

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS



**UPSCALING CLIMATE RESILIENCE MEASURES
IN THE DRY CORRIDOR AGROECOSYSTEMS
OF EL SALVADOR (RECLIMA)**

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

EL SALVADOR

FEBRUARY, 2018

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EXECUTIVE SUMMARY

The proposed project supports the Government of El Salvador to strengthen the climate resilience of small farmers, with a focus on the needs of women farmers, located in the municipalities of the dry corridor. The project is aligned with the Government's key development goals and climate change plan, and is anchored in its Nationally Determined Contribution that aims to establish sustainable landscapes resilient to climate change on one million hectares. The project was designed through extensive stakeholder consultation, including with civil society and farmer's groups in the targeted regions of the county; and the NDA has issued a no-objection letter.

The Environmental and Social Management Framework is the tool to guide the identification and management of potential negative environmental and social impacts of proposed projects and serve as a platform for consultations with stakeholders and potential project beneficiaries. The ESMF has been prepared in compliance with FAO Environmental and Social Management Guidelines and considering the GCF's Environmental and Social Safeguards.

Section 3 includes a description of project components based on the 6 landscapes, as well as an overview of the socioeconomic conditions in the area of implementation. The legal and institutional framework of the ESMF is described in section 4. The applicable Environmental and Social Safeguards of the project RECLIMA are explained in section 5. Stakeholder engagement related information, including the identification and consultation of stakeholders, disclosure and grievance mechanism is described in section 6. The Indigenous Peoples Planning Framework and the Biodiversity Management Framework are described in sections 7 and 8 respectively, and arrangements for monitoring and reporting is included in section 9.

1. INTRODUCTION

The project supports the national efforts to strengthen farmers' resilience to face risks of increasing temperatures, erratic rainfall, and extreme events, including recurrent drought, attributable to climate change. GCF grant resources, in conjunction with government co-financing, will invest in innovative agro-ecosystem models for landscape management, climate information services and improved climate change governance. The objective of the project is to improve livelihood resilience to climate change for the vulnerable population of El Salvador's dry corridor and reduce GHG emissions through the establishment of innovative sustainable agro-ecosystem landscape management. The primary measurable benefits include 225,000 direct beneficiaries, from 50,000 family farmers, of whom 85,500 are women and 20,500 indigenous people. Direct beneficiaries will be more resilient to climate change through the implementation of agro-ecological productive models. The project will also indirectly benefit 1,064,618 people through the implementation of agro-ecosystem landscape management models (Total beneficiaries 1,289,618). Restoration/reforestation activities will be implemented in 17,333 hectares of forest to promote the maintenance of key ecosystem services. The project actions will sequester 4,216,835 tCO₂-eq.

The project is aligned with the Government's key development goals and climate change plan, and is anchored in its Nationally Determined Contribution that aims to establish sustainable landscapes resilient to climate change on one million hectares. The project promotes a paradigm shift through its integrated approach to landscape management for highly vulnerable small rural farmers. The project yields sustainable development benefits of enhanced agricultural productivity, improved soil quality, improved food security, reliable access to drinking water and improved rural livelihoods. GCF grant resources catalyze the allocation of government resources toward this agro-ecosystem management approach.

The Environmental and Social Management Framework ensures that environmental and social management is integrated into the development cycle of individual subprojects. Since exact sub-activities are not determined at the onset of project, but will be decided during project implementation based on demand and consultations with the concerned communities, the ESMF is the appropriate instrument under the FAO's Environmental and Social Safeguards Policy. The ESMF is intended to serve as a practical tool to guide identification and mitigation of potential negative environmental and social impacts of proposed projects and serve as a platform for consultations with stakeholders and potential project beneficiaries. The ESMF has been prepared in compliance with FAO Environmental and Social Management Guidelines and considering the GCF's Environmental and Social Safeguards.

2. PROJECT DESCRIPTION

The project will improve the livelihood resilience to climate change of the vulnerable population of El Salvador's Dry corridor and reduce GHG emissions through the establishment of innovative sustainable agro-ecosystem landscape management. The project promotes a paradigm shift through its integrated approach to landscape management for highly vulnerable small rural farmers and yields sustainable development benefits of enhanced agricultural productivity, improved soil quality, improved food security, reliable access to drinking water and improved rural livelihoods.

2.1. *Project Objective and Components*

The project aims to improve the resilience of vulnerable family farmers to climate change through an integrated landscape approach, featuring: the promotion of practical on-farm measures for increasing the resilience of agricultural production systems (which form the principal bases of livelihood support systems); the introduction of household and community level systems for ensuring water supply through rainwater capture and storage; the maintenance of flows of environmental services of importance for livelihoods and agriculture, through improvements to production systems on-farm and the restoration and conservation of degraded ecosystems off farm. The project consists of three interlinked components:

Component 1. Sustainable land management, ecosystem and landscape restoration, and sustainable agriculture practices to build household resilience to climate change.

This component seeks to promote the adoption of management practices that increase carbon sequestration in the soil, improving soil health and biodiversity. To achieve this, technologies are adopted that lead to a resilient agriculture and climate change adaptation, also improving land productivity and promoting efficient water use. The sustainable articulation and inclusion of producers in inclusive markets will generate employment and improved income, with a raise in the living standards. With the enterprises developed, the empowerment of the more vulnerable groups will allow for adaptation to climate change through projects and sustainable productive practices, as well as the adoption of new ways to transform products complying with food safety and quality standards to access green markets. In this component, the interventions will be at 2 different levels: farm and landscape.

Farm level: Good agricultural practices will be demonstrated through Farmer Filed Schools, where farmers will learn about:

- **Conservation tillage and maintenance of soil cover to promote moisture retention**, focusing on minimizing soil disturbance when tilling or ploughing the soil (minimum tillage), and maintaining crop cover or residue from previous harvests over the soil, supplemented with plant coverage (legumes).
- **Terracing and runoff capture ditches to promote runoff infiltration and soil moisture recharge**, involving the construction of terraces reinforced by physical or plant barriers perpendicular to the direction of slope on hillsides.
- **Resilient fodder banks for animal feed during unseasonal droughts**. Planting of improved materials (pastures): The introduction of new species of crops and improved varieties is a technology that aims to increase productivity, quality, health and nutritional value of the plant and / or crop resilience to diseases, pests and environmental stress.
- **Integrated management of soil fertility for soil moisture retention**, including the production and incorporation of compost (bokashi) and improved timing and placement of fertilisers .
- **Agroforestry systems to reduce drought stress on crops and promote runoff infiltration**, through tree planting or the promotion of natural regeneration, as dispersed trees in fields or in fencelines, pruned and/or pollarded in order to manage light competition with crops.
- **Silvopastoral systems to reduce temperature stress on livestock and promote runoff infiltration**, as dispersed trees in pastures or in fencelines..

- **Use of climate change resilient varieties, especially of staple grains**, increasing the range of options from those currently promoted in accordance with situation-specific adaptation needs identified by farmers and including traditional varieties.
- **Water-efficient drip irrigation** to replace spray irrigation used for the production of vegetable cash crops (e.g. tomatoes and sweet peppers)

Restoration of ecosystems: This intervention is focused on improving the provision of key ecosystem services, particularly the provision of water in areas where drought effects will intensify. The objective of this activity is to increase the availability of water and the resilience of the landscape to the expected impacts of climate change. Based on this intervention, the Program hopes to improve the management of water in the landscape by restoring forest cover in tributaries, water bodies and water recharge areas and protection of ecosystems, to increase groundwater recharge and reduce surface runoff during extreme events.

The Program will implement forest restoration actions (natural regeneration and induced restoration) in critical areas for water protection in priority landscapes. The accumulation of biomass due to restoration activities is one of the main contributions aimed at mitigating the effect of climate change. Implementing these practices will have benefits both in adaptation and mitigation as it will improve ecosystem resilience by increasing connectivity at the landscape level, while increasing forest carbon stocks. Conservation, restoration and sustainable management of forests have proven to be cost-effective, safe and readily available to sequester carbon dioxide and prevent the loss of other greenhouse gases. The above mentioned practices are more efficient when implemented in combination. As farmer field Schools are established, the extensionists carry out assessments of the plots with the farmers to determine which model is convenient based on the physical, geographic and climatic characteristics of the farmer's plot.

Landscape level: the above mentioned models learned by the families in the Field Schools will then be replicated in their plots, improving the entire area. Through training of extensionists the knowledge of the community will be strengthened.

Component 2. *Improved generation and use of climate information for decision-making by producers, technicians, extensionists, municipalities, and other stakeholders/local development agents.*

Component 2 consists of contributing to the improvement of the generation of climate information and its use for decision-making by local governments, producers, extension technicians, and other stakeholders that are agents of local development. It is made up of two macro activities, one oriented towards strengthening the national level Early Warning System (EWS) to enable proper decision-making in extreme climate events, and the second to strengthen knowledge of climate threats, fostering risk reduction actions in the intervention territories.

Component 3. *Policy alignment, institutional strengthening and governance for sustainable land development and landscaping.* Component 3 of the Logical Framework refers to the harmonization of policies and norms in El Salvador on regional and national climate change mitigation and adaptation.

The component includes activities to help harmonize policies and international or regional treaties on climate change mitigation and adaptation to which the country has subscribed, in order to support their applicability at a local and institutional level. To do this, the project plans to undertake a compliance analysis and study implementation progress to facilitate the creation of mechanisms that contribute to improved inter-institutional coordination to comply with the instruments to which the country is a signatory. The component also seeks to strengthen national planning to face the challenges of climate variability by evaluating national and local plans to be strengthened at both levels, the implementation of actions to contribute towards improving institutional capacities to generate resilience in the most affected communities, besides undertaking actions to strengthen national planning articulation to guarantee its contribution towards climate change mitigation and adaptation.

