiento, Recuperación, Restauración, Manejo, Producción y Protección de Bosques en Guatemala *(Law on the Promotion of Forest Establishment, Recovery, Restoration, Management, Production and Protection in Guatemala)*
TFCRH	Forest lands for water catchment, regulation and recharge
WFP	Water For People
WFPG	Water For People – Guatemala

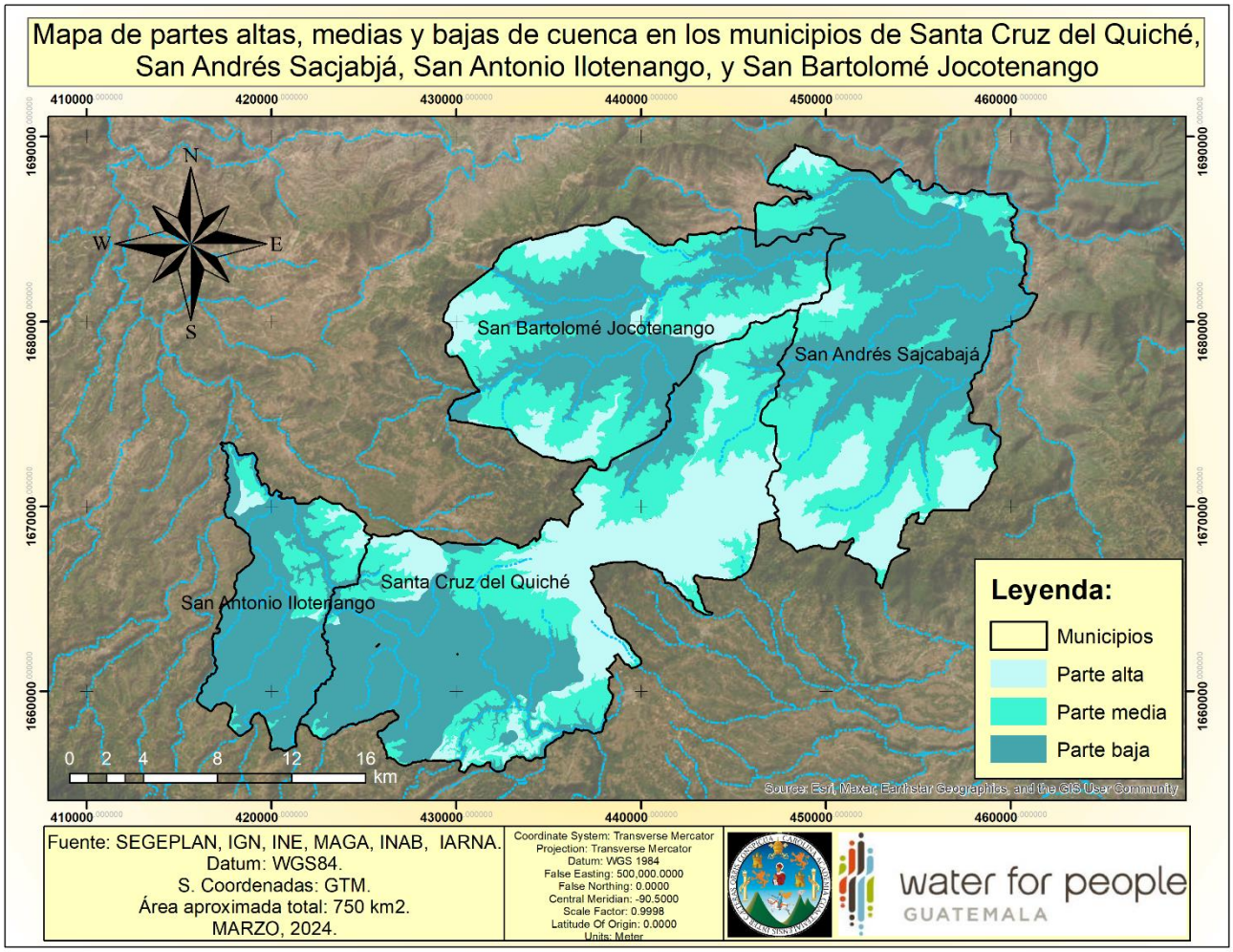
MAP OF PROJECT AREA



MAP OF FOREST LANDS FOR WATER CATCHMENT, REGULATION AND RECHARGE IN THE PROJECT'S TARGET AREA



MAP OF UPPER WATERSHED SECTIONS IN THE PROJECT AREA



PART. 1 PROJECT CONTEXT

1.1 Origin

According to the forest cover dynamics map for 2016-2020, Guatemala has an estimated forest cover of 3,601,567 hectares, amounting to 33.3% of the national territory, with a gross loss of 61,098 hectares of forest per year, and a forest cover restoration of 47,915 hectares per year, which represents a net annual change of -13,184 hectares, corresponding to an annual deforestation rate of -0.36% with respect to the forest cover recorded in 2016 (INAB and CONAP 2023).

The loss of forest cover affects the quantity and quality of water available to supply the population, resulting in water shortages causing an impact on living standards. This situation has become particularly critical at the national level since Guatemala has been identified as one of the planet's most vulnerable countries to extreme weather events and other consequences of climate change. Water resources are under increasing pressure from climate change and other global factors, thus disrupting rainfall patterns, humidity, river flows and groundwater recharge.

According to the Intergovernmental Panel on Climate Change (IPCC, 2021), continued global warming is expected to further intensify the water cycle, including its variability, precipitation and severity of wet and dry events, which will consequently have negative impacts on natural and economic systems. Poor soil and water management practices, such as deforestation and forest fires, among others, are responsible for many ecosystem degradation processes –such as erosion and sediment generation– that result in a decline in water security for the population.

The role of forests in water catchment, regulation and recharge areas is clear; it is therefore important to promote the protection, management and restoration of those areas where forests have been degraded, especially areas that are considered to be of high to very high-water recharge significance. As a result, the Government of Guatemala, through the National Forest Institute (INAB), has been striving to maintain and conserve forests in strategic water catchment and regulation areas, by implementing forest incentive programs aimed at strengthening and improving forest management, including the PINPEP and PROBOSQUE Programmes.

The project's area of influence extends over four municipalities in the Upper Salinas River Watershed that are part of the dry corridor in the Department of Quiché. The proposed area is affected by loss of forest cover due to the high occurrence of forest fires, deforestation, and land use changes, among other factors, causing the degradation of forest-soil-water resources.

Water For People (WFP) is an organization operating in the proposed municipalities with the aim of supplying water to the neediest populations. To date, it has implemented 270 water systems that benefit more than 222,000 people, all built under the *Total Coverage Forever Model* (*Modelo Cobertura Total Para Siempre*–CTPS). This model aims to provide sustainability to water systems by promoting various actions, including integrated water resource management, which involves encouraging the proper management of high- to very-high-water recharge areas and fostering actions focused on the forest-soil-water link. Given the capacity of ecosystems to provide these goods and services, the project, through water resource management, will implement activities aimed at managing, protecting and restoring different types of ecosystem services in order to contribute to people's adaptation to climate change.

The project **"Protection and restoration of forest lands for water catchment, regulation and recharge in the Upper Salinas River Watershed, Guatemala, as a climate change adaptation measure to ensure water supply for the Guatemalan population"** is an effort to help solve the above problem. This is a local project, since its work will focus mainly on four municipalities in the Upper Salinas River Watershed in the Department of Quiché, implementing actions aimed at the protection, management and restoration of areas of high to very high-water recharge rates in these municipalities, as well as the establishment of compensation mechanisms for water environmental services that facilitate the governance of water resources, thus ensuring their sustainability.

The project is directly linked to other ITTO-funded projects, such as the project "Development of a Forest Landscape Restoration Program in Guatemala", which was based on ITTO guidelines. This project aimed to improve forest landscape restoration actions through the implementation of a forest restoration mechanism, with the participation of key stakeholders in prioritized strategic ecosystems.

Direct project benefits include the development of tools and capacity building in target communities to implement forest landscape restoration mechanisms, facilitating their replication at the national level and generating economic development opportunities. In addition, the restoration of degraded forests and lands offers an effective solution to reduce socioenvironmental vulnerability in target areas, as well as an option for climate change mitigation and adaptation.

Restored areas, in turn, will once again play a crucial role in providing essential goods and services for the livelihoods of the communities involved, encouraging their participation in the conservation and sustainable management of target areas through the project.

1.2 Relevance

1.2.1 Conformity with ITTO's objectives and priorities

The forest sector is considered to be a strategic sector of Guatemala's economy and is a key element in achieving the objectives of water resource use and management and the conservation of other related natural resources, which define environmental sustainability.

The actions proposed in this project will contribute to the development of new environmental processes that will allow the communities to improve the protection, management and restoration of forests in the intervention area and thus improve the quality, quantity and continuous availability of water resources in the area; these actions are in line with the following ITTO's objective as set out in the International Tropical Timber Agreement (ITTA) 2006:

"Promoting better understanding of the contribution of non-timber forest products and environmental services to the sustainable management of tropical forests with the aim of enhancing the capacity of members to develop strategies to strengthen such contributions in the context of sustainable forest management, and cooperating with relevant institutions and processes to this end".

The project is also consistent with the priorities in ITTO's action plan, specifically: "Reduce tropical deforestation and forest degradation and enhance the provision of environmental services". In particular, the project is consistent with the thematic programme for reducing deforestation and forest degradation and enhancing environmental services in tropical forests (REDDES). The objective of this thematic programme is to strengthen the capacity of ITTO developing member countries and their stakeholders to reduce forest degradation; maintain and enhance environmental services of tropical forests; contribute to the social and economic sustainability through forest restoration and rehabilitation, as well as payments for forest-based environmental services; and enhance adaptation and resilience of tropical forests to the effects of climate change. The activities that can be supported through the REDDES Thematic Programme, and which are taken into consideration in this project, include:

- Improvement and enhancement of data and knowledge on forest environmental services;
- Creation of enabling conditions for reducing deforestation and forest degradation and establishing mechanisms for the payment of environmental services.

1.2.2 Relevance to the submitting country's policies

Guatemala's forest policy[1] is based on principles such as: "Forests have a crucial role in satisfying the demand for goods, maintaining ecological processes, protecting catchment basins and water resources (water-forest link), as well as ensuring the conservation of biodiversity and genetic resources". Furthermore, this policy is the guiding framework to make production use compatible with the conservation of forest resources and to ensure that the use of land is consistent with its suitability.

The Forestry Law (Legislative Decree No. 101-96), in its Article 47 – 'Watersheds', states the following: *The removal of forests in the upper reaches of forested watersheds is banned, especially those located in water recharge areas that supply water sources, which will be afforded special protection. Consequently, these areas shall only be subject to sustainable forest management*.

Furthermore, special regeneration and rehabilitation programmes must be developed for deforested areas in significant water catchment zones in state, municipal or private lands.[2]

1.3 Target Area

1.3.1 Geographic location

This is a local project as it will be implemented in the Department of Quiché, which is one of the departments characterized by having extensive forest areas for water catchment, regulation and recharge in the 'high' and 'very high' categories. The project target area covers the Municipalities of San Antonio Ilotenango, Santa Cruz del Quiché, San Bartolomé Jocotenango and San Andrés Sajcabajá, all located in the Upper Salinas River Watershed.

1.3.2 Social, cultural, economic and environmental aspects

The Department of Quiché is located in the northwestern region of the country, covering an area of 8,378 km² (7.67% of the national territory), with approximately 42.5% of its land under forest cover. The project's area of intervention covers the following four municipalities: San Antonio Ilotenango, Santa Cruz del Quiché, San Bartolomé Jocotenango and San Andrés Sajcabajá, all located in the upper reaches of the Salinas River Watershed.

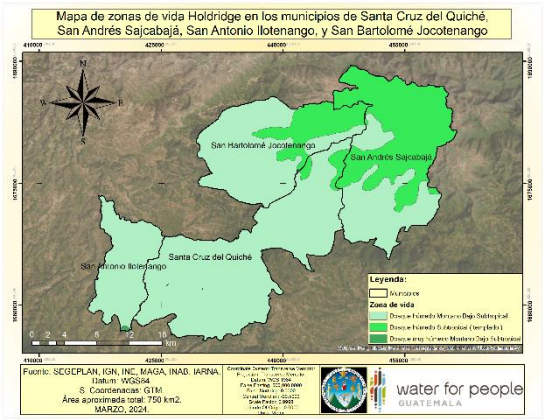
According to the latest population census, these four municipalities have an estimated population of 142,418 people, **51% of whom are women and 49% are men** (INE 2018). The Mayan ethnic representation is 89.4% belonging mostly to the K'iche ethnic group. According to data from the National Survey of Living Conditions, 41.8% of the population in the Department of Quiché is living in extreme poverty (ENCOVI 2014).

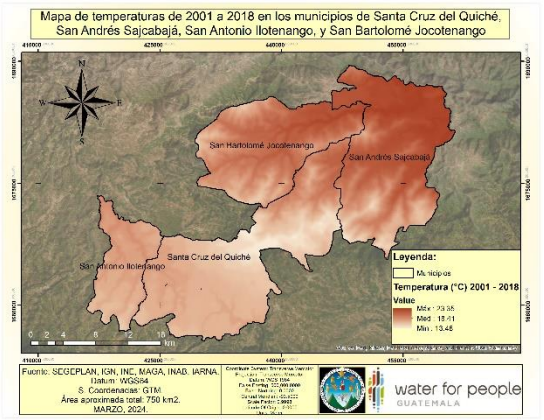
The intervention area is located in the central region of the Department of Quiché, in north-central Guatemala, mostly within the Dry Corridor, with a small part in the highlands of Santa Cruz Quiché. Altitudes vary between 1,200 and 2,200 meters above sea level, which generates a warm climate in the lowlands and temperate to cold weather in the highlands. The average annual temperature is 16°C, with minimum temperatures of 2°C and maximum temperatures of 28°C.

Rainfall ranges from 1,000 mm per year in the Dry Corridor to 2,200 mm in the highlands of Santa Cruz Quiché, with an annual average of approximately 1,500 mm. The rainy season is between May and October.

[1] Forest Policy of Guatemala. MAGA/PAFG/INAB/CONAP. Guatemala, 1999
[2] Forestry Law, Legislative Decree No. 101-96. MAGA/PAFG/INAB. Guatemala, 1997.

The area covers diverse life zones, with a predominance of subtropical low montane rainforest, which covers 68.75% of the land area, followed by temperate subtropical rainforest, accounting for 31.25%.