2.2. Implementing Areas

The project will be implemented in 114 municipalities of the Dry Corridor of El Salvador. Overall, it is expected the project will benefit about 1,289,618 people, where 225,000 will be direct beneficiaries.

The areas where the project will be implemented are based on the landscapes, taking into account environmental integration units (PNODT, 2002), hydrographic regions (MARN, 2017), livelihoods (FEWS, 2010) and their linkage with the presence of forest remnants as ecosystem service providers (MARN, 2014).

The six landscapes where the project will intervene are:

2.2.1. Río Paz– CaraSucia

The landscape has an extension of 123,424 ha, distributed in 10 municipalities. The Municipalities are:

- El Refugio
- Ahuachapán
- Atiquizaya
- Turin
- San Lorenzo
- Guaymango
- Jujutla
- San Francisco Menendez
- Tacuba
- Acajutla

This landscape is dominated by productive systems (82.91%) and conserves 12.68% of natural ecosystems. There are 2,193 ha of deciduous forests (both deciduous and semi deciduous) and 2,191 ha of gallery forests in mountainous areas, which are essential for the provision of ecosystem services linked to water harvesting and infiltration, as well as protection against erosion, and pollination services. In the coastal zone, 2,545 ha of mangrove forest and 6,900 ha of evergreen forests and coastal beach vegetation are conserved, providing ecosystem services such as protection against tidal waves, reducing the impact of coastal erosion, rising sea levels and coastal flooding.

It should be noted that a significant proportion of the landscape corresponds to crops of basic grains (27% of the landscape), areas dedicated to livestock, both in pastures and in a mosaic of crops and pastures (15% of the landscape). There are important extensions of sugarcane cultivation in the coastal zone (18% of the landscape) that usually extend to the margins of coastal wetlands and mangroves, in many cases drying them. The expansion of sugarcane cultivation without green cultivation practices has serious consequences for pollution, severely affecting local communities and ecosystems. Likewise, there are important extensions of shade coffee cultivation (14% of the landscape), characterized by a diverse floristic composition, with several strata, that protects the soil and provides the connection between the remnants of natural vegetation, contributing to conservation of biodiversity in the country (Ricord & Gallo, 2010).

2.2.2. Jiboa– Jaltepeque

The landscape has an extension of 130,155 ha, distributed in 17 municipalities. The Municipalities under this landscape are:

- San Pedro Nonualco
- El Rosario
- Paraiso de Osorio
- San Antonio Masahuat
- San Juan Tepezontes
- San Pedro Mazahuat
- Santa Maria Ostuma
- Tapalhuaca
- Zacatecoluca
- San Luis Talpa
- Santiago Nonualco
- San Emigdio
- San Miguel Tepezontes
- San Rafael Obrajuelo
- San Juan Nonualco
- Tecoluca
- San Luis Herradura

The landscape corresponds to the Jiboa - Estero de Jaltepeque hydrographic region, and is dominated by productive systems (79%), while natural ecosystems cover 17% of the landscape. The main natural ecosystems are conserved in the coastal zone and are the mangroves (4% of the landscape), the evergreen lowland forests represented mainly in the Natural Protected Areas System (3% of the landscape). On the summits and slopes of the mountains there are remnants of mixed semi deciduous and deciduous forests (3% of the landscape).

Regarding production systems, the most important are the cultivation of basic grains (22% of the landscape) and sugarcane (18% of the landscape). It is worth highlighting the impact of sugarcane cultivation on this landscape, due to its great extension and distribution; with consequent pollution effects on both ecosystems and water resources and on human populations. In the mountainous areas coffee is grown under shade (9% of the landscape) which as mentioned above fulfills fundamental ecosystemic regulatory functions.

2.2.3. Jiquilisco – Tecapán

The landscape has an area of 181,885 ha, distributed in 22 municipalities. The Municipalities under this landscape are:

- | | |
|------------------------|----------------------|
| • Santa Elena | • Chinameca |
| • California | • San Rafael Oriente |
| • Ozatlan | • El Transito |
| • Jucuapa | • San Jorge |
| • San Francisco Javier | • Concepcion Batres |
| • San Agustin | • Puerto Triunfo |
| • Santiago de Maria | • Jiquilisco |
| • Ereaguayuin | • Santa Maria |
| • Alegria | • San Dionisio |
| • Tecapan | • Estanzuelas |
| • Berlin | • Usulután |

The landscape is located in the hydrographic region Bahía de Jiquilisco and sectors of the hydrographic region Lempa. Like the previous ones it is a landscape dominated by the productive systems (75% of the area), whereas in 21% of its area diverse natural ecosystems are conserved. There are 4,231 ha of deciduous forests and 1,194 ha of gallery forests in mountainous areas.

The coastal zone conserves 18,038 ha of mangrove forest and 5,300 ha of evergreen forests, ecotonal and coastal vegetation. The Bay of Jiquilisco includes the largest mangrove expanse in El Salvador which (which accounts for 47% of the mangroves of the dry Pacific North coast in Mesoamerica) (19% of the landscape), cultivation of basic grains (18% of the landscape) and areas dedicated mainly to dairy farming (10% of the landscape) and natural and cultivated pastures (7% of the landscape). Sugar cane also develops in large areas in the coastal area of this landscape (6% of the landscape), with impacts already mentioned.

2.2.4. Golfo de Fonseca – Jucuarán

It is a landscape of 164133 ha, distributed in 9 municipalities. The Municipalities are:

- | | |
|-----------------------|--------------|
| • La Union | • Pasaquina |
| • Conchagua | • San Miguel |
| • Intipuca | • Chirilagua |
| • El Carmen | • Jucuarán |
| • Meanguera del Golfo | |

The landscape corresponds to the Sirama hydrographic region and comprises sectors of the Rio Grande hydrographic region of San Miguel. It presents a matrix dominated by productive systems

(48%) and natural ecosystems (47%). The most extensive natural ecosystems correspond to semi-deciduous mixed forests (23% of the landscape) in the Jucuarán sector, deciduous forests (5%) and mangroves in the Gulf of Fonseca (5%).

This is a landscape with a high diversity of environments and richness of species includes protected areas Pasajes Morrales, La Unión Bay mangroves, Conchagua volcano, Los Negritos lagoons, El Tamarindo estuary, Icacal and Las Tunas (MARN, 2012). It should be noted that the semi-deciduous mixed forests that develop in the Jucuarán mountain range are the most extensive and best preserved in the country (Gallo M. and Rodríguez E., 2007).

The most extensive productive systems correspond to areas of livestock production (25%), both in a mosaic of crops and pastures, as well as in areas of cultivated and natural pastures and pastures in paddocks. The morrales are vegetal associations that develop in sites that historically conserved dry forests, are an association of grasses, composites and herbaceous legumes that dominate the lower stratum, whereas the arboreal stratum is dominated by morro (*Crescentia alata*) and jícara (*C. cujele*), and black and white hawthorn (*Acacia sp.*). Finally, a significant extension of the landscape corresponds to urban and commercial areas (3.9%), which includes the Puerto de Cutuco.

2.2.5. Río Grande de San Miguel– Goascorán

It has an area of 245,719 ha, distributed in 34 municipalities. The Municipalities under this landscape are:

- | | |
|------------------------|--------------------------|
| • San Francisco Gotera | • Yayantique |
| • Jocoro | • Bolivar |
| • Guatajiagua | • Santa Rosa de Lima |
| • Sociedad | • Anamoros |
| • San Carlos | • Nueva Esparta |
| • Chilanga | • El Sauce |
| • Divisadero | • Concepcion de Oriente |
| • Yamabal | • Poloros |
| • Sensenbra | • Lislique |
| • Lolotiquillo | • Ciudad Barrios |
| • Osicala | • Chapelrique |
| • San Simon | • Moncagua |
| • Yolohaiquin | • Uluazapa |
| • Gualococti | • Delicias de Concepcion |
| • San Alejo | • Quelepa |
| • Yucuayquin | • Comacaran |
| • San Jose la Fuente | • Corinto |

The landscape corresponds to the hydrographic regions Rio Grande de San Miguel and Goascorán. It is a landscape dominated by productive systems (58%) with 40% of natural ecosystems. Deciduous forests are the most extensive and important natural ecosystem in this landscape (20% of the landscape), while coniferous forests cover more than 4% of the landscape and are mainly located in the northern sector of the landscape. There are sparse and isolated natural protected areas in this landscape, but with a fundamental importance for the provision of water to local communities, and their production systems, such as *Cerro Cacahuatique*.

In relation to the productive systems, the most extensive and important in the landscape corresponds to the areas dedicated to livestock (32% of the landscape) that are developed both in mosaic of crops with grasses, as in natural and cultivated pastures and in backpacks . It should be noted that the deciduous forests that historically were developed in this region have been gradually replaced by

savannas of hills and *jícaros*, associated to the cattle ranch. In this ecosystem commonly known as "*morrales*", grasses, composites and herbaceous legumes dominate the floristic composition of the lower stratum, while the arboreal stratum is dominated by the *crescentia alata* and jicaro (*C. cujete*), and Black and White Hawthorn (*Acacia sp.*).