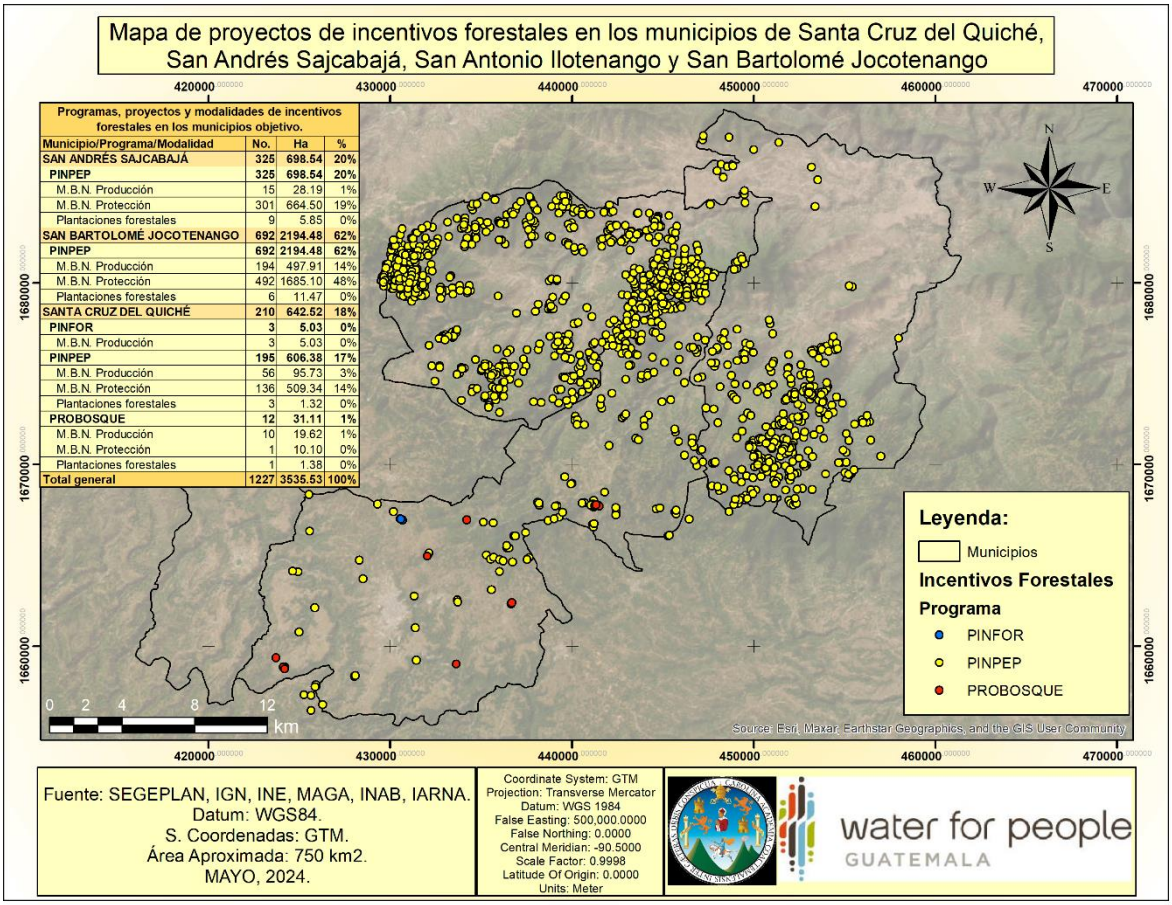


The main economic activities include subsistence agriculture on smallholder lands. In recent years, economic activities have diversified with the trade and export of horticultural and timber products, for both domestic and international markets, showing a greater capacity to generate employment, with an employment-to-population ratio of 58% (ENCOVI 2014). During certain months of the year, there is migration to the southern coast of the country to harvest coffee or cut sugarcane as a source of income for the families.

In terms of water resources, 83.3% of the population of the Department of Quiché and its municipalities have access to water supply sources. However, this situation is being affected by climate change, particularly due to the decrease in the availability of surface and ground water.

Based on the annual monitoring carried out by Water For People in the municipalities, the levels of water supply coverage through municipal water systems are as follows: Santa Cruz del Quiché - 77.5%, San Bartolomé Jocotenango - 89.9%, San Antonio Ilotenango - 74.5% and San Andrés Sajcabajá - 88.7%. All these municipalities have Municipal Water and Sanitation Offices as well as Municipal Forest Offices.

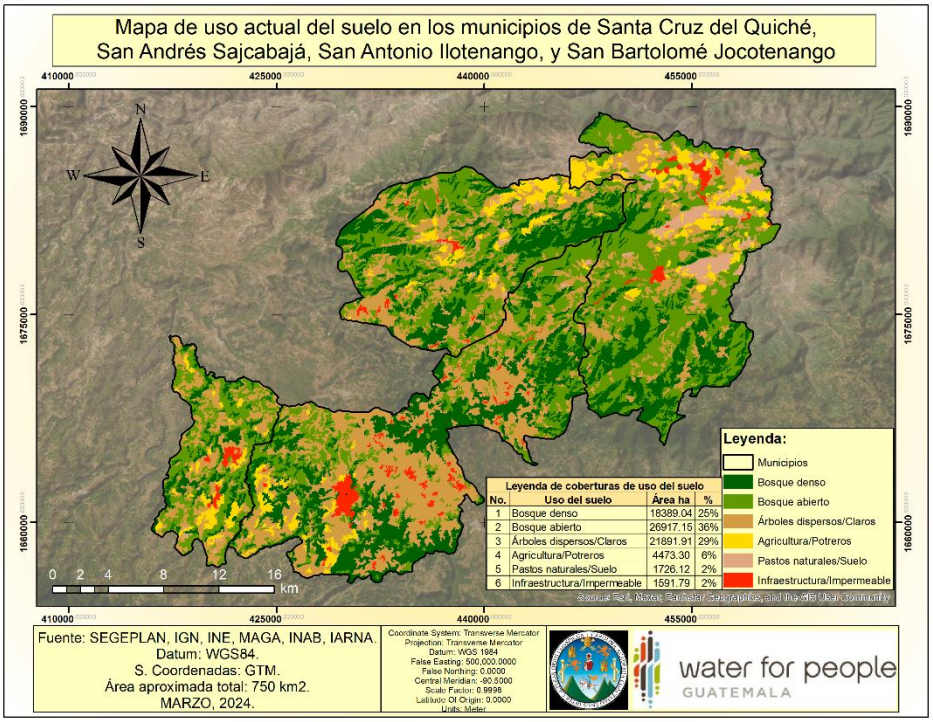
In relation to the management, protection and restoration of forests in the target municipalities, INAB has promoted forest incentive programs and has achieved important results, which are described in the following table:

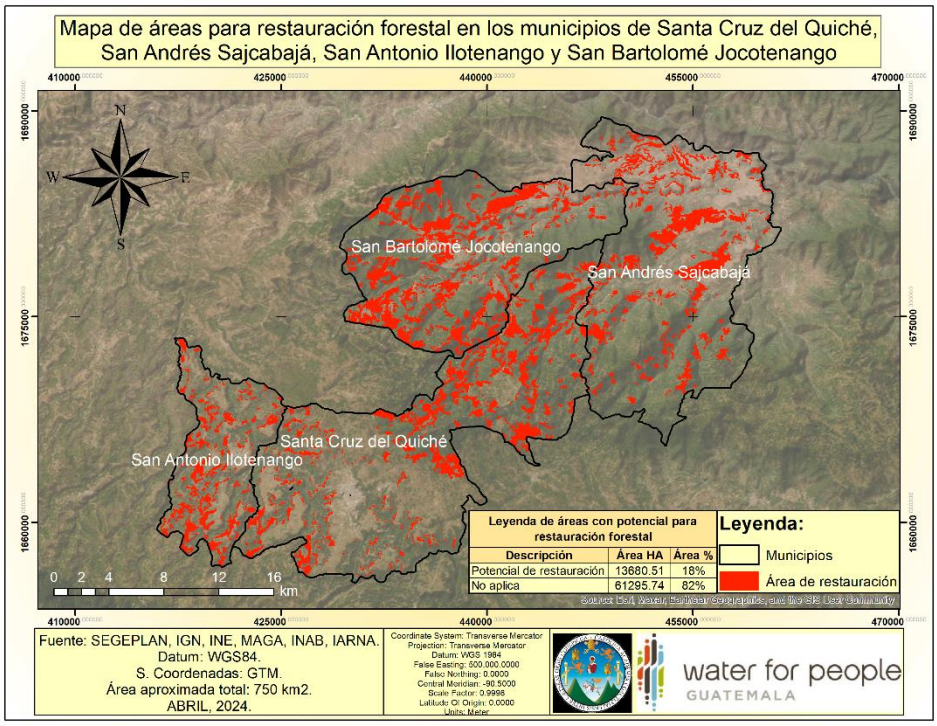


Source: National Forest Institute, 2023

Regarding the current land use in the intervention area, 25% of the territory, amounting to 18,389 hectares, is covered by dense forest, while 36% has open forest cover. The rest of the territory has a combination of scattered trees in clearings, uncovered land, croplands and other uses.

An analysis of this cover was carried out against the land use capacity map for the area. As a result, a total of more than 13,000 hectares was identified as having a high restoration potential in the target municipalities. According to their land use capacity, these areas should be covered by forest, but are currently under a land use conflict as they are being overutilized, as illustrated in the following maps.


Mapa de uso actual del suelo en los municipios de Santa Cruz del Quiché,
San Andrés Sajcabajá, San Antonio Ilotenango, y San Bartolomé Jocotenango
410000
425000
440000
455000
1690000
1675000
1660000
N
W
E
S
0 2 4 8 12 16
km
Leyenda:
Municipios
Bosque denso
Bosque abierto
Árboles dispersos/Claros
Agricultura/Potreros
Pastos naturales/Suelo
Infraestructura/Impermeable
Leyenda de coberturas de uso del suelo
No. | Uso del suelo | Área ha | %
1 | Bosque denso | 18389.04 | 25%
2 | Bosque abierto | 26917.15 | 36%
3 | Árboles dispersos/Claros | 21891.91 | 29%
4 | Agricultura/Potreros | 4473.30 | 6%
5 | Pastos naturales/Suelo | 1726.12 | 2%
6 | Infraestructura/Impermeable | 1591.79 | 2%
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Fuente: SEGEPLAN, IGN, INE, MAGA, INAB, IARNA.
Datum: WGS84.
S. Coordenadas: GTM.
Área aproximada total: 750 km2.
MARZO, 2024.
Coordinate System: Transverse Mercator
Projection: Transverse Mercator
Datum: WGS 1984
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: -90.5000
Scale Factor: 0.9998
Latitude Of Origin: 0.0000
Units: Meter
water for people
GUATEMALA


Mapa de áreas para restauración forestal en los municipios de Santa Cruz del Quiché,
San Andrés Sajcabajá, San Antonio Ilotenango y San Bartolomé Jocotenango
410000
425000
440000
455000
470000
1690000
1675000
1660000
N
W
E
S
San Bartolomé Jocotenango
San Andrés Sajcabajá
Santa Cruz del Quiché
San Antonio Ilotenango
0 2 4 8 12 16
km
Leyenda de áreas con potencial para restauración forestal
Descripción | Área HA | Área %
Potencial de restauración | 13680.51 | 18%
No aplica | 61295.74 | 82%
Leyenda:
Municipios
Área de restauración
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Fuente: SEGEPLAN, IGN, INE, MAGA, INAB, IARNA.
Datum: WGS84.
S. Coordenadas: GTM.
Área aproximada total: 750 km2.
ABRIL, 2024.
Coordinate System: Transverse Mercator
Projection: Transverse Mercator
Datum: WGS 1984
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: -90.5000
Scale Factor: 0.9998
Latitude Of Origin: 0.0000
Units: Meter
water for people
GUATEMALA

1.4 Expected outcomes at project completion

Expected outcomes at project completion are as follows:

- **Conservation and restoration of 800 hectares in high to very high-water recharge areas in the Upper Salinas River Watershed.**
- **Improvement of water quantity and quality for human consumption in 100 communities located in the participating municipalities.**
- **Establishment of 2 compensation mechanisms for water environmental services in the Upper Salinas River Watershed.**
- **Strengthening of water resource governance through the local organization of communities in the area of intervention.**

PART 2. PROJECT RATIONALE AND OBJECTIVES

2.1 Rationale

Guatemala is committed to contributing to the achievement of the Sustainable Development Goals (SDGs), through the National Development Priorities (NDPs). This project will contribute to the achievement of SDG 3 and SDG 6, related to good health and to clean water and sanitation respectively, and SDG 15, related to life on land, as well as the country's NDP priority related to access to water and management of natural resources. Additionally, governance for social management of water has become one of the necessary elements for the sustainability of livelihoods and productivity. Given the focus of the project's expected outcomes, the selection criteria for ecosystem-based adaptation interventions also apply, including a) helping people to adapt to climate change, b) using biodiversity and ecosystem services, and c) be part of a global adaptation strategy at different levels of governance from the local level (GIZ 2020).

In its efforts to help achieve total coverage forever and facilitate access to safe water services in the communities, Water For People has supported the development of strategic planning instruments in the municipalities, including Water Resource Management Plans, which provide for the protection, conservation and restoration of forest cover in micro-watersheds where community water services originate.

Furthermore, INAB has defined forest incentive modalities in the PROBOSQUE Law, which focuses on promoting the restoration of degraded areas and the conservation and protection of those areas that contain water sources supplying communities. INAB also has an Environmental Services Unit that promotes and establishes compensation mechanisms including local agreements to ensure water supply to the population under a sustainability modality.

Over the last few years, the National Forest Institute (INAB) has endeavoured to maintain and conserve forests in areas of strategic significance for water catchment and flow regulation through the development of programs and projects to strengthen and enhance forest management. However, as a result of the intense pressure of climate change in the country, immediate actions are required to protect and conserve forests in watershed areas, and to prevent and adapt to current and future conditions arising from climate change, in particular actions to ensure water quality and quantity for the country's population.

The implementation of the project will also contribute to municipal government initiatives to manage water resources efficiently in order to ensure sustainable ongoing water service supply to the population.

2.1.1 Institutional set-up and organizational issues

Article 253 of Guatemala's Political Constitution stipulates that Municipal Councils will deal with local public services, including drinking water and sanitation.

The Municipal Code, Decree No. 12-2002, and its Amendment, Decree No. 56-2002, both passed by the National Congress, also clearly indicate in Chapter 1, Title V, that municipal competences "to be enforced by a municipality, by two or more municipalities under agreement, or by a collective of municipalities", include, firstly: "a) Supply duly chlorinated drinking water to households; sewerage...".

Guatemala's Forestry Law (Decree No. 101-96) establishes that reforestation and forest conservation are a national priority in the interests of social development; to this end, it will promote forest development and sustainable management through the following objectives: "Reduce deforestation and agricultural encroachment in lands suitable for forestry, by increasing land uses based on land suitability and taking into consideration soil, topography and climate characteristics"; "Promote reforestation of forest areas that are currently not forested, to provide the country with the forest products it requires"; "Promote improved community living standards

by increasing the supply of forest goods and services to satisfy its basic needs (particularly water)".

Section 47 of the Forestry Law bans the removal of forests in the highlands of forested watershed areas, particularly those located in water catchment areas that supply water sources, which should be afforded special protection. Therefore, only sustainable forest management may be used in these areas. Moreover, special regeneration and rehabilitation programs must be developed for deforested areas in significant water recharge zones on state, municipal or private lands.

Water For People in Guatemala promotes water resource management through the development and implementation of tools that enable the communities to contribute to the efficient use of water, and the maintenance, restoration and enhancement of forest cover in micro-watersheds supplying water to the population. All these actions are consistent with and contribute to the provisions of the National Policy for Water and Sanitation and of the Forestry Law. To this end, Water For People has an office in Guatemala and, under the Integrated Water Resource Management component, it follows up on initiatives related to water resource management and, additionally, under the monitoring and evaluation component, and in coordination with the municipalities, it monitors the level of coverage in water services and the level of water quality reaching households. This structure and this coordination process will ensure the efficient implementation of the project.

2.1.2 Stakeholder analysis

Stakeholders were identified through consultations, workshops and interviews, and they collaborated in the development and analysis of the Problem Tree. Project users were identified as the government sector (including the Ministry of Public Health and Social Assistance – MSPAS and INAB), local governments (four municipalities), local communities, forest managers working in the Quiché area and society at large.

The beneficiaries of water projects implemented in these municipalities are a major stakeholder group, since in the short, medium and long terms they will benefit from the activities of forest resource monitoring, protection, conservation and restoration, and will have an impact on improved availability and quality of the water obtained from the sources they are currently using.

Group of stakeholders	Characteristics	Problems, needs or interests	Potential	Involvement in the project
Primary Stakeholders				
Water users	Demand for water for human consumption, irrigation and other uses. They are the most affected by the loss of forest cover in the upper and middle watershed and water recharge areas.	Increased demand due to population growth, and areas under irrigation. In most cases, they are already suffering from water supply shortages.	Interest in consuming good quality water Organization through local committees that manage water system administration, operation and maintenance. Willing and able to participate in water management activities	Primary beneficiary of the project
Government agencies	Responsible for enforcing legislation, but lack effective means and	Lack of effective joint instruments and plans.	Strong interest in the restoration of forest lands for water catchment and regulation, as	Direct involvement in project implementation

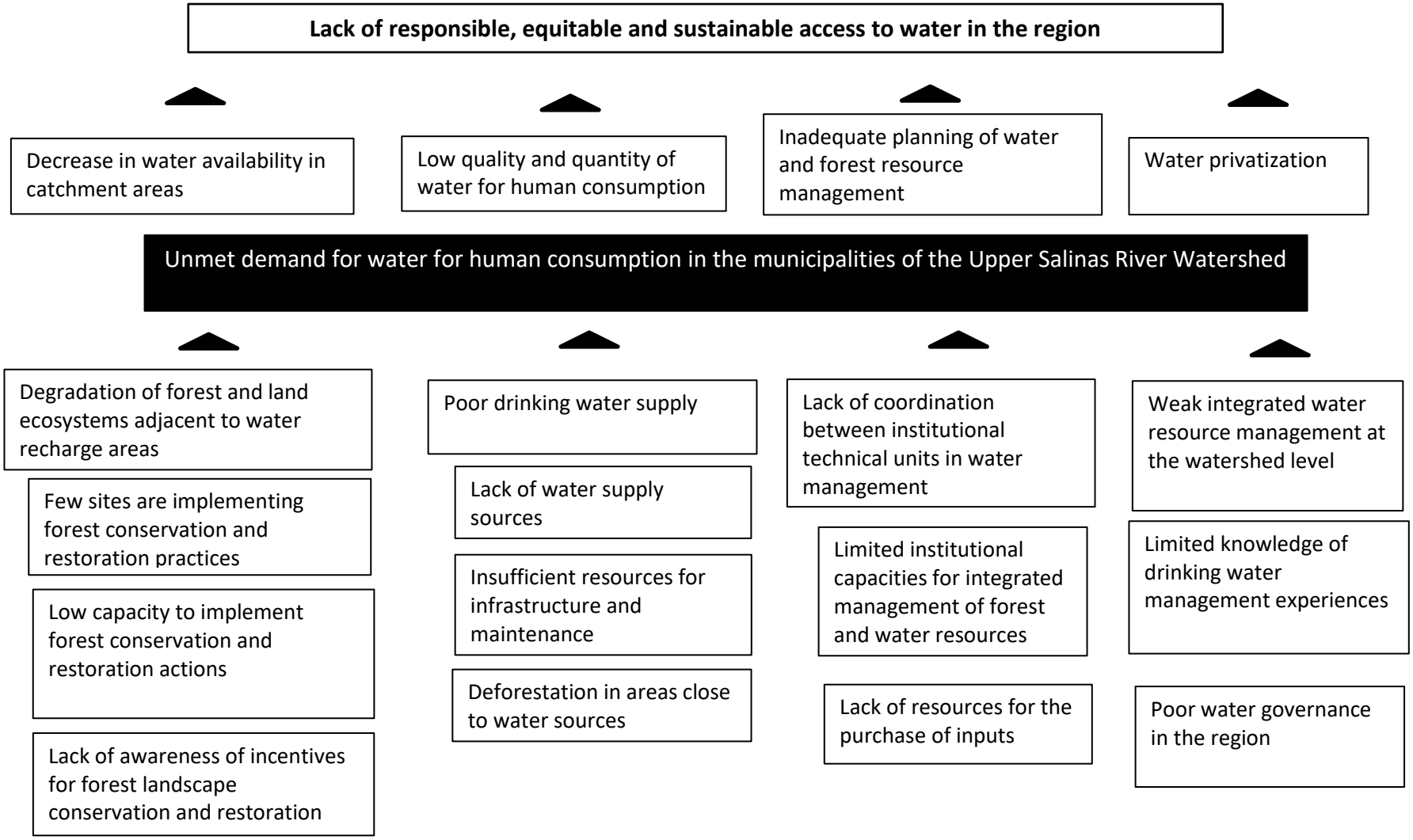
Group of stakeholders	Characteristics	Problems, needs or interests	Potential	Involvement in the project
	coordination to ensure compliance.		well as conservation and protection of natural resources, especially to generate water supply availability for the population	
Local governments	Have forest lands for water catchment and regulation that are used by the communities, as well as four Municipal Water and Sanitation Offices and four Municipal Forest Offices.	Strong interest in resource conservation and protection to reduce social conflicts and supply water to their population	May become excellent agents to boost community involvement in water resource management. Interested in managing projects for the protection of water sources	May provide community participation spaces
Secondary stakeholders				
NGOs	Deeply concerned about the lack of water resources for the population.	Unavailability of funds to implement water resource management activities	Strong links with local communities and willingness to support project implementation	Beneficiaries and active parties in promoting water resource management

2.1.3 Problem analysis

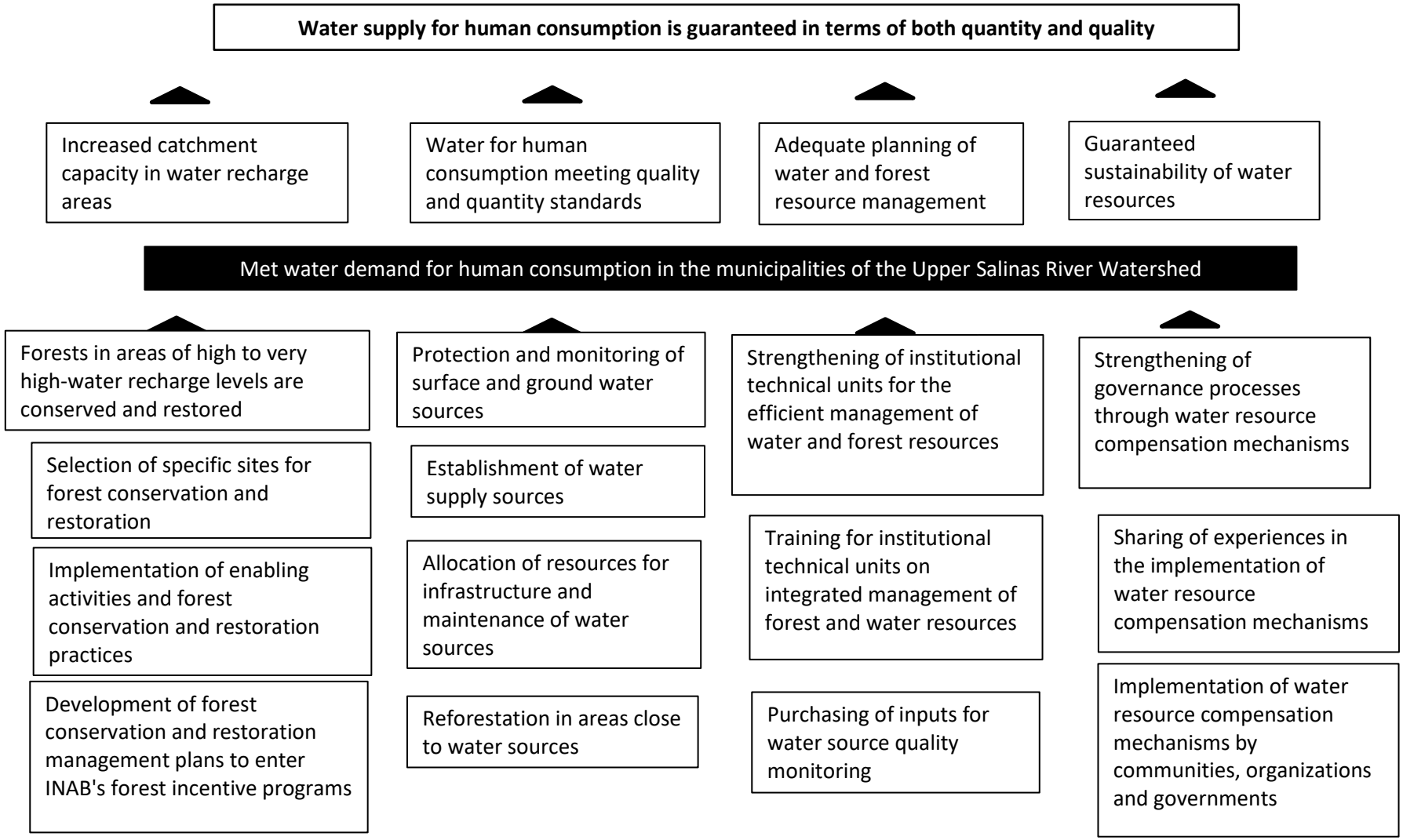
The unavailability of water resources for the population is affecting communities in the municipalities of the Upper Salinas River Watershed. This problem is compounded by the fact that most of the Quiché mountain areas that are of high and very high significance for water regulation have lost forest cover, or the existing cover is significantly degraded and does not allow the full water cycle to be completed in the area, resulting in soil erosion with the consequential lack of infiltration and percolation. In this respect, the project aims to deal with the following social, environmental and technical pressures:

a) Social pressures, to ensure water supply in sufficient quantity and quality, from sources that are being harnessed and used by the communities.
b) Environmental pressures, resulting from the loss of forest cover in forest lands located in areas of high and very high-water recharge significance.
c) Limited technical knowledge of local governments about water resource management, particularly in relation to the water-forest link.
d) In most cases, the benefits of forest restoration and protection incentives has not been linked to the protection of water sources that supply water to population centers.

Problem Tree



Objectives Tree



Logical Framework Matrix

INTERVENTION STRATEGY	MEASURABLE INDICATORS	MEANS OF VERIFICATION	KEY ASSUMPTIONS
DEVELOPMENT OBJECTIVE: Contribute to the management, protection and restoration of forest resources in high to very high-water recharge areas to help ensure water security in four municipalities in the Upper Salinas River Watershed in the Department of Quiché.	Empowerment at the municipal level through the implementation of Municipal Water and Sanitation Policies for the management of upper watershed areas and the protection of water recharge areas, with the aim of ensuring the continuity of these actions after project completion.	Agreements and/or memoranda of understanding signed for the protection and management of water sources Technical reports Audits	Political leaders, institutional officers, specialists, NGOs, communities and the private sector are involved and take ownership of project activities, replicating them in the long term in a participatory and inclusive manner.
SPECIFIC OBJETIVE 1: Protect and restore forested areas in high to very high-water recharge zones to increase people's resilience to climate change effects in the target municipalities.	Number of hectares under conservation in the Upper Salinas River Watershed and entered into INAB's forest incentive programs	Number of files submitted to INAB. List of beneficiaries with forest areas under restoration practices	Residents and owners of community and private lands are willing to improve the ecological conditions of the Salinas River Watershed.
SPECIFIC OBJECTIVE 2: Promote local governance for the integrated management of water and forest resources through the strengthening of local agencies and the implementation of compensation mechanisms for environmental water services.	Number of communities and people directly benefited	203,791 people are directly benefited 37,053 families (100 communities) are benefited	Beneficiaries comply with proper management, operation and administration procedures for integrated water resource management

INTERVENTION STRATEGY	MEASURABLE INDICATORS	MEANS OF VERIFICATION	KEY ASSUMPTIONS
Output 1. 800 hectares of forests in high to very high-water recharge areas are under conservation and restoration.	Number of hectares of forest under forest landscape restoration and conservation modalities.	500 hectares under different forest landscape restoration and conservation modalities	Individuals and/or families are willing, have the land and are socially motivated to conserve and restore the forest landscape.
	Number of forest nurseries established and under production	4 forest nurseries established, with a production of 75,000 plants per nursery	
	Number of hectares entered into INAB's forest incentive programs	300 hectares with management plans	
Output 2. 100 surface and ground water sources used by the population for human consumption are protected and monitored in terms of water quantity and quality.	Protection and reforestation of areas with water sources supplying the communities	100 water sources protected	People participate by undertaking initiatives independently of external institutions. Capacity building in the management of water systems, and allocation of resources.
	Number of water source protection plans at the municipal level	4 water source protection plans at the municipal level	
	Number of water quantity and quality monitoring procedures in water sources	200 monitoring procedures (100 per year)	
	Number of training workshops for water committees on operation and maintenance of water systems	50 training workshops (100 committees strengthened)	

INTERVENTION STRATEGY	MEASURABLE INDICATORS	MEANS OF VERIFICATION	KEY ASSUMPTIONS
	Development of a (long-term) sustainability strategy to promote an adequate water supply in terms of both quantity and quality.	**A sustainability strategy developed and disseminated among municipal governments and water service providers.**	**Municipal governments and the population participate in the formulation and implementation of the strategy.**
Output 3. 4 Municipal Water and Sanitation Offices (OMAS-DIMAS) and 4 Municipal Forest Offices (OFMs) have been strengthened with tools and inputs to enable them to carry out integrated water and forest resource management in their municipalities.	Number of municipal technical units strengthened Number of training workshops for municipal technical departments on integrated forest and water resource management	4 strengthened Municipal Water and Sanitation Offices (OMAS-DIMAS) 4 strengthened Municipal Forest Offices (OFMs) 8 training workshops (1/ municipality/ year)	Social involvement is consistent with the support provided by municipal technical units.
Output 4. Two compensation mechanisms for water environmental services are established in the project area, helping strengthen governance and ensure water resource sustainability in this area.	Tour to learn about experiences on established compensation mechanisms for environmental services Number of municipalities with established compensation mechanisms	1 tour at the national level 2 signed agreements on compensation mechanisms	Political, individual and collective willingness to implement compensation mechanisms.

2.2 Objectives

2.2.1 Development objective and impact indicators

Contribute to the management, protection and restoration of forest resources in high to very high-water recharge areas to help ensure water security in four municipalities in the Upper Salinas River Watershed in the Department of Quiché.

Long-term impact indicators are as follows:

- Beneficiary communities are implementing forest management, protection and restoration activities in degraded areas in high to very high-water recharge zones, as well as taking care of and monitoring water sources that supply the population.
- Empowerment at the municipal level through the implementation of Municipal Water and Sanitation Policies for the management of upper watershed areas and the protection of water recharge areas, with the aim of ensuring the continuity of these actions after project completion.

2.2.2 Specific objectives and outcome indicators

Specific objective 1
Protect and restore forested areas in high to very high-water recharge zones to increase people's resilience to climate change effects in the target municipalities.

At the end of the project, the following impact indicators will have been achieved:

- At least 800 hectares of forest landscape are under protection and/or restoration.
- 100 surface or ground water sources used by the population for human consumption are protected and monitored in terms of water quantity and quality.

Specific objective 2
Promote local governance for the integrated management of water and forest resources through the strengthening of local agencies and the implementation of compensation mechanisms for environmental water services.

At the end of the project, the following impact indicators will have been achieved:

- 37,053 families (100 communities) are directly benefited by the conservation of water recharge areas that supply their water sources.
- Two mechanisms are implemented to compensate for environmental water services

PART 3: DESCRIPTION OF PROJECT INTERVENTIONS

3.1 Outputs and activities

3.1.1 Outputs

Output 1. 800 hectares of forests in high to very high-water recharge areas are under conservation and restoration.