2.2.6. Lempa

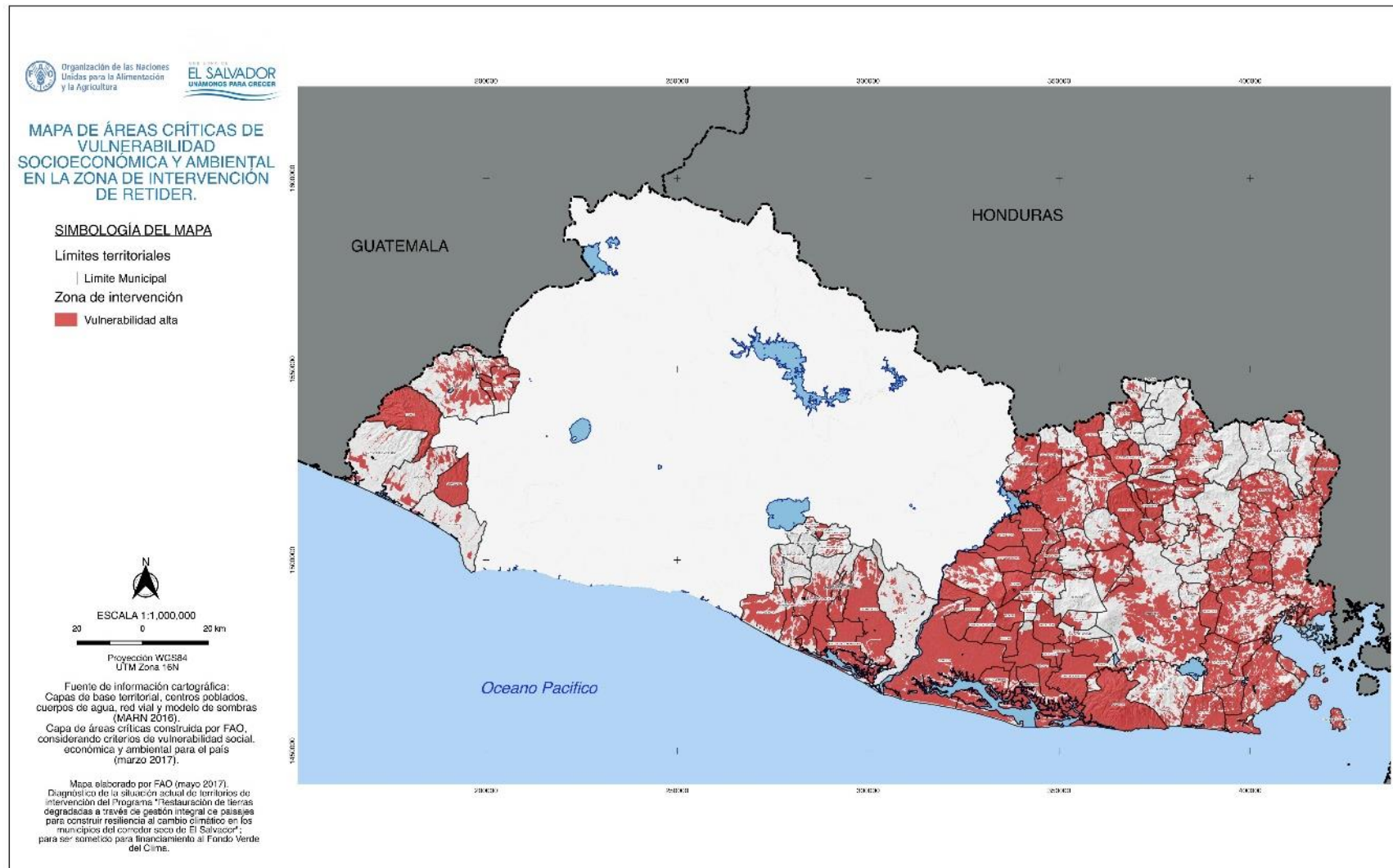
This landscape corresponds to the eastern sector of the Lempa hydrographic region, and has an extension of 162876 ha, distributed in 22 municipalities. The Municipalities are:

- Nueva Granada
- San Buenaventura
- Mercedes Umaña
- Cacaopera
- San Isidro
- Nueva Guadalupe
- Lolotique
- Sesory
- San Luis de la Reyna
- Carolina
- San Antonio el Mosco
- Nuevo Eden de San Juan
- San Gerado
- El Triunfo
- Torola
- Arambala
- Jocoatique
- Joateca
- Meanguera
- Rosario
- Perquin
- San Fernando

It is a landscape dominated by productive systems (51%) and conserves natural ecosystems (34% of the landscape).

In relation to the productive systems, this landscape dominates the cultivation of basic grains (37,436 ha, 23%) and the areas dedicated to livestock (18.51%) that include natural pastures, cultivated, mosaic of crops and pastures.

Figure 1. Implementing areas



Source: FAO (May 2017)

2.3. Eligibility Criteria for Sites

Sites and beneficiaries where the project will be implemented will be selected according to the following eligibility criteria:

The population in the Dry Corridor of El Salvador is 2.2 million people, where it is estimated that 1.9 million people are vulnerable to the effects of climate change, where 152,058 are family farmers (in total 812,412 people, given the average family size is 4.5 people).

Project interventions will be specifically targeted at localities and stakeholders in the Dry Corridor considered to be at high risk from the effects of climate change, by virtue of the interactions between underlying livelihood vulnerability and CC effects, and where there is consequently the greatest potential to generate adaptation and mitigation benefits.

Target areas of the project are selected through a phased approach:

- 1) Ranking of municipalities nationwide through various analysis considering variables such as historical exposure to drought and poverty levels (data on these variables are only available at municipal level). The inclusion of socioeconomic variables in the prioritization process reflects the assumed relation that exists between vulnerability to the effects of climate change and poverty. The poorest have the least ability to invest in diversifying their livelihoods to reduce their exposure to climate change impacts, and least access to social and financial safety nets.
- 2) The overall area of intervention was defined by the limits of the hydrographic regions where the greatest concentrations of high-vulnerability municipalities were located, resulting in the final selection of 114 target municipalities.
- 3) Within these selected target municipalities, the project will focus on those areas with the highest socioeconomic and environmental vulnerability, identified through the application of a further layer of biophysical variables of direct relevance to vulnerability and the potential for achieving adaptation and mitigation benefits (productive potential of soils and hydrological recharge potential).
- 4) The project will work with small-scale family farmers (defined as subsistence producers relying on family labor, thus with limited access to the human, physical and financial resources required for adaptation) who are at risk of becoming extreme food insecure due to climate change (those in conditions of poverty or extreme poverty fall into this group). The project will be closely linked to the “*Paquete Agrícola*” programme of MAG, and will target the same beneficiary population, which is limited to subsistence farmers, with less than 3 ha of land, who mainly produce maize and beans.

On this basis, the project will target around 50,000 households (225,000 people) out of the existing 152,580 households (686,610 people) in the target municipalities. Female-headed households will be prioritized: they account for 13% of the total households and it is estimated they will constitute 27% of the target households. An estimated 6.5% of the target population will be indigenous.

Table 1. Criteria for step-wise selection of target localities and beneficiaries

Criterion	Level	Weighting	Reasoning
Step 1: National prioritization of municipalities			
Drought risk	Municipal	Severe = 2 Moderate = 1	Areas with baseline high exposure to drought are at highest risk of complete livelihood collapse under climate change.
Levels of extreme poverty	Municipal	Severe = 2 High = 1	Poverty implies limited access to financial resources to buffer against the impacts of climate change on livelihoods, and limited financial and social safety nets, under conditions of non-adaptation
Malnutrition	Municipal	Severe = 2 High = 1	Those with highest baseline malnutrition levels are at highest risk if CC further worsens access to nutrition
Step 2: Grouping of municipalities			
Grouping into hydrographic regions			Optimization of cost-effectiveness of project implementation; optimization of upstream-downstream environmental service flows related to adaptation
Step 3: Selection of target areas within selected hydrographic regions			
Productive (agronomic) potential	Sub-municipal	Class I, II y III: 2 Class IV, V, VI: 1	Soils with lowest baseline productive potential are at greatest risk of agronomic collapse due to further CC stresses
Hydrological recharge potential	Sub-municipal	>350mm/year = 2 <350mm/year = 1	Adaptation actions in high recharge areas will have greatest impact on aquifer conditions
Step 4: Definition of project beneficiaries within target areas			
Family farmers (reliant on family labour)			Reliance on family labour implies limited access to financial resources to buffer against the impacts of climate change on livelihoods under conditions of non-adaptation

2.4. Implementation Arrangements

FAO will act as the Executing Entity of the project and technical secretary of both, the Project Board (PB) and the Executive Steering Committee (ESC) providing technical assistance in the various project components, including financial oversight and M&E.

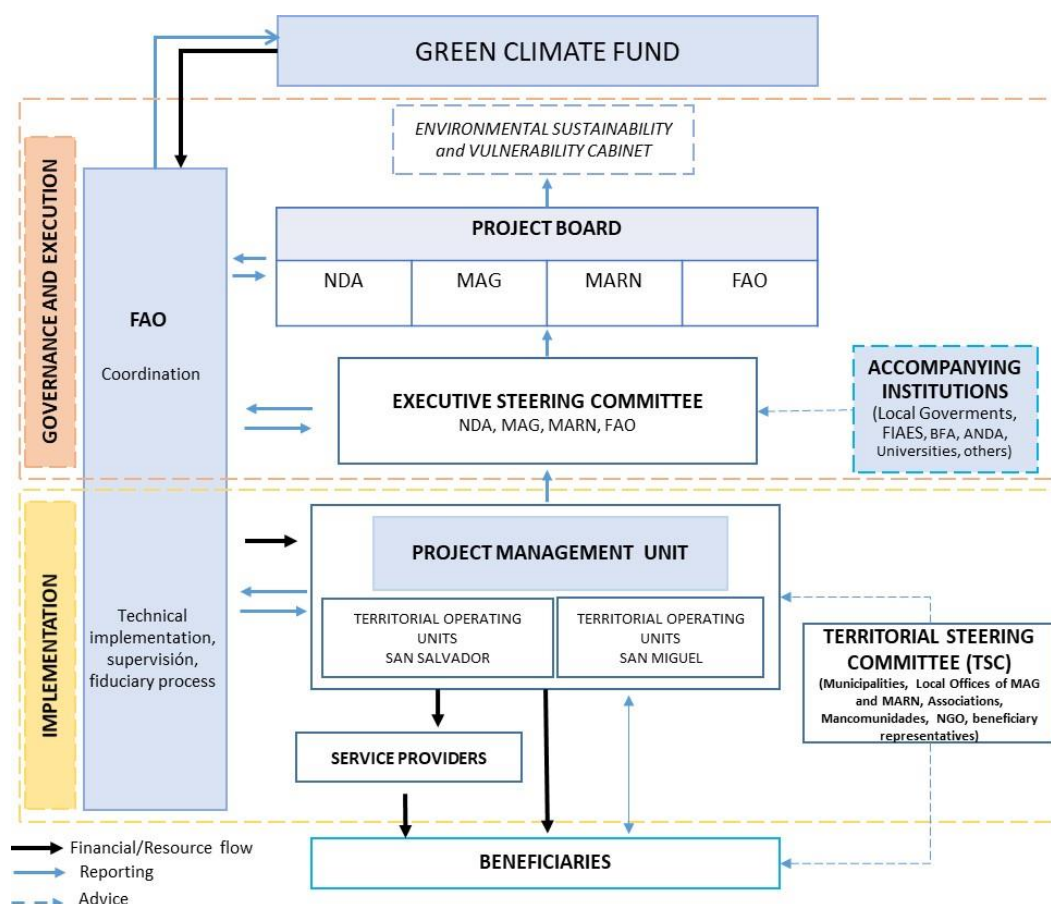
The National Designated Authority (Deputy Minister of Development Cooperation- Ministry of Foreign Affairs) will be the Official government liaison with the GCF Secretariat. It will accompany the planning, monitoring and evaluation processes during the execution of the project, and inform the Environmental Sustainability and Vulnerability Cabinet about the progress of the project.