Output 2. 100 surface and ground water sources used by the population for human consumption are protected and monitored in terms of water quantity and quality, **and a (long-term) sustainability strategy has been developed to promote an adequate water supply in terms of both quantity and quality.**

Output 3. 4 Municipal Water and Sanitation Offices (OMAS-DIMAS) and 4 Municipal Forest Offices (OFM) have been strengthened with tools and inputs to enable them to carry out integrated water and forest resource management in their municipalities.

Output 4. Two compensation mechanisms for water environmental services are established in the project area, helping strengthen governance and ensure water resource sustainability in this area.

3.1.2 Activities and Inputs

Output 1. **800 hectares of forests in high to very high-water recharge areas are under conservation and restoration**

Activity 1.1 Prioritization of potential areas for the implementation of forest conservation and restoration actions.

Activity 1.2 Establishment and/or strengthening of at least 4 municipal or community nurseries for the production of native forest species to be used in water recharge areas.

Sub-activity 1.2.1*: Production of at least 75,000 plants per nursery/year*

Activity 1.3 Protection of forests and restoration of degraded lands in upper watershed and very high-water recharge areas.

Activity 1.4 Development and execution of management plans for protection or restoration of areas with and without forest cover in high to very high-water recharge and upper watershed areas.

Output 2. **100 surface and ground water sources used by the population for human consumption are protected and monitored in terms of water quantity and quality and a (long-term) sustainability strategy has been developed to promote an adequate water supply in terms of both quantity and quality**

Activity 2.1 Characterization of water sources located in high to very high-water recharge areas.

Activity 2.2 Annual monitoring of water quality in the systems supplying the communities in the project area.

Activity 2.3 Strengthening of water committees in the administration, operation and maintenance of the systems supplying water to the communities.

Activity 2.4 Protection and reforestation of high to very high-water recharge zones and areas where water sources supplying the communities are located.

Activity 2.5 **Development of a (long-term) sustainability strategy to promote an adequate water supply in terms of both quantity and quality.**

Output 3. **4 Municipal Water and Sanitation Offices (OMAS-DIMAS) and 4 Municipal Forest Offices (OFM) have been strengthened with tools and inputs to enable them to carry out integrated water and forest resource management in their municipalities**

Activity 3.1 Equipping and strengthening of OMAS-DIMAS to carry out water quantity and quality monitoring activities.

Activity 3.2 Equipping of OFMs to carry out protection and restoration activities in areas of high to very high-water recharge significance and upper watersheds.

Activity 3.3 Capacity building related to integrated management of forest and water resources (water quantity and quality), among others.

Output 4. **Two compensation mechanisms for water environmental services have enhanced water resource governance and ensured water resource sustainability**

Activity 4.1 Identification of potential sites for the establishment of compensation mechanisms for water environmental services.

Activity 4.2 Tour to learn about experiences on compensation mechanisms for environmental services established in other areas of the country (aimed at municipal authorities, community members and municipal technicians).

Activity 4.3 Diagnosis, design, negotiation and establishment of two compensation mechanisms for water environmental services in the project areas to strengthen governance and ensure the sustainability of water resources.

3.2 Strategic approaches and methods

Project activities will be carried out by strengthening the capacity of Water For People, INAB, Municipal Water and Sanitation Offices and Municipal Forest Offices, in particular, and in general, a diversity of forest and water and sanitation sector stakeholders who operate in and cover the municipalities where the project will be implemented. The project will apply a participatory approach including all key stakeholders involved, and will develop mechanisms to help achieve water resource sustainability in the area. This will include meetings, dissemination / validation workshops and field visits. Project implementation will involve the following steps to ensure the use of this approach:

- **Strategic partnerships:** A set of workshops and meetings will be held with key community stakeholders, local governments and government institutions to plan and coordinate the identification, prioritization, implementation, monitoring and evaluation of project activities.

- **Monitoring of water quality in the communities: With the support of qualified personnel, the capacities of municipality staff and water service managers will be strengthened so as to enable them to annually monitor water systems from water sources located in the project intervention area to assess the level of water quality and quantity (bacteriological analysis and flow rate measurement) being received by the population.**

- **Implementation of activities and processes for the protection, conservation, and restoration of areas of very high water significance: the activities to be implemented will mainly help maintain, conserve, restore and increase forest cover in areas of high to very high water recharge rates in order to ensure the quantity and quality of water supply. As part of these activities, the quantity and quality of water from springs in degraded areas under restoration will be monitored.**

- **Consultation and validation processes for the development and implementation of compensation mechanisms for water-related environmental services:** Workshops and meetings will be held with technical personnel of the institutions involved, water users and other stakeholders, to analyze and validate the potential of sites for the establishment of compensation mechanisms that promote good governance and resource sustainability.

3.3 Work plan

The implementation of the project will involve the following activities, responsible parties and schedule.

Outputs /Activities	Responsible party	Year 1				Year 2			
		1	2	3	4	1	2	3	4
Output 1. 800 hectares of forests in high to very high-water recharge areas are under conservation and restoration									
A.1.1. Prioritization of potential areas for the implementation of forest conservation and restoration actions	**OFMs, INAB, Water For People**	**X**	**X**						
A.1.2. Establishment and/or strengthening of at least 4 municipal or community nurseries for the production of native forest species to be used in water recharge areas	**OFMs, Water Committees**			**X**	**X**				
Sub-activity 1.2.1: Production of at least 75,000 plants per nursery/year	**OFMs, Water Committees**			**X**	**X**	**X**	**X**	**X**	**X**
A.1.3 Conservation and restoration of degraded lands in upper watershed and very high-water recharge areas	**Water For People, INAB**			**X**	**X**	**X**	**X**	**X**	**X**
A.1.4 Development and execution of management plans for protection or restoration of areas with and without forest cover in high to very high-water recharge and upper watershed areas	**Water For People**			**X**	**X**			**X**	**X**
Output 2. 100 surface and ground water sources used by the population for human consumption are protected and monitored in terms of water quantity and quality									
A.2.1 Characterization of water sources located in high to very high-water recharge areas	**Water For People, OMAS**		**X**	**X**	**X**				
A.2.2. Annual monitoring of water quality in the systems supplying the communities in the project area	**OMAS, Water For People**			**X**				**X**	

Outputs /Activities	Responsible party	Year 1				Year 2			
		1	2	3	4	1	2	3	4
A.2.3. Strengthening of water committees in the administration, operation and maintenance of the systems supplying water to the communities	**Water For People**		**X**	**X**	**X**	**X**	**X**	**X**	**X**
A.2.4 Protection and reforestation of high to very high-water recharge zones and areas where water sources supplying the communities are located	**Water For People, INAB, OFMs, Water Committees**		**X**	**X**			**X**	**X**	
A.2.5 Development of a (long-term) sustainability strategy to promote an adequate water supply in terms of both quantity and quality.	**Water For People, INAB, OFMs, OMAS**					**X**	**X**	**X**	
Output 3. 4 Municipal Water and Sanitation Offices (OMAS-DIMAS) and 4 Municipal Forest Offices (OFM) have been strengthened with tools and inputs to enable them to carry out integrated water and forest resource management in their municipalities									
A.3.1 Equipping and strengthening of OMAS-DIMAS to carry out water quantity and quality monitoring activities	**Water For People**					**X**	**X**		
A.3.2. Equipping of OFMs to carry out protection and restoration activities in areas of high to very high-water recharge significance and upper watersheds	**Water For People**					**X**	**X**		
A.3.3. Capacity building related to integrated management of forest and water resources (water quantity and quality), among others	**Water For People, INAB**			**X**	**X**	**X**	**X**	**X**	**X**
Output 4. Two compensation mechanisms for water environmental services have enhanced water resource governance and ensured water resource sustainability									
A.4.1 Identification of potential sites for the establishment of compensation mechanisms for water environmental services	**Water For People, OFMs, OMAS, INAB**					**X**			
A.4.2 Tour to learn about experiences on compensation mechanisms for environmental services established in other areas of the country (aimed at municipal authorities, community members and municipal technicians)	**Water For People, OFMs, OMAS, INAB**						**X**		

Outputs /Activities	Responsible party	Year 1				Year 2			
		1	2	3	4	1	2	3	4
A.4.3 Diagnosis, design, negotiation and establishment of two compensation mechanisms for water environmental services in the project areas to strengthen governance and ensure the sustainability of water resources	**Water For People, INAB**				**X**	**X**	**X**	**X**	**X**

3.4 Budget

3.4.1 Master budget schedule

Output and/or Activity	Description	Budget Item	Quantity		Units	Unit cost (US$)	Total Cost (US$)	ITTO		EA	CA
			Year 1	Year 2				Year 1	Year 2		
Output 1	**800 hectares of forests in high to very high-water recharge areas are under conservation and restoration.**										
A.1.1	**Prioritization of potential areas for the implementation of forest conservation and restoration actions**										
	2 1-day inter-institutional meetings for validation; 15 participants/meeting	61	30	0	participant /day	15.00	450.00	450.00	0.00	0.00	0.00
A.1.2	**Establishment and/or strengthening of at least 4 municipal or community nurseries for the production of native forest species to be used in water recharge areas**										
	EccFor rigid tray @ 180 cc volume, 24 cells, for broadleaved & coniferous species	41	12,500	0	unit	3.13	39,062.50	39,062.50	0.00	0.00	0.00
	Metal frames for 10 trays, 118 x% angular, protected with green anticorrosive paint	41	1,252	0	unit	17.50	21,910.00	21,910.00	0.00	0.00	0.00
	Saran mesh, 63 % shade, with holes every 75 cm	41	1,380	0	m^2	3.00	4,140.00	4,140.00	0.00	0.00	0.00
Sub A.1.2.1	***Production of at least 75,000 plants per nursery/year***										
	Seeds for plant production	51	5	5	kg	218.00	2,180.00	1,090.00	1,090.00	0.00	0.00
	Substrate, Rekyva Peat moss	51	0	60	lot	48.00	2,880.00	0.00	2,880.00	0.00	0.00
	Inputs for composting, fertilization and disease control in seedlings at nursery level	51	1	1	unit	400.00	800.00	400.00	400.00	0.00	0.00
	Technical staff (1 nursery operator/ municipality) in charge of plant production	11	12	12	person /month	625.00	15,000.00	7,500.00	7,500.00	0.00	15,000.00

Output and/or Activity	Description	Budget Item	Quantity		Units	Unit cost (US$)	Total Cost (US$)	ITTO		EA	CA
			Year 1	Year 2				Year 1	Year 2		
A.1.3	**Protection of forests and restoration of degraded lands in upper watershed and very high-water recharge areas**										
	Field technician (forestry/environmental) for the implementation of conservation and restoration practices on degraded forest lands.	11	12	12	person /month	1,100.00	26,400.00	13,200.00	13,200.00	0.00	0.00
	Field technician (social) for community and organizational strengthening	11	12	12	person /month	1,100.00	26,400.00	13,200.00	13,200.00	0.00	0.00
	1 pick up truck for the transportation of the technical team in the field.	44	1	0	vehicle	44,000.00	44,000.00	44,000.00	0.00	0.00	0.00
	Technical staff responsible for institutional strengthening (WFP)	11	3	3	person /month	500.00	3,000.00	1,500.00	1,500.00	3,000.00	0.00
	10 workshops to promote forest incentive programs, water resource management and adaptation to climate change (20 people, 1 day)	61	100	100	person /month /food	15.00	3,000.00	1,500.00	1,500.00	0.00	0.00
A.1.4	**Development and execution of management plans for protection or restoration of areas with and without forest cover in high to very high-water recharge and upper watershed areas**										
	Forestry technician for the development of management plans and their processing through INAB	11	12	12	person /month	1,100.00	26,400.00	13,200.00	13,200.00	0.00	0.00
	INAB technician for project approval and certification	11	4	4	person /month	500.00	4,000.00	2,000.00	2,000.00	0.00	4,000.00

Output and/or Activity	Description	Budget Item	Quantity		Units	Unit cost (US$)	Total Cost (US$)	ITTO		EA	CA
			Year 1	Year 2				Year 1	Year 2		
Output 2.	**100 surface and ground water sources used by the population for human consumption are protected and monitored in terms of water quantity and quality**										
A.2.1	**Characterization of water sources located in high to very high-water recharge areas**										
	Consultant to characterize 100 water sources and to develop 4 municipal participatory plans (1 per municipality) for the protection of water sources	13	8	0	person /month	2,000.00	16,000.00	16,000.00	0.00	0.00	0.00
	8 networking workshops with COCODES and Water Committees (20 people, 1 day)	61	160	0	person /day /food	15.00	2,400.00	2,400.00	0.00	0.00	0.00
	8 workshops to develop municipal plans (20 people, 1 day)	61	160	0	person /day /food	15.00	2,400.00	2,400.00	0.00	0.00	0.00
	Design and printing of 100 copies of participatory municipal plans for the protection of water sources	21	0	100	plans	12.00	1,200.00	0.00	1,200.00	0.00	0.00
A.2.2	**Annual monitoring of water quality in the systems supplying the communities in the project area**										
	Technician responsible for community strengthening (WFP)	11	12	12	person /month	1,100.00	26,400.00	13,200.00	13,200.00	26,400.00	0.00
	Water quality monitoring specialist (WFP)	13	3	3	person /month	1,100.00	6,600.00	3,300.00	3,300.00	6,600.00	0.00
	Short-term technician to perform water quality monitoring in the field	11	3	3	person /month	1,100.00	6,600.00	3,300.00	3,300.00	0.00	0.00

Output and/or Activity	Description	Budget Item	Quantity		Units	Unit cost (US$)	Total Cost (US$)	ITTO		EA	CA
			Year 1	Year 2				Year 1	Year 2		
A.2.3	**Strengthening of water committees in the administration, operation and maintenance of the systems supplying water to the communities**										
	25 training workshops for Water Committees (15 people/workshop, 1 day) on the management, operation and maintenance of water systems	61	180	195	person /day /food	15.00	5,625.00	2,700.00	2,925.00	0.00	0.00
A.2.4	**Protection and reforestation of high to very high-water recharge zones and areas where water sources supplying the communities are located**										
	Logistics (plant transfer, coordination and media) of 16 reforestation operations in water recharge areas (2 operations/municipality/year).	61	8	8	operation	110.00	1,760.00	880.00	880.00	1,760.00	0.00
A.2.5	**Development of a (long-term) sustainability strategy to promote an adequate water supply in terms of both quantity and quality.**										
	04 participatory workshops for the development of a (long-term) sustainability strategy to promote an adequate water supply in terms of both quantity and quality.	61	0	4	workshop	400	1,600	0	0	1,600	0.00
Output 3:	**4 Municipal Water and Sanitation Offices (OMAS-DIMAS) and 4 Municipal Forest Offices (OFM) have been strengthened with tools and inputs to enable them to carry out integrated water and forest resource management in their municipalities**										
A.3.1	**Equipping and strengthening of OMAS-DIMAS to carry out water quantity and quality monitoring activities**										
	Portable computer equipment (laptop with 8GB RAM, 1TB hard disk drive, 1.6 GHZ Processor Core i5)	44	4	0	equipment	800.00	3,200.00	3,200.00	0.00	0.00	0.00
	Laboratory equipment for water quality monitoring	43	4	0	equipment	6,250.00	25,000.00	25,000.00	0.00	25,000.00	0.00
	Reagents kit to test water quality	51	400	400	kit	10.00	8,000.00	4,000.00	4,000.00	0.00	0.00
	4 motorcycles for OMAS-DIMAS personnel transportation in the field	44	4	0	vehicle	4,000.00	16,000.00	16,000.00	0.00	0.00	0.00