The Ministry of Agriculture (MAG) and the Ministry of Environment (MARN) will have fundamental roles in the project. Both Ministries will actively participate in the governance structures of the project applying policies and strategies to contribute to climate change adaptation and mitigation, strengthening governance and coordination with local actors, creating conditions for the sustainability of project impacts and contributing with technical experience on matters related to land and water management, landscape recovery, watershed management, and agro-climate information management.

The project governance and institutional arrangements reflect the result of an on-going inter-ministerial dialogue facilitated by FAO, with relevant national authorities, including the National Designated Authority (NDA- Ministry of Foreign Affairs), Ministry of Agriculture and Livestock (MAG) and Ministry of Environment and Natural Resources (MARN) as well as local –level consultations with stakeholders.

The governance and implementation structure of the project is shown below.

Figure 2. Implementation Arrangements of RECLIMA



The project highest governance level is the Project Board (PB), which is comprised by the Ministry of Foreign Affairs (RREE-represented by the NDA), Ministry of Agriculture and Livestock (MAG-Represented by the Minister), and Ministry of Environment and Natural Resources (MARN-Represented by the Minister).

The NDA will chair the Project Board and FAO will act as the Secretariat. The PB aims at providing political and strategic orientation to the implementation of the project as well as ensuring sound inter-institutional coordination. The board will also ensure planned co-financing from government agencies is delivered timely.

The project governance also includes an Executive Steering Committee (ESC) comprised by Technical staff from MARN and MAG and chaired by technical staff from the NDA. FAO will act as the technical secretariat and provide support to the SC, whose more specific functions are described below.

In order to implement the project, FAO will establish a Project Management Unit (PMU), which will supervise, coordinate and support project implementation and day-to-day activities during the project life-cycle, in close consultation with the Government.

The PMU will establish two Territorial Operating Units (San Salvador and San Miguel) to ensure sound implementation at the local level. At the local level, a Territorial Steering Committee (TSC) will also be established including representatives of municipalities and associations of municipalities (mancomunidades), local staff from MAG and MARN, Civil Society Organizations, Non-Governmental Organizations and producer associations, and representatives of project beneficiaries.

In the context of this project, a Safeguards specialist will be recruited for ensuring overall compliance and support safeguard performance monitoring during the life of the project. While the specialist will not be hired full time, FAO will ensure adequate timing is allocated for safeguard compliance and monitoring.

Two specialists will be hired full time to ensure compliance with Indigenous Peoples and Gender related commitments as established in this ESMF, and will be located in each of the 2 Territorial Operating Units.

A Biodiversity Specialist will support the assessment of biodiversity issues at sub-activity level, as well as the development of Biodiversity Management Plans and their monitoring where needed. A tenure Specialist will support the activities related to tenure issues. The above mentioned specialist will work under the coordination of the Safeguards Specialist, who will report to the Environmental and Social Management Unit in FAO.

Below is an estimate costs of the staff costs.

Staff	Unit	Unit Cost	Total
Safeguards Specialist	1 x 41 months	1,800	73,800
Biodiversity Specialist	1 x 7 months	1,800	12,600
IP/Gender Specialist	2 x 48 months	1,900	182,400
Tenure Specialist	1x 4 months	1,800	7,200
TOTAL			276,000

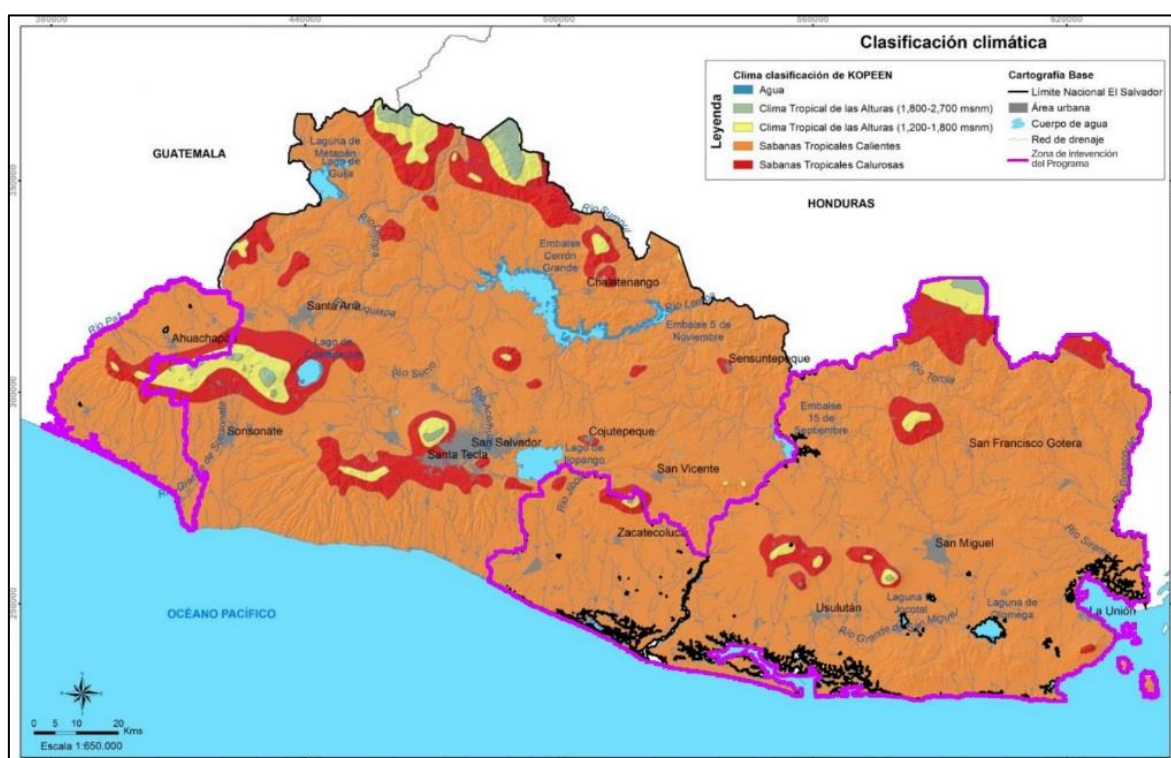
A workplan describing the implementation of the commitments outlined in this Environmental and Social Management Framework, approximate costs and timeframe is included in Annex 1.

3. ENVIRONMENTAL AND SOCIOECONOMIC BASELINE CONDITIONS

3.1. Environmental Aspects

Climate: Climate in the project intervention territory is tropical, with a humid season (May to October) and another dry season (November to April), clearly dividing the hydrological year. The figure below shows the Köppen climate classification in the territory. It shows that most of the areas where the project will be implemented fall into a "Hot Tropical Savannah", with elevations from 0 to 800 meters above sea level, and a dry season from November to April (MARN, 2016a).

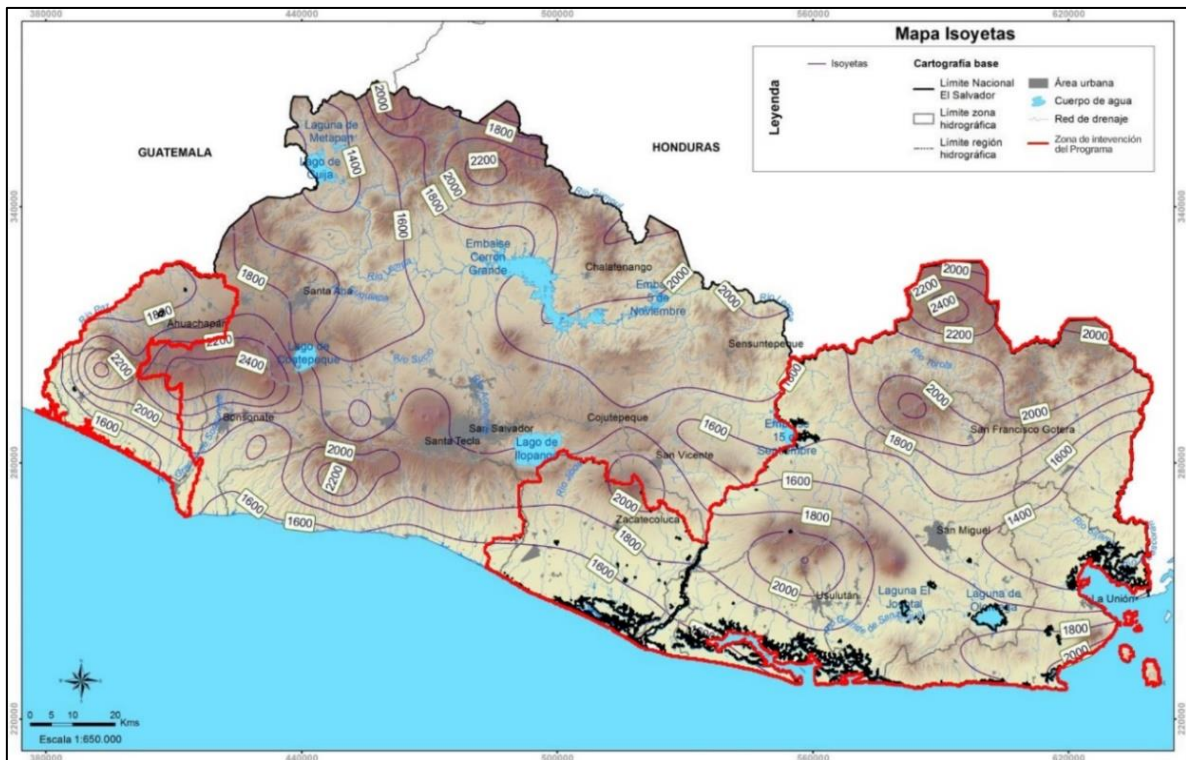
Figure 3. Climate classification



Source: Köppen climate classification (MARN, 2016a).