Output and/or Activity	Description	Budget Item	Quantity		Units	Unit cost (US$)	Total Cost (US$)	ITTO		EA	CA
			Year 1	Year 2				Year 1	Year 2		
A.3.2	**Equipping of OFMs to carry out protection and restoration activities in areas of high to very high-water recharge significance and upper watersheds**										
	Portable computer equipment (laptop with 8GB RAM, 1TB hard disk drive, 1.6 GHZ Processor Core i5)	44	4	0	equipment	800.00	3,200.00	3,200.00	0.00	0.00	0.00
	Forest measurement kit (tape measure, diameter tape, GPS, hypsometer)	43	4	0	equipment	1,500.00	6,000.00	6,000.00	0.00	0.00	0.00
	4 motorcycles for OFM personnel transportation in the field	44	4	0	vehicle	4,000.00	16,000.00	16,000.00	0.00	0.00	0.00
A.3.3	**Capacity building related to integrated management of forest and water resources (water quantity and quality), among others**										
	8 training workshops on planning and strengthening of integrated forest and water resource management (15 people, 1 day)	61	60	60	person /day /food	15.00	1,800.00	900.00	900.00	0.00	0.00
Output 4:	**Two compensation mechanisms for water environmental services have enhanced water resource governance and ensured water resource sustainability**										
A.4.1	**Identification of potential sites for the establishment of compensation mechanisms for water environmental services**										
	1 INAB technician specializing in environmental services compensation mechanisms (site identification)	11	6	12	person /month	1,200.00	21,600.00	7,200.00	14,400.00	21,600.00	0.00
A.4.2	**Tour to learn about experiences on compensation mechanisms for environmental services established in other areas of the country (aimed at municipal authorities, community members and municipal technicians)**										
	1 Tour to learn about successful experiences in compensation mechanisms (20 people, 2 days)	61	0	20	person/ food/ transport	125.00	2,500.00	0.00	2,500.00	0.00	0.00
A.4.3	**Diagnosis, design, negotiation and establishment of two compensation mechanisms for water environmental services in the project areas to strengthen governance and ensure the sustainability of water resources**										

Output and/or Activity	Description	Budget Item	Quantity		Units	Unit cost (US$)	Total Cost (US$)	ITTO		EA	CA
			Year 1	Year 2				Year 1	Year 2		
	Consultant for the diagnosis and establishment of compensation mechanisms	13	6	0	person /month	1,570.00	9,420.00	9,420.00	0.00	0.00	0.00
	10 meetings with water resource beneficiaries, municipal authorities, and community and private sector leaders (15 people per meeting, 1 day)	61	75	75	person/ day/ food	15.00	2,250.00	1,125.00	1,125.00	0.00	0.00
SUB-TOTAL		**-**	**-**		**-**	**75,396.63**	**403,577.50**	**299,377.50**	**104,200.00**	**84,360.00**	**19,000.00**
A0.0	**Non-activity based costs**										
	Project Coordinator	111	12	12	person /month	1,800.00	43,200.00	21,600.00	21,600.00	0.00	0.00
	Administrative-accounting assistant	112	12	12	person /month	1,100.00	26,400.00	13,200.00	13,200.00	0.00	0.00
	DSA for project activities	31	12	12	monthly amount	450.00	10,800.00	5,400.00	5,400.00	0.00	0.00
_	DSA for WFP personnel	31	12	12	monthly amount	208.00	4,992.00	2,496.00	2,496.00	4,992.00	0.00
_	DSA for INAB personnel	31	12	12	monthly amount	125.00	3,000.00	1,500.00	1,500.00	0.00	3,000.00
	Office costs WFP (Capital items)	41	12	12	monthly rent	200.00	4,800.00	2,400.00	2,400.00	4,800.00	0.00
	Fuel	51	12	12	monthly amount	250.00	6,000.00	3,000.00	3,000.00	0.00	0.00
	Vehicle and motorcycle maintenance	52	9	9	service /year	300.00	5,400.00	2,700.00	2,700.00	0.00	0.00
	Vehicle and motorcycle insurance	52	9	9	yearly amount	412.00	7,416.00	3,708.00	3,708.00	0.00	0.00

Output and/or Activity	Description	Budget Item	Quantity		Units	Unit cost (US$)	Total Cost (US$)	ITTO		EA	CA
			Year 1	Year 2				Year 1	Year 2		
	WFP utilities	53	12	12	monthly amount	80.00	1,920.00	960.00	960.00	1,920.00	0.00
_	Office expenses (consumable items)	54	12	12	monthly amount	70.00	2,680.00	1,340.00	1,340.00	0.00	0.00
	Materials and supplies	54	12	12	monthly amount	70.00	1,680.00	840.00	840.00	0.00	0.00
	Miscellaneous	61	12	12	monthly amount	80.00	1,920.00	960.00	960.00	0.00	0.00
	Audit (final)	62	0	1	person /month	3,000.00	3,000.00	0.00	3,000.00	0.00	0.00
SUB-TOTAL	_	_	_	_	_	**8,145.00**	**123,208.00**	**60,104.00**	**63,104.00**	**11,712.00**	**3,000.00**
A0.5	**Monitoring and evaluation**										
	ITTO monitoring and review	82	1	1	Lump sum	10,000.00	20,000.00				
	ITTO ex-post evaluation	84	0	1	Lump sum	15,000.00	15,000.00				
	ITTO Programme Support Costs (12%)	85	-	-	Lump sum		53,245.62				
SUB-TOTAL	_	_	_	_	_	_	**88,245.62**				
GRAND TOTAL							**615,031.10**				

3.4.2 Consolidated budget by component

Category	Description	TOTAL	YEAR 1	YEAR 2
10	**Personnel**			
11.1	Project Coordinator	43,200.00	21,600.00	21,600.00
11.2	Administrative-accounting assistant	26,400.00	13,200.00	13,200.00
11.3	Technical staff (1 nursery operator / municipality) in charge of plant production	15,000.00	7,500.00	7,500.00
11.4	Field technician (forestry/environmental) for the implementation of conservation and restoration practices on degraded forest lands	26,400.00	13,200.00	13,200.00
11.5	Field technician (social) for community and organizational strengthening	26,400.00	13,200.00	13,200.00
11.6	Technical staff responsible for institutional strengthening (WFP)	3,000.00	1,500.00	1,500.00
11.7	Forestry technician for the development of management plans and their processing through INAB	26,400.00	13,200.00	13,200.00
11.8	INAB technician for project approval and certification	4,000.00	2,000.00	2,000.00
11.9	Technician responsible for community strengthening (WFP)	26,400.00	13,200.00	13,200.00
11.10	Short-term technician to perform water quality monitoring in the field	6,600.00	3,300.00	3,300.00
11.11	1 INAB technician specializing in environmental services compensation mechanisms (site identification)	21,600.00	7,200.00	14,400.00
13.1	Water quality monitoring specialist (WFP)	6,600.00	3,300.00	3,300.00
13.2	Consultant to characterize 100 water sources and to develop 4 municipal participatory plans (1 per municipality) for the protection of water sources	16,000.00	16,000.00	0.00
13.3	Consultant for the diagnosis and establishment of compensation mechanisms	9,420.00	9,420.00	0.00
19	**Sub-total**	**257,420.00**	**137,820.00**	**119,600.00**
20	**Sub-contracts**			
21	Design and printing of 100 copies of participatory municipal plans for the protection of water sources	1,200.00	0.00	1,200.00
29	**Sub-total**	**1,200.00**	**0.00**	**1,200.00**
30	**Duty travel**			
31.1	DSA for project activities	10,800.00	5,400.00	5,400.00
31.2	DSA for WFP personnel	4,992.00	2,496.00	2,496.00
31.3	DSA for INAB personnel	3,000.00	1,500.00	1,500.00
39	**Sub-total**	**18,792.00**	**9,396.00**	**9,396.00**

Category	Description	TOTAL	YEAR 1	YEAR 2
40	**Capital items**			
41.1	EccFor rigid tray @ 180 cc volume, 24 cells, for broadleaved & coniferous species	39,062.50	39,062.50	0.00
41.2	Metal frames for 10 trays, 118 x% angular, protected with green anticorrosive paint	21,910.00	21,910.00	0.00
41.3	Saran mesh, 63 % shade, with holes every 75 cm	4,140.00	4,140.00	0.00
41.4	Office costs WFP (Capital items)	4,800.00	2,400.00	2,400.00
43.1	Laboratory equipment for water quality monitoring	25,000.00	25,000.00	0.00
44.1	Forest measurement kit (tape measure, diameter tape, GPS, hypsometer)	6,000.00	6,000.00	0.00
44.2	1 pick up truck for the transportation of the technical team in the field	44,000.00	44,000.00	0.00
44.3	Portable computer equipment (laptop with 8GB RAM, 1TB hard disk drive, 1.6 GHZ Core i5 Processor)	3,200.00	3,200.00	0.00
44.5	3 motorcycles for OMAS-DIMAS personnel transportation in the field	16,000.00	16,000.00	0.00
44.6	Portable computer equipment (laptop with 8GB RAM, 1TB hard disk drive, 1.6 GHZ Core i5 Processor)	3,200.00	3,200.00	0.00
44.7	3 motorcycles for OFM personnel transportation in the field	16,000.00	16,000.00	0.00
49	**Sub-total**	**183,312.50**	**180,912.50**	**2,400.00**
50	**Consumable items**			
51.1	Seeds for plant production	2,180.00	1,090.00	1,090.00
51.2	Substrate, Rekyva Peat moss	2,880.00	0.00	2,880.00
51.3	Inputs for composting, fertilization and disease control in seedlings at nursery level	800.00	400.00	400.00
51.4	Reagents kit to test water quality	8,000.00	4,000.00	4,000.00
51.5	Fuel	6,000.00	3,000.00	3,000.00
52.1	Vehicle maintenance	5,400.00	2,700.00	2,700.00
52.2	Vehicle and motorcycle insurance	7,416.00	3,708.00	3,708.00
53.1	WFP utilities	1,920.00	960.00	960.00
54.1	Office expenses (consumable items)	2,680.00	1,340.00	1,340.00
54.2	Materials and supplies	1,680.00	840.00	840.00
59	**Sub-total**	**38,956.00**	**18,038.00**	**20,918.00**
60	**Miscellaneous**			
61.1	2 1-day inter-institutional meetings for validation; 15 participants/meeting	450.00	450.00	0.00
61.2	10 workshops to promote forest incentive programs, water resource management and adaptation to climate change (20 people, 1 day)	3,000.00	1,500.00	1,500.00
61.3	8 networking workshops with COCODES and Water Committees (20 people, 1 day)	2,400.00	2,400.00	0.00
61.4	8 workshops to develop municipal plans (20 people, 1 day)	2,400.00	2,400.00	0.00

Category	Description	TOTAL	YEAR 1	YEAR 2
61.5	25 training workshops for Water Committees (15 people /workshop, 1 day) on the management, operation and maintenance of water systems	5,625.00	2,700.00	2,925.00
61.6	Logistics (plant transfer, coordination and media) of 16 reforestation operations in water recharge areas (2 operations/municipality/year)	1,760.00	880.00	880.00
61.7	8 training workshops on planning and strengthening of integrated forest and water resource management (15 people, 1 day)	1,800.00	900.00	900.00
61.8	1 Tour to learn about successful experiences in compensation mechanisms (20 people, 2 days)	2,500.00	0.00	2,500.00
61.9	10 meetings with water resource beneficiaries, municipal authorities, and community and private sector leaders (15 people per meeting, 1 day)	2,250.00	1,125.00	1,125.00
61.10	Sundry	1,920.00	960.00	960.00
62.1	Audits (annual and final)	3,000.00	0.00	3,000.00
69	**Sub-total**	**27,105.00**	**13,315.00**	**13,790.00**
80	**Project monitoring and administration**			
82.1	ITTO monitoring and review	**20,000.00**		
84.1	ITTO ex-post evaluation	**15,000.00**		
85.1	ITTO Programme Support Costs (12%)	**53,245.62**		
89	**Subtotal**	**88,245.62**		
100	**GRAND TOTAL**	**615,031.10**		

3.4.3 ITTO budget by component

Category	Description	TOTAL	YEAR 1	YEAR 2
10	**Personnel**			
11.1	Project Coordinator	43,200.00	21,600.00	21,600.00
11.2	Administrative-accounting assistant	26,400.00	13,200.00	13,200.00
11.3	Field technician (forestry/environmental) for the implementation of conservation and restoration practices on degraded forest lands	26,400.00	13,200.00	13,200.00
11.4	Field technician (social) for community and organizational strengthening	26,400.00	13,200.00	13,200.00
11.6	Forestry technician for the development of management plans and their processing through INAB	26,400.00	13,200.00	13,200.00
11.70	Short-term technician to perform water quality monitoring in the field	6,600.00	3,300.00	3,300.00
13.1	Consultant to characterize 100 water sources and to develop 4 municipal participatory plans (1 per municipality) for the protection of water sources	16,000.00	16,000.00	0.00
13.2	Consultant for the diagnosis and establishment of compensation mechanisms	9,420.00	9,420.00	0.00
19	**Sub-total**	**180,820.00**	**103,120.00**	**77,700.00**
20	**Sub-contracts**			
21	Design and printing of 100 copies of participatory municipal plans for the protection of water sources	1,200.00	0.00	1,200.00
29	**Sub-total**	**1,200.00**	**0.00**	**1,200.00**
30	**Duty travel**			
31	DSA for WFP personnel	10,800.00	5,400.00	5,400.00
39	**Sub-total**	**10,800.00**	**5,400.00**	**5,400.00**
40	**Capital items**			
41.1	EccFor rigid tray @ 180 cc volume, 24 cells, for broadleaved & coniferous species	39,062.50	39,062.50	0.00
41.2	Metal frames for 10 trays, 118 x% angular, protected with green anticorrosive paint	21,910.00	21,910.00	0.00
41.3	Saran mesh, 63 % shade, with holes every 75 cm	4,140.00	4,140.00	0.00
44.1	Forest measurement kit (tape measure, diameter tape, GPS, hypsometer)	6,000.00	6,000.00	0.00
44.2	1 pick up truck for the transportation of the technical team in the field	44,000.00	44,000.00	0.00
44.3	Portable computer equipment (laptop with 8GB RAM, 1TB hard disk drive, 1.6 GHZ Core i5 Processor)	3,200.00	3,200.00	0.00
44.4	4 motorcycles for OMAS-DIMAS personnel transportation in the field	16,000.00	16,000.00	0.00
44.5	Portable computer equipment (laptop with 8GB RAM, 1TB hard disk drive, 1.6 GHZ Core i5 Processor)	3,200.00	3,200.00	0.00
44.6	4 motorcycles for OFM personnel transportation in the field	16,000.00	16,000.00	0.00
49	**Sub-total**	**153,512.50**	**153,512.50**	**0.00**

Category	Description	TOTAL	YEAR 1	YEAR 2
50	**Consumable items**			
51.1	Seeds for plant production	2,180.00	1,090.00	1,090.00
51.2	Substrate, Rekyva Peat moss	2,880.00	0.00	2,880.00
51.3	Inputs for composting, fertilization and disease control in seedlings at nursery level	800.00	400.00	400.00
51.4	Reagents kit to test water quality	8,000.00	4,000.00	4,000.00
51.5	Fuel	6,000.00	3,000.00	3,000.00
52.1	Vehicle maintenance	5,400.00	2,700.00	2,700.00
52.2	Vehicle and motorcycle insurance	7,416.00	3,708.00	3,708.00
54.1	Office expenses (consumable items)	2,680.00	1,340.00	1,340.00
54.2	Materials and supplies	1,680.00	840.00	840.00
59	**Sub-total**	**37,036.00**	**17,078.00**	**19,958.00**
60	**Miscellaneous**			
61.1	2 1-day inter-institutional meetings for validation; 15 participants /meeting	450.00	450.00	0.00
61.2	10 workshops to promote forest incentive programs, water resource management and adaptation to climate change (20 people, 1 day)	3,000.00	1,500.00	1,500.00
61.3	8 networking workshops with COCODES and Water Committees (20 people, 1 day)	2,400.00	2,400.00	0.00
61.4	8 workshops to develop municipal plans (20 people, 1 day)	2,400.00	2,400.00	0.00
61.5	25 training workshops for Water Committees (15 people /workshop, 1 day) on the management, operation and maintenance of water systems	5,625.00	2,700.00	2,925.00
61.6	8 training workshops on planning and strengthening of integrated forest and water resource management (15 people, 1 day)	1,800.00	900.00	900.00
61.7	1 Tour to learn about successful experiences in compensation mechanisms (20 people, 2 days)	2,500.00	0.00	2,500.00
61.80	10 meetings with water resource beneficiaries, municipal authorities, and community and private sector leaders (15 people per meeting, 1 day)	2,250.00	1,125.00	1,125.00
61.9	Sundry	1,920.00	960.00	960.00
62.1	Audits (annual and final)	3,000.00	0.00	3,000.00
69	**Sub-total**	**25,345.00**	**12,435.00**	**12,910.00**
80	**Project monitoring and administration**			
82.1	ITTO monitoring and review	**20,000.00**		
84.1	ITTO ex-post evaluation	**15,000.00**		
85.1	ITTO Programme Support Costs (12%)	**53,245.62**		
89	**Subtotal**	**88,245.62**		
100	**GRAND TOTAL**	**496,959.10**		

3.4.4 Executing agency budget by component

Category	Description	TOTAL	YEAR 1	YEAR 2
10	**Personnel**			
11.1	Technical staff responsible for institutional strengthening (WFP)	3,000.00	1,500.00	1,500.00
11.2	Technician responsible for community strengthening (WFP)	26,400.00	13,200.00	13,200.00
13.1	Water quality monitoring specialist (WFP)	6,600.00	3,300.00	3,300.00
19	**Sub-total**	**36,000.00**	**18,000.00**	**18,000.00**
30	**Duty travel**			
31	DSA for INAB personnel	4,992.00	2,496.00	2,496.00
39	**Sub-total**			
40	**Capital items**			
41.4	Office costs WFP (Capital items)	4,800.00	2,400.00	2,400.00
43.1	Laboratory equipment for water quality monitoring	25,000.00	25,000.00	0.00
49	**Sub-total**	**29,800.00**	**27,400.00**	**2,400.00**
50	**Consumable items**			
53.1	WFP utilities	1,920.00	960.00	960.00
59	**Sub-total**	**1,920.00**	**960.00**	**960.00**
60	**Miscellaneous**			
61.6	Logistics (plant transfer, coordination and media) of 16 reforestation operations in water recharge areas (2 operations/municipality/year)	1,760.00	880.00	880.00
69	**Sub-total**	**1,760.00**	**880.00**	**880.00**
100	**GRAND TOTAL**	**74,472.00**	**49,736.00**	**24,736.00**

3.4.5 Collaborating agency budget by component

Category	Description	TOTAL	YEAR 1	YEAR 2
10	**Personnel**			
11.1	Technical staff (1 nursery operator / municipality) in charge of plant production	15,000.00	7,500.00	7,500.00
11.2	INAB technician for project approval and certification	4,000.00	2,000.00	2,000.00
11.3	1 INAB technician specializing in environmental services compensation mechanisms (site identification)	21,600.00	7,200.00	14,400.00
19	**Sub-total**	**40,600.00**	**16,700.00**	**23,900.00**
30	**Duty travel**			
31	DSA for INAB personnel	3,000.00	1,500.00	1,500.00
39	**Sub-total**			
100	**GRAND TOTAL**	**43,600.00**	**18,200.00**	**25,400.00**

PART 4: IMPLEMENTATION ARRANGEMENTS

4.1 Organization set-up and stakeholder involvement mechanisms

4.1.1 Executing agency and partners

The Executing Agency of the Project will be Water For People (WFP) that will be responsible for coordination and outcomes, and for ensuring output and outcome achievement as established for this project. The National Forest Institute (INAB), as the project's collaborating agency, will provide technical support for the implementation of field work, mainly in relation to activities **A.1.4**, **A.4.1** and **A.4.2**.

The role of WFP in this project will be two-fold: a) financial administration of the project; and b) direct implementation of the full project cycle, providing technical assistance, methodological support, training and guidance in the development and use of tools and instruments to ensure the success of the project in the field.

In coordination with INAB with respect to the methods used to identify potential water recharge areas, WFP will provide:

- Strategic and methodological guidance to help:
- Define and prioritize potential forest lands for cover maintenance, restoration and expansion in lands of high to very high-water recharge significance;
- Develop intervention strategies, including the establishment of compensation mechanism schemes for water environmental services; and
- Provide training in forest incentives, water resource management, and monitoring of water quantity and quality.

- Support and guidance to OMAS-DIMAS and OFMs in their field work, including:
- Training of OMAS-DIMAS and OFM personnel in issues related to water quantity and quality monitoring, and water resource management;
- Supporting OMAS in the annual monitoring of levels of water cover, data analysis, review and dissemination of monitoring outcomes; and
- Disseminating and reporting project outcomes with a view to scaling up and replicating them, as well as impacting on forest and water resource management decisions within the public policy framework.

The project will receive technical support from the National Forest Institute – INAB as the collaborating agency. INAB is an autonomous, decentralized government body with legal capacity, its own capital and administrative independence. It is the competent managing authority of the public agricultural sector in the forestry field, as established by the current Forestry Law of Guatemala (Decree No. 101-96). INAB's main functions are as follows: a) Enforce forest policies, b) Promote and foster forest development in the country through sustainable forest management, reforestation, forest industry and crafts, based on forest resources and the protection and development of watersheds, c) Promote forest research, d) Coordinate the implementation of forest development programs, and e) Develop programs and projects for forest conservation.

- **INAB will support WFP in the technical execution of the project, and will also be responsible for monitoring compliance with actions required for its successful implementation. WFP and INAB will be jointly responsible for project outcomes, ensuring compliance with the main indicators and assumptions of this proposal.**
- **INAB, as the agency in charge of implementing the national Forest Incentive Programs and as the governing authority for forest management at the national level, is responsible, by law, for monitoring approved management plans for a period of 10 years.**

This will ensure the sustainability of the protection and restoration actions implemented in the project intervention areas.

- **The Municipal Code establishes that municipalities are responsible for providing the population with water services in adequate quantity and quality. This regulation ensures that water quality and quantity monitoring is carried out on an ongoing basis. In this context, strengthening OMAS-DIMAS and service providers (water committees) with equipment and installed capacity will significantly improve their response capacity to comply with this legal responsibility.**

4.1.2 Project management team

WFP will appoint a Coordinator, who should be a forester, agronomist or environmentalist, with over 5 years' proven experience in the management of forestry or related projects. The Coordinator will be responsible for overall project coordination and successful implementation, as well as technical team supervision. INAB will appoint all the members of the project management team at the start of project activities, as follows:

- 1 Project Coordinator,
- 1 Project Finance Manager
- 3 Field technicians
- 1 Short-term technician for water quality monitoring

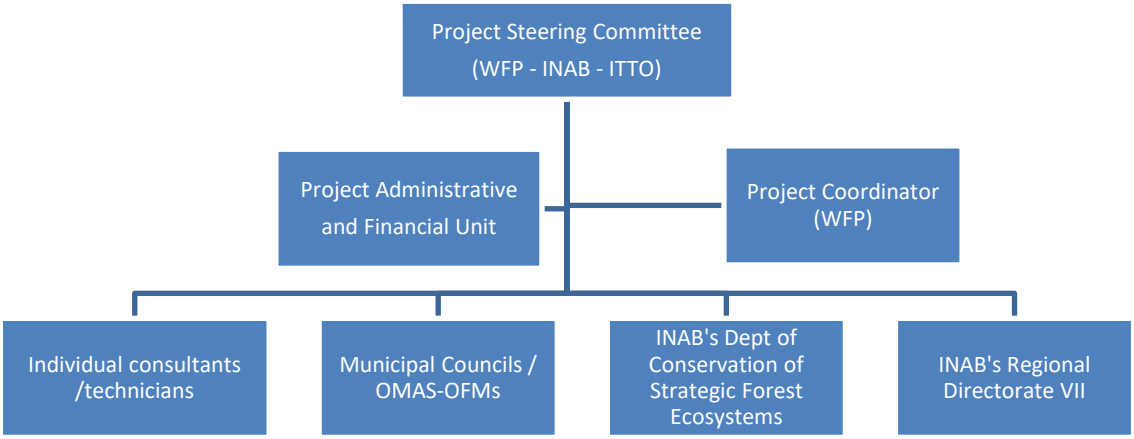
4.1.3 Project Steering Committee

A Project Steering Committee (PSC) will be established to operate according to the relevant ITTO regulations. This Committee will be made up of the following members:

- A representative of INAB (the Manager or his/her representative) (Chair)
- A representative of INAB's External Cooperation and Forestry Pre-investment Department
- A representative of Water for People (the national director or his/her representative) (Secretary)
- An ITTO representative

The PSC will meet at least once every quarter.

The organizational structure for project implementation is shown below:



4.1.4 Stakeholder involvement mechanisms

The involvement of stakeholders and beneficiaries will be based on an inter-institutional mechanism to promote feedback on activities to be implemented and outcomes to be achieved. Water for People organizes an annual workshop to reflect on water and this platform welcomes community, local government, government institutions, and NGO representatives.

- **Project management**

Water For People will be directly responsible for the technical and financial administration of the project, and will coordinate directly with the communities, municipalities – specifically with the Municipal Water and Sanitation Offices and the Municipal Forest Offices - and the National Forest Institute in its role as direct project collaborator and governing body for forest resources outside of protected areas in the country.

4.2 Reporting, review, monitoring and evaluation

Within 8 weeks of project start-up, the Project Coordinator will prepare an inception report for the first meeting of the Project Steering Committee. This report will include a detailed plan of operation for the first 12 months. The plan of operation will be based on the logical framework and on activity details as defined in the approved project proposal. It will include resources needed, indicate a responsible party for each activity, and contain a monthly or weekly schedule for the implementation of activities.

Every 6 months, Water for People will submit **technical and financial** progress reports to the ITTO Secretariat in accordance with the relevant ITTO requirements. The consultancy reports will also be sent to the ITTO Secretariat. Final **technical and financial reports** will be sent to the Secretariat no later than 3 months after project completion.

ITTO's monitoring missions will take place according to the Organization's schedule. Such missions will check project progress with respect to the achievement of outputs, compliance of ITTO project management regulations and procedures, and implementation of the Project Steering Committee's recommendations and decisions. **All progress reports as well as the project completion report will be timely submitted according to the schedule established by ITTO through the online system specifically developed by the Organization to monitor project progress**.

4.3 Mainstreaming of project learning

Mainstreaming of the experience, achievements and progress of the project will be through a variety of media, starting with a publication in both English and Spanish, on the Water For People website and on its social media networks.

Furthermore, information on project outcomes and achievements will be disseminated by the Department of Communication and Education of INAB, the collaborating agency in this project, through printed materials, INAB’s webpage and other media.

PART 5: ANNEXES

ANNEX 1. Profiles of the executing and collaborating agencies

A. Executing Agency (WFP)

Expertise: Water For People is a non-profit organization incorporated in Guatemala as a branch of the head office (Denver Co.) through No. 42 Incorporation Deed, 46 Statutes and 48 Social Charter on its desire to operate and be incorporated in Guatemala, prepared by Carmen Torselli Bech BA. It is registered in the Legal Entities Registry of the Ministry of Internal Affairs under record no. 19296, folio no. 19296 and Volume 1 of the single electronic system for legal entity registration. Currently the Executive Director and legal representative is Martin Velasquez Villatoro, who is also registered with the Ministry of Internal Affairs.

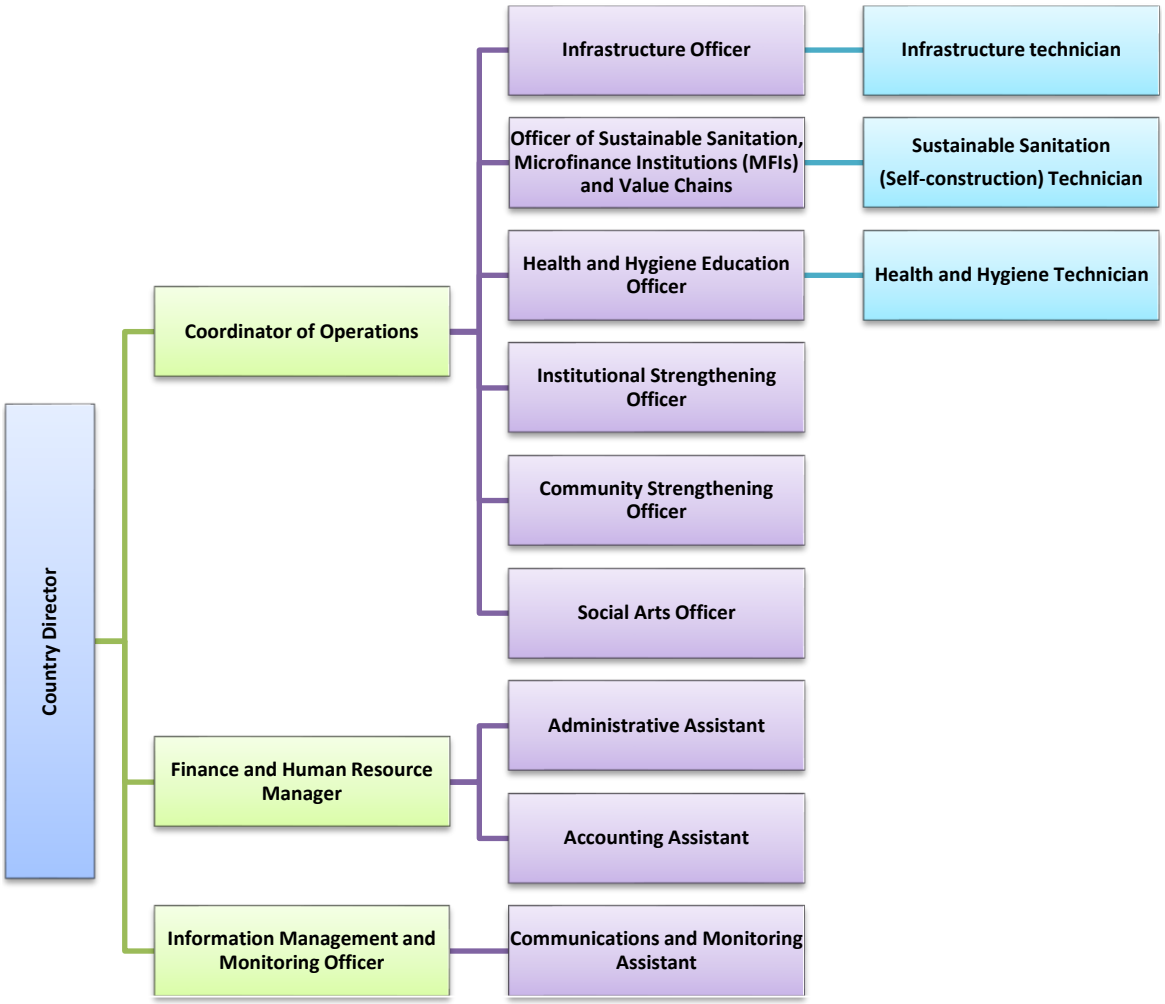
Water For People is registered with the Tax Administration Office (*Superintendencia de Administración Tributaria*) under NIT 6492411-4, and is exempt from paying tax under Resolution No. 2013-03-14-000024. It is also registered with the Guatemalan Social Security Institute (*Instituto Guatemalteco de Seguridad Social*) under employer no. 121968.