The map in the previous figure also shows some sites where the climate ranges from "Hot Tropical Savanna" (800 to 1200 masl) and "Tropical Highlands" (1200 to 1800 masl), particularly in Ahuachapán, Northern Usulután, San Miguel, and Morazán. With respect to annual precipitation, historic rainfall data shows a rain volume between 1,526 and 2,341 mm/year. The rainiest areas are in the mountainous regions of Perquín (Northern Morazán) and Usulután (Southern region). These values descend towards the East of the territory of project intervention (figure 4).

Figure 4. Multiannual precipitation average contour map for 1962-2012

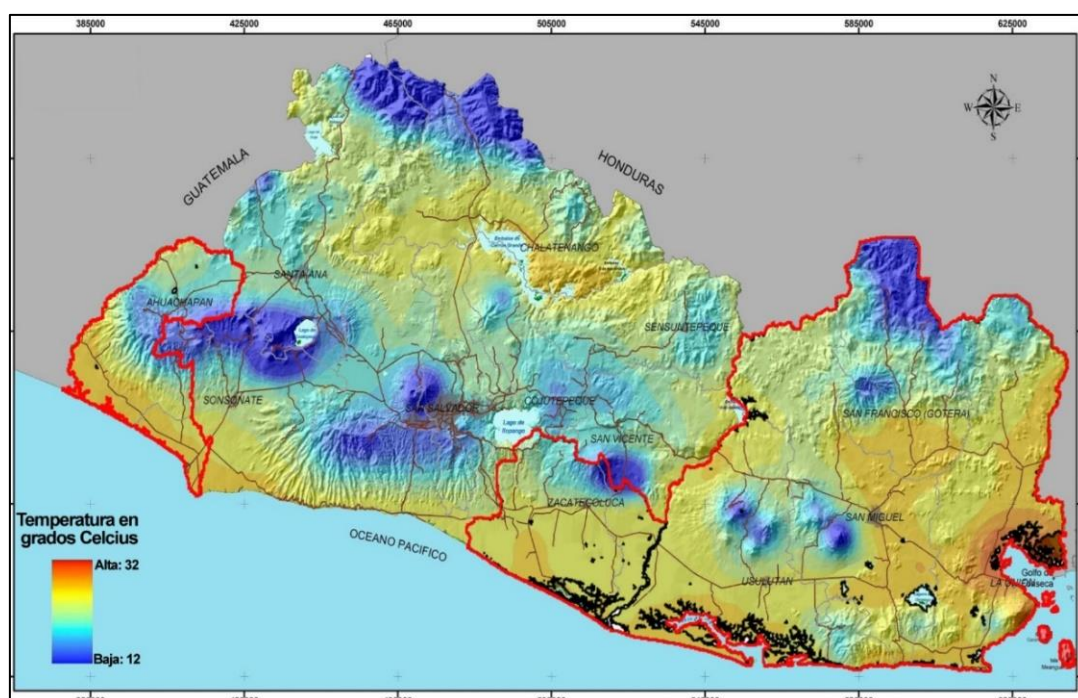


Source: MARN, 2016a.

The rainy season, in general, presents two maximum spikes of rain and one minimum, with September as the rainiest month, followed by June and August. This peak is linked to "gale storms" in this month as a consequence of alterations in the atmospheric conditions in the adjacent Pacific ocean, which lead to two or three days of continuous and intense rainfall accumulating at least 100 mm in 24 hours. The dry season (November to April), however, is linked to the confluence of a series of orographic, atmospheric, and oceanographic factors that produce a reduction or elimination of rainfall, and the characteristic climate of the Pacific basin of Central America.

In terms of temperature, according to historic data from the 25 main weather stations established in the country, the maximum, minimum, and annual average temperature readings from 1970 to 2012 are 31.6, 19.8, and 25.4 degrees C, respectively (MARN, 2014). The highest annual temperature values can be found in the departments of San Vicente and San Miguel, 35.9 and 35.7 degrees C, respectively).

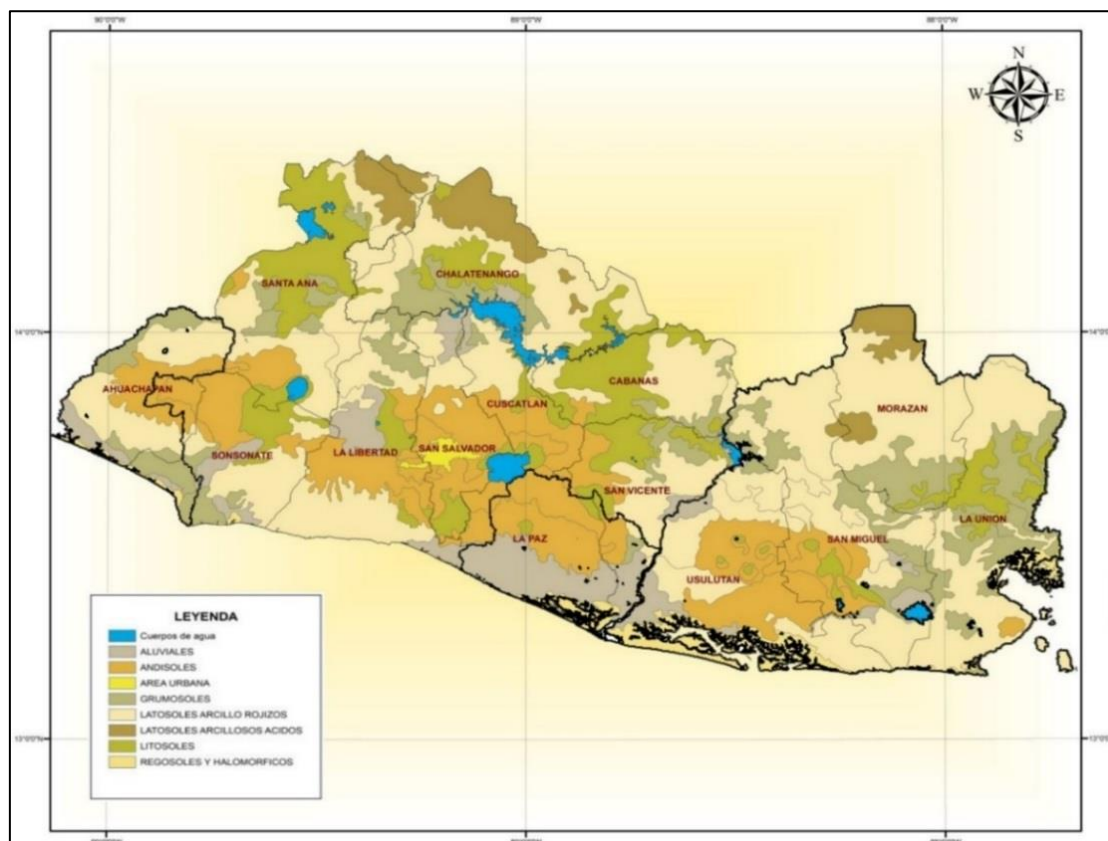
Figure 5. Multiannual average temperature map, 1970 - 2012



Source: MARN, 2014.

Soils: The intervention areas of the project are characterized by predominantly clay soils of reddish color, known as "Latosols Reddish Clays" (figure 6).

Figure 6. Pedological Map

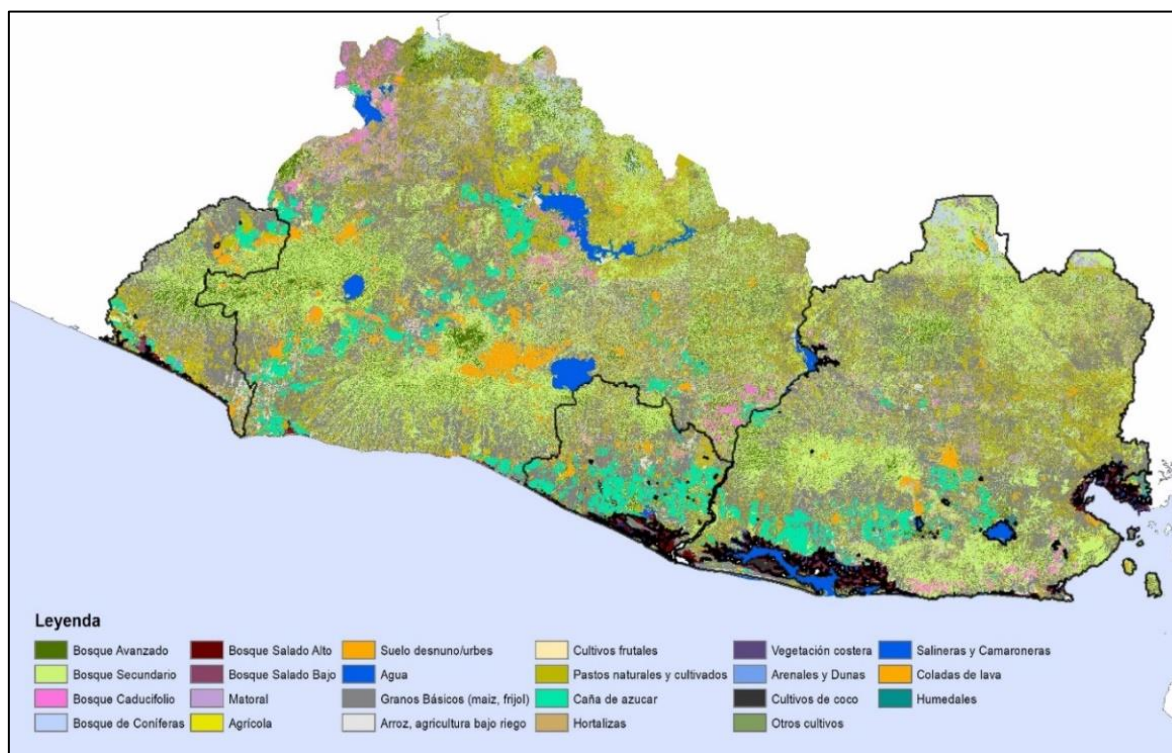


Source: MAG, 2013

The soils are well formed with a block structure and a generally red color, although they may range from yellow to brown tones. The surface texture is clay loam, with clay subsoil. The average depth is one meter, although in certain sites bedrock may surface due to erosion processes. If this land is protected with soil conservation works, they can be highly fertile. The soils are appropriate for nearly all types of crops (MAG, 2013).

On the use of these soils, the predominant coverage in the program intervention area is agricultural, despite the fact that a high percentage of these lands are classified with tight restrictions for intensive agriculture (figure 7). These lands are mostly dedicated to basic staple grain production and extensive husbandry; these are mostly infertile lands prone to erosion and landslides. Nearly one-fifth of the national territory is dedicated to basic staple grain production. Vestiges of the simplified "milpa" agro-ecosystem can still be found, usually including just corn and beans, or corn and sorghum, where traditional practices have been abandoned and substitution techniques used damage the soil and biodiversity.

Figure 7. Land use



Source: MARN, 2016a.

According to the same map, pasture accounts for 10% of the territory, with crop and pasture mosaics covering another 11%; together these lands represent an occupation of interest for the project. As a result of the agricultural activities developed by these practices, degradation processes of soils are severe, estimating elevated erosion rates. Natural processes also contribute to this degradation, including the natural erosion of young and non-compacted slopes, and incidence of torrential rains with powerful erosive force. Anthropogenic factors such as overexploitation of forest coverage, inappropriate agriculture practices by subsistence farmers on many of the hillsides in the country, and land use with vegetable coverage inappropriate for the potential land use all play a role, as well.

Sugarcane is produced under two formats: conventionally, with intensive use of chemicals ranging from herbicides to ripeners, for cane grown for large-scale sugar mills; and traditionally, without the use of chemicals, for cane grown for local artisanal mills to produce raw sugar.

The soils used for planting basic staple grains are the most degraded; many of these plots are located on lands not appropriate for this type of crop, and frequently on highly degraded slopes. Coffee growing is the only agro-ecosystem with more conserved soils and greater biodiversity, as it is grown under shade with five to ten tree species.

Up to 95% of slopes have lost their primary coverage and are deforested soils. Combined with monocropping practices, this dynamic has led to serious losses of biodiversity. As a result, these hillsides present high levels of soil erosion and high biophysical vulnerability; the majority of the agricultural practices in these plots contribute to further physical, chemical and biological degradation, and few efforts have been made for conservation.

Water resources: The project intervention areas are located in eight hydrographic regions (figure 8): Paz, Cara Sucia – San Pedro, Jiboa – Jaltepeque, Lempa, Bahía de Jiquilisco, Grande de San Miguel, Sirama and Goascorán.

Figure 8. Hydrographic Regions



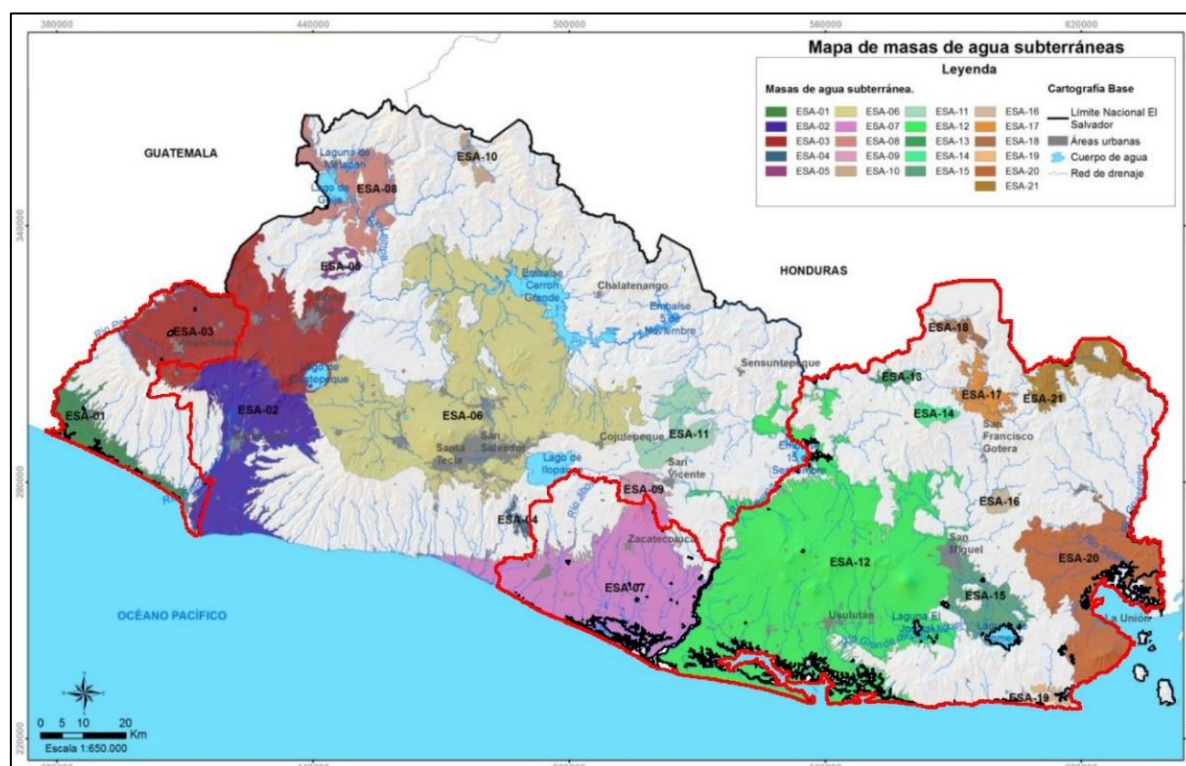
Source: MARN, 2016a.

The total estimated natural contributions comprehensively seen in El Salvador's watersheds, based on a historical average from the data series from 1970 to 2012, reach 20,293 MMC, distributing 56.9% of this total in the Lempa hydrographic zone, while 22.2% is in the West, Paz-Jaltepeque zone, and 20.9% in the East, Jiquilisco-Goascorán zone. A greater number of hydrometric stations have been established in the Lempa hydrographic zone, with a greater record of readings, lending greater reliability for the calibration process in other regions.

In the dry season, much of the national territory suffers from extreme arid conditions, and the majority of the riverways dry up or have greatly reduced water flow as a result of the lack of water retention in soils in the upper sections of the watershed. Increasing climate variability further exacerbates this situation during the rainy season, as intense and concentrated rains grow more frequent on soil lacking vegetation. These soils cannot properly trap water and absorb it into the aquifers for use in the dry season (MARN, 2012).

Additionally, the rapid and unplanned expansion of urban areas and the corresponding impermeabilization of the land has aggravated the degradation process, further reducing the capacity for water regulation and dangerously increasing flow rates in the rainy season, provoking flash flooding, increasing the risk of landslides and adding to the sediment burden that reduces the water capacity of rivers. In terms of subterranean water, El Salvador has a surface aquifer of approximately 9,611.88km², 46.34% of the national surface. According to data from MARN (2016), 72 aquifers and 21 underground water masses have been identified (figure 9).

Figure 9. Underground water masses



Source: MARN, 2016a.

The areas surrounding San Vicente, Tecapa, Usulután, El Tigre, Chinameca, San Miguel, and Conchagua are considered of special hydrogeologic interest; the lower lying waterways of the Paz, Lempa, and Goascorán rivers are also important water catchment areas with high environmental value and/or socio-economic activity.