Its mission is as follows: “Water For People exists to promote the development of high-quality drinking water and sanitation services, accessible to all, and sustained by strong communities, businesses and governments”. At present, it is focusing its efforts on the Municipalities of Santa Cruz del Quiché, San Andrés Sajcabajá, San Antonio Ilotenango and San Bartolomé Jocotenango.

Water For People has experience in:

- Sustainability of water and sanitation services in communities and public institutions.
- Technical assistance in integrated management of water resources.
- Technical implementation and assistance on water with different technologies according to the community context.
- Monitoring and evaluation of water and sanitation services.
- Institutional strengthening of partners and allies, such as municipalities and community associations, in issues related to water and sanitation.
- Management of a variety of funds including: IDB, Coca Cola, Colgate Palmolive, LDS (the Church of the Latter-Day Saints), Charity Water, One Drop, Green and Blue, and EDUCO.
- Promotion of behavioural change through social art.
- Technical implementation and assistance on hygiene modules for the promotion of water, sanitation and hygiene in public institutions.
- Sustainable sanitation projects through self-construction and microfinance.
- Health and hygiene education at various levels.
- Advocacy and lobbying at the national level in various government and water and sanitation sector institutions.
- Accounts management in the Netsuite software to ensure appropriate control of resources and funds to be used.

Water For People organizational structure



B. Collaborating Agency (INAB)

Expertise: The National Forest Institute – INAB is an autonomous, decentralized government body with legal capacity, its own capital and administrative independence. It is the competent managing authority of the public agricultural sector in the forestry field, as established by the current Forestry Law of Guatemala (1996).

INAB is legally responsible for forest administration outside of protected areas. It has 35 sub-regional offices and 9 regional directorates, which has resulted in a functional structure with nationwide coverage. Its main functions are as follows: a) Enforce forest policies, b) Promote and foster forest development in the country through sustainable forest management, reforestation, forest industry and crafts, based on forest resources and the protection and development of watersheds, c) Promote forest research, d) Coordinate the implementation of forest development programs, and e) Develop programs and projects for forest conservation.

INAB has experience in the following areas:

- Incentive-driven forest promotion and development
- Sustainable forest management and forest production promotion
- Forest protection
- Forestry administration, regulation and monitoring
- Establishment of compensation mechanisms for forest-related environmental services
- Forest promotion, training and education
- Research and geographic information systems
- Institutional strengthening
- Support to local governments in forest administration

Infrastructure: INAB's infrastructure for the implementation of activities related to this project includes a regional office and a sub-regional office in the Municipality and Department of Quiché, covering the municipalities targeted in this project. Furthermore, they have their own budget as well as motor vehicles and motorcycles available. In terms of personnel, INAB has technicians, administrative staff and legal advisors.

Professional qualifications: INAB's professional staff to be involved in the project include: 1 regional director, 1 technical coordinator, 1 forest technician, 1 municipal, community and social forestry strengthening officer, and 1 officer in charge of the Department of Conservation of Strategic Forest Ecosystems, who all have experience in forest restoration, water recharge, compensation mechanisms for environmental services, municipal strengthening and other relevant fields.

ANNEX 2. Tasks and responsibilities of key experts provided by the executing agency

A. Technical staff responsible for institutional strengthening (01 person)

Duration: 24 months

Duties:

- Be the main liaison between Water For People and the project coordinator.
- Lead coordination and negotiation processes with municipal authorities and partner organizations for all activities related to the implementation of the project.
- Support the implementation of the project to review reports, supervise and approve activities, discuss strategies, and provide technical assistance to the project coordinator.
- Support activities to strengthen the Municipal Forest Offices and Municipal Water and Sanitation Offices.
- Supervise the implementation of protection and restoration plans in high to very high-water recharge areas.

B. Technical staff responsible for institutional strengthening (01 person)

Duration: 24 months

Duties:

- Organize and coordinate with the communities all activities related to the monitoring of water sources.
- Organize and coordinate with the communities all activities related to the protection of water sources.
- Organize and coordinate with the communities all activities related to capacity building for service providers in the administration, operation and maintenance of water systems.
- Support activities to strengthen the laboratories of the Municipal Water and Sanitation Offices.

C. Water quality monitoring specialist (01 person)

Duration: 6 months

Duties:

- Design, plan and implement all monitoring activities related to project actions.
- Design, plan and implement all activities related to the monitoring of water sources.
- Review and submit all reports resulting from monitoring activities.

ANNEX 3. Tasks and responsibilities of key experts provided by collaborating agencies

A. Municipal technical staff in charge of plant production (01 person/ nursery /municipality)

Duration: 24 months

Duties:

- Prepare the land for the installation of the forest nursery.
- Attend training workshops related to nursery plant production as required.
- Order the necessary materials to guarantee the successful production of at least 75,000 plants per year.
- Perform all nursery preparation and maintenance activities to ensure planned annual production.
- Maintain strict control of the production and distribution of nursery plants.
- Report on a monthly basis to the Municipality and the project coordinator on the progress of activities carried out and the fulfillment of production and plant delivery commitments.

B. INAB technician to support project approval and certification (01 person)

Duration: 24 months

Duties:

- Evaluate, monitor and certify PINPEP and PROBOSQUE forest incentive program projects submitted to INAB as a result of project support.
- Request technical amendments to the forest management plans of the projects submitted under the project, when required.
- Provide technical assistance on forestry issues to the municipal forest offices assisted by the project.
- Support the facilitation of training workshops on sustainable forest management and other forest-related topics planned within the framework of the project.
- Actively participate in the various activities related to sustainable forest management, as part of project implementation.

C. INAB technician specialized in compensation mechanisms for water resources (01 person)

Duration: 24 months

Duties:

- Lead the process of identification, design and management of compensation mechanisms for water environmental services as planned in the project.
- Provide technical support to the consultant hired for the management and implementation of compensation mechanisms for water environmental services.
- Provide technical support in the implementation and execution of compensation mechanisms for water environmental services developed under the project.
- Promote the participation and engagement of governmental and non-governmental institutions, local governments, organized groups and/or communities in the development and implementation of compensation mechanisms for environmental services promoted by the project.
- Support the facilitation of training workshops on topics related to environmental services and forest hydrology, as envisaged in the project.

ANNEX 4. Terms of reference of personnel and consultants funded by ITTO

A. Project Coordinator

Duration: 24 months

Objectives of the position: The Coordinator will be responsible for the planning, organization and implementation of project activities. In addition, he/she will coordinate with the National Forest Institute (INAB), municipal authorities and the Project Technical Committee, to effectively complement project efforts.

Job description:
- Contract for professional fees
- The job will be based at the Water For People office in Santa Cruz del Quiché

Duties:

For these purposes, the project Coordinator's duties will include the following, among others:

- Lead the work team, and manage, monitor, coordinate and provide the necessary guidance for the implementation of activities.
- Develop a detailed work plan and yearly plans of operation, and manage the budget in accordance with project objectives.
- Participate in the selection of project personnel.
- Evaluate and design the tasks assigned to project staff as required.
- Coordinate with coordinators or managers of the institutions involved in the Project Steering Committee and Project Technical Committee.
- Supervise and review the preparation of documents and publications disseminated by the project.
- Draft and submit the project's technical and administrative reports and documents.

Qualifications:

- University degree
- Master's degree in related fields would be advantageous.
- At least 5 years of general professional experience
- Experience working in coordination with national, regional and local authorities and international cooperation agencies for the implementation of local and/or rural projects.
- No criminal or police record.
- Ability in conflict resolution and integration of spaces for engagement with various stakeholders.

B. Administrative/accounting assistant

Duration: 24 months

Objectives of the position: The administrative/accounting assistant will be responsible for the administration of project funds as well as preparing budgets and ensuring their adequate execution, strictly adhering to the provisions as set out in the project document and in compliance with the transparency standards of Water For People and ITTO.

Job description:
- Contract for professional fees
- The job will be based at the Water For People office in Santa Cruz del Quiché

Duties:

- Administration of the project budget.
- Management of project accounts applying national regulations and ITTO and Water For People procedures.
- Carry out administration processes in accordance with Water For People and ITTO policies, and ensure the transparency of financial resources of the project.
- Ensure the effective and efficient execution of the monthly, quarterly and annual project budget, following the standards and procedures established by Water For People and ITTO.
- Assist the Project Coordinator in monitoring the use of project funds.
- Draft financial reports according to ITTO and Water For People requirements.

Qualifications:

- Mid-level and/or university administrative and accounting expertise.
- Suitable administration and accounting experience in international cooperation projects.
- No criminal or police record.
- Proficiency in computer packages.

C. Forest technician to develop restoration and forest protection plans

Duration: 24 months

Objectives of the position: Identify forested or degraded forest areas in zones of high to very high-water recharge significance, and coordinate with their owners/holders for the development of forest restoration and/or protection plans so that they can benefit from INAB's forest incentive programs. Provide support to the Project Coordinator in the achievement and scope of outcomes as established in the project document.

Job description:

- Contract for professional fees
- The job will be based at the Water For People office in Santa Cruz del Quiché
- Technical visits to potential areas for restoration in four municipalities located in the Upper Salinas River Watershed in the Department of Quiché.

Duties:

- Ensure the implementation of restoration and protection activities in areas of high to very high-water recharge significance as set out in the project document.
- Facilitate the implementation of information workshops related to the project, which may include topics such as water quality, forest restoration, and forest protection, among others.
- Develop management plans for protection and restoration of identified areas of high to very high-water recharge significance.
- Coordinate, report, and participate in monthly meetings of the Water For People team, and in meetings with the OMAS and OFMs.
- Coordinate with municipal governments, technicians from the municipal forest offices and community leaders regarding the application process for the forest incentive programs.
- Identify forest areas with potential, develop forest management plans, and enter the forest incentive programs PINPEP and/or PROBOSQUE.
- Maintain an updated database of implemented actions, through the collection of field information.
- Assist in coordinating the strengthening of four municipal forest offices.
- Support and coordinate other actions related to the project, in terms of forestry issues, as well as other strategic lines.

- Prepare monthly technical reports to contribute to the reporting process envisaged within the framework of the project.
- Other duties and tasks to be assigned by the Project Coordinator or the National Director.

Qualifications:

- Bachelor's degree in forestry and/or agricultural sciences, or similar.
- Training in the development of forest management plans and land use capacity studies.
- Current registration as Regent with the National Forestry Register.
- Experience in the development and management of forest protection and restoration plans.
- Experience in the management of projects under forest incentive programs.
- Experience in coordinating with Municipal Office staff.
- Ability to work in the field in coordination with rural communities.
- Strategic thinking to identify opportunities for water resource management.

D. Short-term technician to monitor water quality

Duration: 6 months

Objectives of the position:

- Coordinate with the Project Coordinator for the establishment of a follow-up and monitoring system on outcomes and outputs in accordance with project indicators.
- Guide and support the design of surveys and the collection of qualitative project data at the community level.
- Ensure the availability of information through data monitoring and collection in the communities within the project target area.

Job description:

- Contract for professional fees
- The job will be based at the Water For People office in Santa Cruz del Quiché
- Regular visits to the project area in four municipalities located in zones of high to very high-water recharge significance in the Department of Quiché.

Duties:

- Assist in conducting surveys in accordance with the indicators established in the project.
- Provide technical assistance to the municipal water and sanitation offices for the development of skills in the use of the monitoring tool and surveys.
- Coordinate with the municipal water and sanitation offices (OMAS-DIMAS) for the scheduling of data collection in the project intervention area.
- Coordinate with water committees for data collection in the project intervention area.
- Lead the collection of information in the project intervention area.
- Perform cleaning and analysis of monitoring data.
- Provide support in the preparation of technical progress reports on monitoring results.
- Submit monitoring results to partners and other stakeholders.

Qualifications:

- Bachelor's degree or university student in agricultural engineering or similar, with experience in data management and statistical packages.
- Experience in database management and analysis
- Experience in the design, implementation and analysis of surveys.
- Experience in the use of statistical software (SPSS, PSPP or other).
- Desirable experience in the use of computer tools or applications for data collection from electronic devices (mwater and others).

- Excellent social and communication skills.
- Fluency in Kich'e language desirable.
- Driver's license for 2- and 4-wheel drive vehicles.

E. Field technician (forestry / environmental)

Duration: 24 months

Objectives of the position:

- Coordinate with the Project Coordinator for the implementation of conservation and restoration practices on degraded forest lands.
- Assist in the establishment of a follow-up and monitoring system for outcomes and outputs according to project indicators.

Job description:

- Contract for professional fees
- The job will be based at the Water For People office in Santa Cruz del Quiché
- Regular visits to the project area in four municipalities located in zones of high to very high-water recharge significance in the Department of Quiché.

Duties:

- Implement activities for the protection, restoration and sustainable management of natural resources in the project area, based on the logical framework and corresponding budget.
- Coordinate with municipal governments, technicians from the municipal forest offices and community leaders in relation to the forest incentive programs for the relevant application procedures.
- Conduct field surveys in areas of high to very high-water recharge significance to identify water sources with potential for protection activities.
- Maintain an updated database of implemented actions through the collection of field information.
- Provide support in the coordination of the strengthening of four municipal forest offices.
- Support and coordinate other actions related to the project on forestry issues, as well as other strategic lines.
- Prepare monthly technical reports to contribute to the reporting process envisaged within the framework of the project.
- Other duties and tasks to be assigned by the Project Coordinator or the National Director.

Qualifications:

- University technician or expert in forestry or related field.
- Experience in community organization.
- Knowledge of forest and natural resource management, forest incentives, and establishment and management of forest nurseries.
- Experience in the use of Geographic Information Systems and other relevant software.
- Fluency in Kich'e language would be advantageous.
- Driver's license for 2- and 4-wheel drive vehicles.
- Ability in conflict resolution and integration of spaces for engagement with various stakeholders.

F. Field technician (social)

Duration: 24 months

Objectives of the position:

- Support, plan and monitor the scheduled implementation of the project, ensuring the achievement of objectives and expected outcomes.
- Lead, assist and monitor the consulting and training processes with the communities targeted for implementation.

Job description:

- Contract for professional fees
- The job will be based at the Water For People office in Santa Cruz del Quiché
- Regular visits to the project area in four municipalities located in zones of high to very high-water recharge significance in the Department of Quiché.

Duties:

- Provide technical assistance to OMAS-DIMAS and OFMs for the development of project activities related to social and organizational issues.
- Motivate and promote community participation in the conservation and sustainable management of natural resources.
- Provide social and organizational assistance to community members and residents related to forestry issues, and carry out field visits in the area of action.
- Maintain an updated database of implemented actions, through the collection of field information.
- Provide support in the coordination for the development and strengthening of capacities among the communities involved in the project.
- Support and coordinate other actions related to the project.
- Prepare monthly technical reports to contribute to the reporting process included in the project's framework.
- Submit monitoring results to partners and other stakeholders.
- Other duties and tasks to be assigned by the Project Coordinator or the National Director.

Qualifications:

- University degree in social sciences, social work or related field.
- Proven knowledge and experience in development and/or social organizations.
- Fluency in Kich'e' language would be advantageous.
- Driver's license for 2- and 4-wheel drive vehicles.
- Ability to work with partners and other stakeholders.
- Teamwork skills.

G. Consultant for the diagnosis and establishment of compensation mechanisms for water environmental services (01 person)

OBJECTIVE OF THE CONSULTANCY: Promote the design and implementation process for two Compensation for Environmental Services (CES) mechanisms in the project target area.