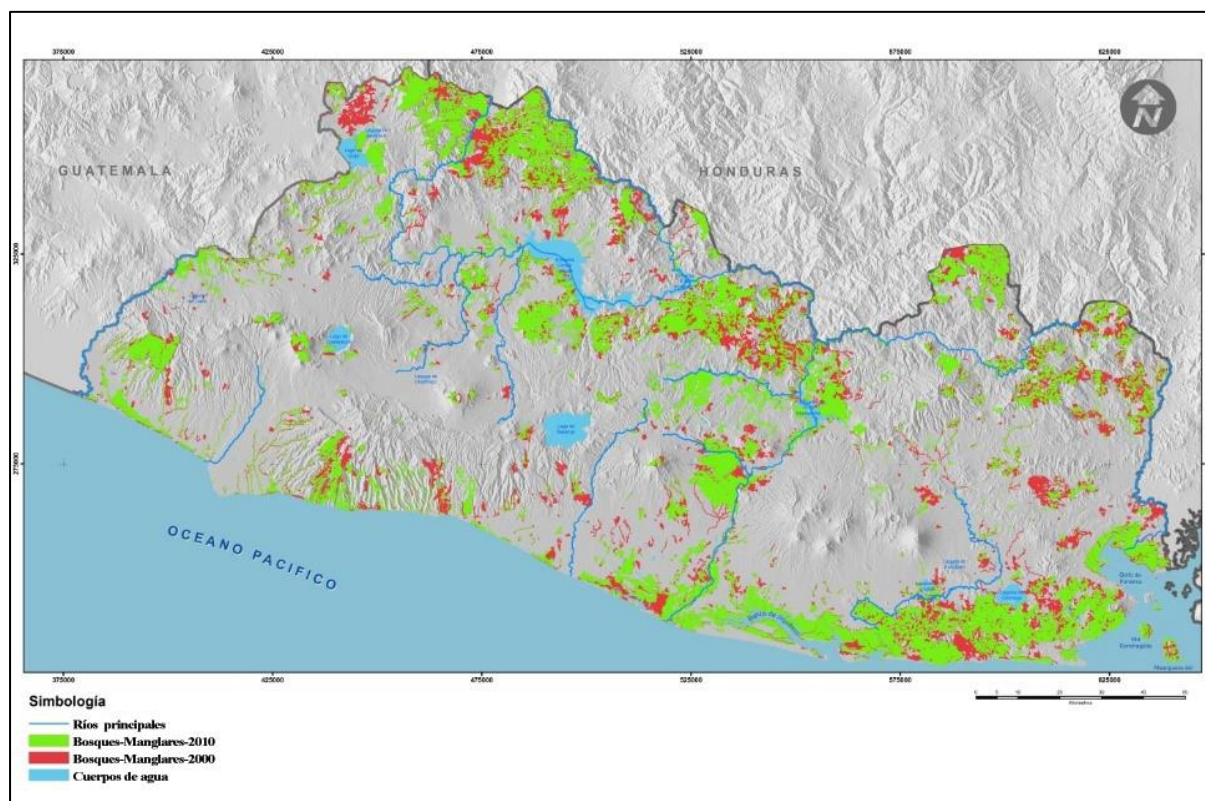
One fundamental factor influencing subterranean bodies of water is filtration or water catchment. This value is the result of a new rainfall pattern in which precipitation rises notably in the rainy season (the greatest estimated monthly increases come in September and October, the latter with 55.25 mm), and drops in the remaining months, excepting November, with a maximum reduction of 31.09 mm in July.

Biodiversity and Forests: According to the World Bank (2012), all ecosystems in El Salvador have suffered from fairly significant human intervention. Out of the 19 land ecosystems identified in the country, 12 are forests, most of them secondary forests. The few forested areas that many biologists consider to be primary forests have been subjected, at least, to considerable selective logging. For that reason, all forest ecosystems have been classified as "secondary" or "intervened", meaning they are less rich than original forests in terms of biodiversity.

The different environments occupied by the diverse biological populations have been affected by reduction and fragmentation, and even permanent loss. One of the main drivers of this loss has been

changing land use due to the expansion of agricultural activities, urban growth and development, and land demands for infrastructure such as the expansion of tourism outfits and establishment of salt and shrimp production facilities. In figure 10 the sites with natural ecosystems losses are identified for the period between 2000 and 2010, specifically in mainland forests and mangroves, which represent important sites of the national biodiversity habitat.

Figure 10. Sites with forest and mangrove losses, 2000 - 2010



Source: (MARN, 2016c)

In the period from 1998 to 2008, according to the MARN report, the country lost a total of approximately 44,000 hectares of natural forest, at an annual average deforestation rate of 1.5%. In the period from 2008 to 2011, 1,334 hectares of natural forest were lost, at a slower annual average deforestation rate (0.17%). These deforestation rates coincide with estimates from the World Forest Resource Assessment undertaken by the Food and Agriculture Organization of the United Nations (FAO) in 2010.

Forest ecosystems such as gallery forests along rivers are disappearing, forest patches are surrounded by hostile environment that impedes their basic ecological functions. The processes of natural regeneration that gained strength in the 1980s and 1990s are being overturned.

Deforestation has been greater in the Northeastern central, and Southeastern regions of the country. There was very little deforestation in the Southwestern region of the country, and minimal deforestation in the Northeastern region as well. There are eight municipalities with a deforestation rate over 50%, and another 12 with rates between 25% and 50%. Nonetheless, the rate of internal selective logging in forests of mature trees, and firewood collection is unknown. Firewood is the main fuel source for cooking in rural El Salvador. Satellite images show changes from forests to crops or pasture land. In many cases, timber extraction keeps the forests in a stage of early secondary forest, which is particularly worrying from an environmental standpoint, considering the relatively low biodiversity value of these young forests compared to more mature forests.

In the mangroves, the agricultural border for sugar cane and staple grains plantations has caused a severe landscape alteration with the consequent increase in human population vulnerability, biodiversity, and loss of ecosystem services key for the productive activities. El Salvador had 100,000 hectares of mangrove forest in the 1950s. In 2010, mangroves accounted for 40,000 ha (MARN, 2012a), including 38,534 hectares with little intervention, and approximately 2,000 affected by sedimentation or deforestation.

Natural Protected Areas: There are 40 areas in the project intervention area declared as natural protected areas (NPAs), covering over 12,600 hectares, distributed in 11 of the 15 conservation areas on a national scale (table 2 and figure 11). Additionally, other natural areas are in the process of being declared with protected status, including natural sites, river complexes, geo-cultural sites and wetlands.

Table 2. Natural Protected Areas

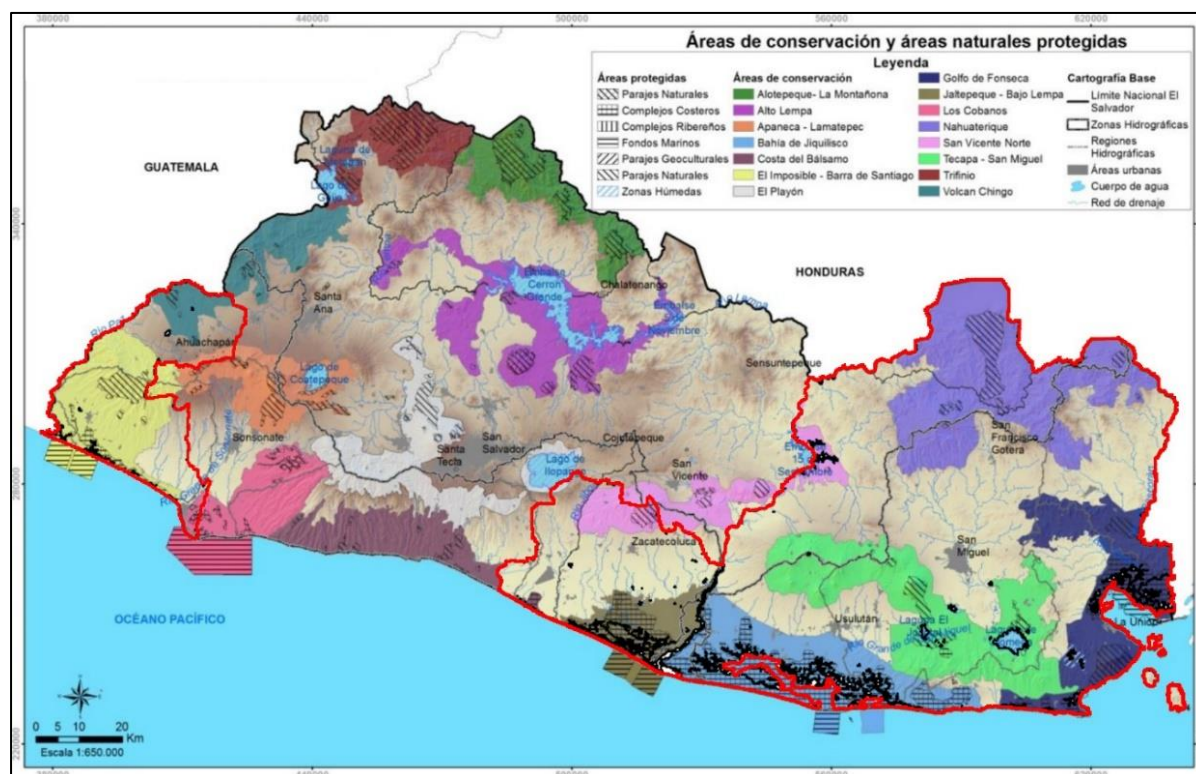
Name	Area (Ha)	Conservation Area
San Francisco El Triunfo	23.32	Apaneca – Lamatepec
Nancuchiname: Mata de Piña, La Maroma, Porción 5,6	797.31	Bahía de Jiquilisco
Chaparrón o Chaguantique	53.80	
Isla San Sebastián	161.95	
El Caballito	205.53	
Santa Clara	602.21	Costa del Bálsamo
San Benito I y II	2284.23	El Imposible – Barra de Santiago
El Imposible y El Balsamero	1765.44	
El Salto	39.13	
Santa Rita	233.01	
Cara Sucia	37.62	
El Chino	24.36	
El Chino Porción 1	301.48	
Hoja de Sal	93.50	
Las Colinas	35.33	
Los Laureles	59.41	
Maquigüe III	187.35	Golfo de Fonseca
El Faro Yologual y Suravaya	205.69	
Dación El Faro	77.93	
El Caballito	575.95	
San Lucas o Palo Galán A	59.61	
El Astillero	253.24	Jaltepeque
Los Cóbanos	576.17	Los Cóbanos
Santa Águeda o El Zope	34.74	
Las Marías	576.17	
Salinitas	576.17	Nahuaterique
San Carlos	120.43	
La Ermita	169.88	San Vicente Norte
El Tamarindo	15..44	
El Tecomatal	174.00	Tecapa – San Miguel
El Socorro II	343.00	
Laguna El Jocotal	1571.89	

Name	Area (Ha)	Conservation Area
Casamota y La Pezota	195.60	Volcán Chingo
San Antonio La Pupusa	8.00	
San Juan Mercedes Silva	47.82	
San Antonio Silva	34.25	
La Ortega	21.45	
Las Nieves Porción 2-1	93.08	
El Triunfo Paso Las Iguanas	8.74	
Tahuapa	15.63	Volcán Chingo

Source: MARN, 2016b

As shown in figure 11, the conservation areas group two or more natural protected areas and territories used as a nexus. These spaces maintain a direct relationship and constitute an independent comprehensive cultural, geographic, hydrological or ecological system. These are authentic functional units that require coordinated management. They are not closed systems, since they engage with the other units. These units can optimize administrative efficiency and the ecological connectivity in the NPAs. These conservation areas were selected for the biological corridor proposal in 2003, as they are closely interrelated with similar natural ecosystems.