SPECIFIC DUTIES:

- Carry out a general diagnosis of biophysical and socioeconomic aspects including the identification of environmental services, providers, buyers and others in the project target area.
- Organize information collection meetings with water resource beneficiaries and municipal, community and private authorities.
- Identify at least two sites with potential for the establishment of compensation mechanisms for water environmental services in the project target area.
- Design and implement a communication, awareness-building and negotiation strategy among the various stakeholders involved in the selected CES mechanisms.
- Develop the Compensation for Environmental Services mechanism design and operational structure (including financial structure) for the selected mechanisms.
- Support the negotiation and approval process for the CES mechanism proposal.

QUALIFICATIONS:

- Bachelor's degree in forestry sciences, agricultural sciences, environmental sciences, or related field.

EXPERIENCE AND SKILLS:

- At least five years of experience in identification and implementation of compensation for environmental services mechanisms.
- Ability to draft technical reports and documents.
- Ability to work in the field in coordination with rural communities and municipal technicians.

JOB DESCRIPTION:

- Contract for professional fees
- The job will be based at the Water For People office in Santa Cruz del Quiché
- Regular visits to the project area in four municipalities located in the Upper Salinas River Watershed in the Department of Quiché.

H. Consultant to characterize 100 water sources and develop municipal participatory plans for the protection of water sources (01 person)

OBJECTIVES OF THE POSITION: Identify and describe at least 100 water sources located in the municipalities of San Andrés Sajcabajá, San Bartolomé Jocotenango, San Antonio Ilotenango and Santa Cruz del Quiché, and develop four municipal participatory plans for the protection of water sources to ensure the continuity of environmental services.

SPECIFIC DUTIES:

- Collect all information on water resources that may be available in public and private institutions in the project area, and that may be useful as baseline information for the analyses to be carried out.
- Characterize at least 100 surface water sources located in the municipalities covered by the project, through an inventory containing the following details: type of source, geo-positioning, water flow, water quality, uses and users, type of forest or vegetation cover around the source, as well as information considered relevant to the study.
- Prepare four diagnoses of the status of water resources in the municipalities covered by the project.
- Organize at least eight workshops (two for each municipality), with representatives of Water Committees, COCODES, technicians from the Municipal Water and Sanitation Offices and Environmental Council Members, to prepare municipal participatory plans for the protection of water sources.
- Prepare four municipal participatory plans for the protection of water sources, to ensure the continuity of environmental services, including short, medium and long-term goals.
- Provide support to the implementation of the municipal participatory plans for the protection of water sources.

QUALIFICATIONS AND REQUIREMENTS:

- Bachelor's degree in environmental, forestry and/or agricultural sciences, or related field.
- The consultant should be based in the project target area.

EXPERIENCE AND SKILLS:

- Experience in surface water source characterization studies.
- Experience in the formulation of participatory plans focused on the protection of natural resources, preferably water resources.
- Experience in the organization of participatory workshops with community and municipal leaders.
- Experience in coordination with Municipal Water and Sanitation Office personnel.

JOB DESCRIPTION:

- Contract for professional fees
- The cost of holding participatory workshops will be covered by the project
- Desk work will be carried out at the Water For People office in Santa Cruz del Quiché.

ANNEX 5. Recommendations of the 59th Expert Panel

No.	SPECIFIC RECOMMENDATION	ORIGINAL VERSION	MODIFICATION MADE/RESPONSE TO THE RECOMMENDATION
1	Improve the project brief by updating the information on the existing situation for the last two years, providing more details on the effectiveness of past forest incentives and financial sustainability of government's support	According to the 2016 forest map, Guatemala has an estimated forest cover of 3,574,244 hectares, amounting to 33% of the national territory, with a loss of forest cover of 122 thousand hectares per year, which is equivalent to an annual deforestation rate of 0.5% at the national level.	**According to the forest cover dynamics map for 2016-2020, Guatemala has an estimated forest cover of 3,601,567 hectares, amounting to 33.3% of the national territory, with a gross loss of 61,098 hectares of forest per year, and a forest cover restoration of 47,915 hectares per year, which represents a net annual change of -13,184 hectares, corresponding to an annual deforestation rate of -0.36% with respect to the forest cover recorded in 2016 (INAB and CONAP 2023). *(Pages 3 and 11)***
		While the Department of Quiché is one of the departments with the largest forest cover increase in the country, with 4,298 hectares more than in 2010, it is also the department most affected by forest-fire-related loss of forest cover, with 1,974 hectares burned (2023, CONRED), and this loss of forest cover has had the following main effects:	**According to the forest cover dynamics study for 2016-2020, the Department of Quiché has had an annual loss of 805.2 hectares of forest, which represents a deforestation rate of -0.29% per year. This decrease is mainly due to agricultural encroachment, illegal logging, and the high incidence of forest fires. In recent years, Quiché has become the department most affected by fire-related loss of forest cover, with a total of 1,974 hectares impacted in 2023 (CONRED). This forest degradation process has had several important effects, including: *(Page 3)***
		Water For People (WFP) will be the executing agency of this project; to this end, it will take on responsibility for coordination and outputs, and will ensure compliance with the main indicators and assumptions in the logical framework matrix of this proposal. Furthermore, the project will receive technical support from the National Forest Institute (INAB) as the Collaborating Agency, with direct involvement from the target municipalities.	**Water For People (WFP) will be the executing agency of this project; to this end, it will take on responsibility for the coordination and production of outputs, ensuring compliance with the main indicators and assumptions described in the logical framework matrix of this proposal. Furthermore, the project will receive technical support from the National Forest Institute (INAB) as the collaborating agency, with direct involvement from the target municipalities and communities, which will be responsible for following up on future actions to ensure the continuity and sustainability of the outcomes achieved through this project. *(Page 4)***
			Technical and financial sustainability: Sustainability will be ensured by strengthening the installed capacity of municipal agencies, communities and government institutions involved in forest and water management through the provision of equipment and technical training. In addition, protection and restoration areas will be integrated into government financial mechanisms, such as forest incentive programs, thus ensuring the long-term continuity and sustainability of the project. *(Page 5)*
		The protection of forest cover and restoration of degraded areas of high to very high-water recharge significance will contribute to the	**The protection and restoration of areas of high to very high-water recharge significance will contribute to improving the quantity and quality of water in the sources**

No.	SPECIFIC RECOMMENDATION	ORIGINAL VERSION	MODIFICATION MADE/RESPONSE TO THE RECOMMENDATION
		maintenance and restoration of forest cover in these areas, and this in turn will help maintain and/or increase water quantity and quality in the sources located in these areas, which are being used by communities of four municipalities in the Upper Salinas River Watershed. Through the strengthening of the OMAS, skills will be developed and increased, and the necessary equipment will be provided to enable them to monitor water quantity and quality during and after the project, while the OFMs will follow up on the areas benefiting from forest incentives after project completion. Furthermore, the implementation of compensation mechanisms will result in cooperation agreements between water users and landowners in areas of high to very high-water recharge rates to ensure the sustainability of forest cover and associated water supply.	**supplying the communities of the four target municipalities in the Upper Salinas River Watershed. By involving the communities in these actions, their commitment to the conservation of natural resources on which they depend for their livelihoods will be reinforced.** **The strengthening of the Municipal Water and Sanitation Offices (*Oficinas Municipales de Agua y Saneamiento* – OMAS) will enable local communities to continuously monitor water quantity and quality, thus ensuring autonomous local management. In addition, the Municipal Forest Offices (*Oficinas Forestales Municipales* –OFM) will follow up on the areas benefiting from forest incentives, thus guaranteeing long-term technical support.** **Compensation mechanisms for environmental services will promote cooperation agreements between water users and landowners in water recharge areas, thus strengthening community collaboration. This will guarantee the sustainability of forest cover and associated water supply, while encouraging participatory and sustainable management of water resources. *(Page 5)*** **Complementary to these actions, forest incentives will provide financial support to facilitate the implementation of protection and restoration initiatives in areas of high to very high-water recharge significance over the next 10 years, thus guaranteeing the sustainability of planned interventions. Furthermore, compensation mechanisms for environmental services will make it possible to establish financial and/or in-kind contributions, providing ongoing support for the conservation and restoration of target areas, and ensuring their long-term preservation. *(Page 6)*** **Over the last 25 years, the Government of Guatemala through the National Forest Institute (INAB) has been striving to maintain and manage forests in strategic water catchment and regulation areas, through the implementation of programs and projects aimed at strengthening and improving forest management, such as the Forest Incentives Program (PINFOR) which ended in 2016 after 20 years of operation, the Forest Incentives Program for Small Forest or Agroforestry Landholders (PINPEP) and the PROBOSQUE Program established under the Law on the Promotion of Forest Establishment, Recovery, Restoration, Management, Production and Protection in Guatemala. The latter two are**
		Over the last few years, the Government of Guatemala, through the National Forest Institute (Instituto Nacional de Bosques–INAB), has been striving to maintain and manage forests in strategic water catchment and regulation areas, by implementing programmes and projects to strengthen and improve forest management, including the Forest Incentives Programme for Small Forest and Agroforestry Landholders –PINPEP– and the PROBOSQUE Programme established by the Law on the Promotion of Forest	

No.	SPECIFIC RECOMMENDATION	ORIGINAL VERSION	MODIFICATION MADE/RESPONSE TO THE RECOMMENDATION
		Establishment, Recovery, Restoration, Management, Production and Protection in Guatemala.	**currently in force, and have to date promoted a total of 52,489 projects under different modalities, covering an area of 526,368 hectares under management with an investment of more than US$471 million. *(Page 3)***
2	Provide maps with clear scale for the 'origin' and 'target area' sections (pages 7 and 14).		**The maps of project area location and forest cover were updated *(Pages 8, 9, 10, 15 and 16).***
3	Under origin, provide additional information on previous ITTO support that led to the current proposal.		**The project is directly linked to other ITTO-funded projects, such as the project "Development of a Forest Landscape Restoration Program in Guatemala", which was based on ITTO guidelines. This project aimed to improve forest landscape restoration actions through the implementation of a forest restoration mechanism, with the participation of key stakeholders in prioritized strategic ecosystems.** **Direct project benefits include the development of tools and capacity building in target communities to implement forest landscape restoration mechanisms, facilitating their replication at the national level and generating economic development opportunities. In addition, the restoration of degraded forests and lands offers an effective solution to reduce socioenvironmental vulnerability in target areas, as well as an option for climate change mitigation and adaptation.** **Restored areas, in turn, will once again play a crucial role in providing essential goods and services for the livelihoods of the communities involved, encouraging their participation in the conservation and sustainable management of target areas through the project.** ***(Page 12)***
4	For the target area, add relevant environmental, demographic and social data, including gender.		**The intervention area is located in the central region of the Department of Quiché, in north-central Guatemala, mostly within the Dry Corridor, with a small part in the highlands of Santa Cruz Quiché. Altitudes vary between 1,200 and 2,200 meters above sea level, which generates a warm climate in the lowlands and temperate to cold weather in the highlands. The average annual temperature is 16°C, with minimum temperatures of 2°C and maximum temperatures of 28°C.** **Rainfall ranges from 1,000 mm per year in the Dry Corridor to 2,200 mm in the highlands of Santa Cruz Quiché, with an annual average of approximately 1,500 mm. The rainy season is between May and October.** **The area covers diverse life zones, with a predominance of subtropical low montane**

No.	SPECIFIC RECOMMENDATION	ORIGINAL VERSION	MODIFICATION MADE/RESPONSE TO THE RECOMMENDATION
			rainforest, which covers 68.75% of the land area, followed by temperate subtropical rainforest, accounting for 31.25%. ***(Pages 13 and 14)***
			A map of forest incentives in the target municipalities has been added *(Page 16).*
			Regarding the current land use in the intervention area, 25% of the territory, amounting to 18,389 hectares, is covered by dense forest, while 36% has open forest cover. The rest of the territory has a combination of scattered trees in clearings, uncovered land, croplands and other uses. **An analysis of this cover was carried out against the land use capacity map for the area. As a result, a total of more than 13,000 hectares was identified as having a high restoration potential in the target municipalities. According to their land use capacity, these areas should be covered by forest, but are currently under a land use conflict as they are being overutilized, as illustrated in the following maps.** ***(Page 15)***
5	Expected outputs after project completion should be precise and realistic for the two-year duration of the project. Please avoid ambiguous language, such as 'at least'.	• At least 800 hectares in high to very high-water recharge areas in the Upper Salinas River Watershed are conserved and restored. • The level of water quantity and quality for human consumption in 100 communities located in the Upper Salinas River Watershed is maintained or improved. • At least 2 compensation mechanisms for water environmental services are established in the Upper Salinas River Watershed. • Local organizational structures are strengthened to contribute to water resource governance in the area.	• **Conservation and restoration of 800 hectares in high to very high-water recharge areas in the Upper Salinas River Watershed.** • **Improvement of water quantity and quality for human consumption in 100 communities located in the participating municipalities.** • **Establishment of 2 compensation mechanisms for water environmental services in the Upper Salinas River Watershed.** • **Strengthening of water resource governance through the local organization of communities in the area of intervention.** ***(Pages 4 and17)***
6	Output 2 should also include a long-term strategy to anticipate water dynamics in quantity and quality. Changes are to be reflected in the logical framework matrix and other sections accordingly.		**Activity 2.5 *(Development of a (long-term) sustainability strategy to promote water supply in quantity and quality)* was added (Pages 25, 27, 30 and 35).**
7	Under implementation approaches and methods, improve the argument on how capacity building will work to monitor water situation before and after the restoration project.	**Monitoring of water quality in the communities:** In coordination with OMAS-DIMAS, water systems from water sources located in the project area will be monitored annually to determine the level of water quality that people are receiving	**Monitoring of water quality in the communities: With the support of qualified personnel, the capacities of municipality staff and water service managers will be strengthened so as to enable them to annually monitor water systems from water sources located in the project intervention area to assess the level of water quality and quantity (bacteriological analysis and flow**

No.	SPECIFIC RECOMMENDATION	ORIGINAL VERSION	MODIFICATION MADE/RESPONSE TO THE RECOMMENDATION
			rate measurement) being received by the population. ***(Page 28)***
		Implementation of activities and processes for the protection, conservation and restoration of areas of high to very high-water recharge significance: The purpose of the activities will be to help maintain, conserve, restore and increase forest cover in areas of high to very high-water recharge rates, so as to ensure quantity and quality of the water supply	**Implementation of activities and processes for the protection, conservation, and restoration of areas of very high water significance: the activities to be implemented will mainly help maintain, conserve, restore and increase forest cover in areas of high to very high water recharge rates in order to ensure the quantity and quality of water supply. As part of these activities, the quantity and quality of water from springs in degraded areas under restoration will be monitored.** ***(Page 28)***
8	Under executive agency and partners, there's a need to improve the exit strategy. The government should have a leading role to play in it.		**Exit strategy:** • **INAB, as the agency in charge of implementing the national Forest Incentive Programs and as the governing authority for forest management at the national level, is responsible, by law, for monitoring approved management plans for a period of 10 years. This will ensure the sustainability of the protection and restoration actions implemented in the project intervention areas.** • **The Municipal Code establishes that municipalities are responsible for providing the population with water services in adequate quantity and quality. This regulation ensures that water quality and quantity monitoring is carried out on an ongoing basis. In this context, strengthening OMAS-DIMAS and service providers (water committees) with equipment and installed capacity will significantly improve their response capacity to comply with this legal responsibility.** ***(Pages 46 and 47)***
9	Include an Annex that shows the overall assessment and specific recommendations of the 59th Expert Panel and respective modifications in tabular form. Modifications should also be highlighted (**bold and underline**) in the text.		**Annex 5 was included in tabular form.**