Figure 11. Natural Protected Areas



Source: MARN, 2016a.

Biosphere reserve: Biosphere reserve are terrestrial, coastal, or marine ecosystems zones, or a combination of them, that have been internationally recognized as such within the framework of the Man and the Biosphere Programme (MAB) of UNESCO. El Salvador has three declared Biosphere Reserve sites: Apaneca-Iamatepec, Xirihualtique-Jiquilisco, and the cross-border Trifinio Fraternidad site, shared among the countries of El Salvador, Guatemala, and Honduras (figure 12).

The Xirihualtique-Jiquilisco Biosphere Reserve is completely within the area of the project, covers 101,607 hectares, and received its status as Reserve on September 18, 2007, by UNESCO's Man and

the Biosphere Programme (MAB). This reserve is located in the departments of Usulután (10 municipalities) and San Miguel (2 municipalities), at its core are the following Natural Protected Areas: Chaguantique, El Tercio, Ceiba Doblada, Complejo Nancuchiname, Normandía, La Redención, San Carlos, Jiquilisco Bay, and Isla San Sebastián.

This biosphere reserve is home to the greatest extension of mangroves in El Salvador. This is a priority ecosystem globally, as it accounts for 46.82% of the mangrove forests on the Northern Coast of the Mesoamerican Pacific Dry Region, an eco-region that has been declared with Critical/Endangered status. This reserve is home to 37 endangered species and over 58 threatened species.

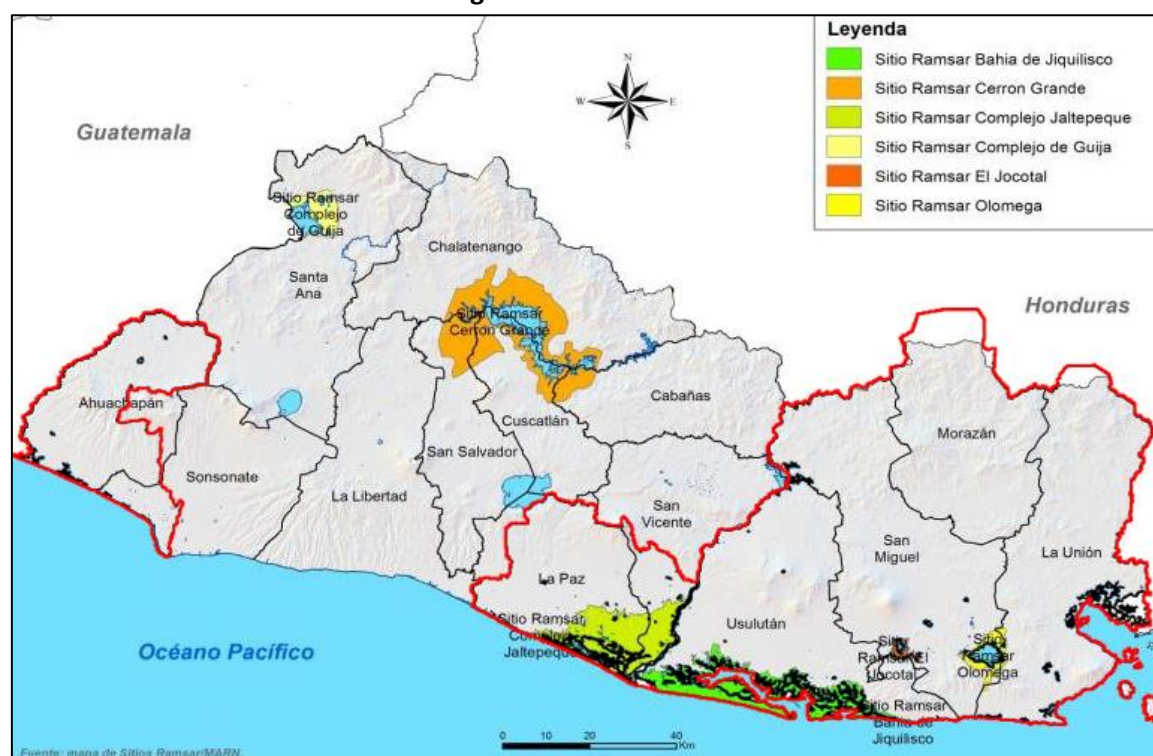
Figure 12. Biosphere Reserves



Source: MARN, 2017a

Fragile marine and coastal regions: The fragile areas within the program intervention include wetlands, rivers, lakes, ponds, and estuaries that provide a habitat for a large amount of plant and animal species (figure 13).

Figure 13. Ramsar Sites



Source: MARN, 2017b.

Certain wetlands are of international importance for the conservation of aquatic birds and other plant and animal species; these sites are denominated Ramsar Sites. These sites include: Laguna de Olomega and Jocotal, Estero de Jaltepeque, Bahía de Jiquilisco and Barra de Santiago (figure 13). The table below summarizes the characteristics of the Ramsar Sites in the program intervention area.¹

Table 3. Main Characteristics of Ramsar Sites

Ramsar Site	Location	Area (Ha.)	Importance
	Departments – San Miguel – Usulután Municipalities – El Tránsito, – San Miguel, – Chirilagua – Jucuarán	1,958 ha	• Habitat for threatened and endangered species such as: freshwater mangroves, two-banded sea bream, caymans and crocodiles etc. • Livelihoods for households dependent on fishing • Tourist attraction
	Department – Usulután Municipalities – Jiquilisco – Puerto El Triunfo – Usulután	31,699 ha	• Habitat for threatened and endangered species such as: freshwater mangroves, two-banded sea bream, caymans and crocodiles, loggerhead, hawksbill, leatherback and olive-ridley sea turtles.

¹ Protected sites under the RAMSAR Convention ratified by El Salvador on July 2, 1998.

Ramsar Site	Location	Area (Ha.)	Importance
	– San Dionisio – Concepción Batres – Jucuarán		• Feeding and reproduction area for marine fauna • Protection area from tsunamis and hurricanes • Livelihoods for households dependent on fishing • Tourist attraction
3. Laguna de Olomega	Departments – San Miguel – La Unión Municipalities – San Miguel, – Chirilagua – El Carmen.	3,943 ha.	• Feeding and rest area for important concentrations of migratory aquatic bird species • Home to freshwater mangrove species • Livelihoods for households dependent on fishing • Tourist attraction
4. Complejo Jaltepeque	Departments – La Paz – San Vicente Municipalities – S. Pedro Masahuat – Santiago Nonualco, – San Juan Nonualco, – Zacatecoluca – S. Luis La Herradura – Tecoluca	49,454 ha.	• Habitat for threatened and endangered species such as: sea turtles (<i>Chelonia mydas</i>, <i>Dermochelys coriacea</i>, and <i>Lepidochelys olivacea</i>), <i>Crocodylus acutus</i>, and others. • Resting site for migratory birds such as: <i>Larus</i> spp, <i>Thalasseus</i> spp, and <i>Charadrius</i> spp. • Livelihoods for households dependent on fishing. • Tourist attraction
5. Barra de Santiago	Departments – Sonsonate – San Ahuachapán Municipalities – San Fco Menéndez – Jujutla – Acajutla	11,519 ha.	• Habitat for threatened and endangered species such as: turtles, parrots, crocodiles, mangroves, palm (<i>Brahea salvadorensis</i>), etc. • Feeding, reproduction and resting site for resident and migratory aquatic birds • Includes 3 Maya-Pipil archaeological sites: Islas El Cajete, El Cajetillo and Cara Sucia

Source: Internally-produced.

The coastal marine strip in El Salvador is a territory with great and unknown natural wealth, home to species and ecosystems with high environmental value; many of these ecosystems are unique in Central America. In addition to its conservation importance, the biodiversity in this area is a core element for local livelihoods and the productive and commercial activities of the local population; it is a high-value asset for the development of other local entrepreneurial initiatives. Table 4 highlights some of the important socio-environmental values along the national coastline.

Table 4. Marine coast fragile zones

Site/Description	Unique Values/Importance
Marine Coastal Ecosystems at the Gulf of Fonseca: A 56 km coastline from the mouth of the Goascorán river that serves as the border with Honduras to Punta Amapala (el Tamarindo) and the La Unión Bay.	This system includes freshwater forests, mangroves, and valleys with endemic vegetation; these are among the only sites in the country with a transition from rocky beach to freshwater forest, and a chain of islands is located on a rocky sea floor with a steep coastline and curved beaches. The extraordinary wealth of species here is unique in the country. Sightings have been recorded of dolphins, clams, oysters, octopus, mussels, crabs, and others.
Jiquilisco Bay Conservation Area. This site is part of the Xirihualtique-Jiquilisco Biosphere Reserve. The area was declared a Ramsar Site on October 31, 2005, and covers 63,500 hectares.	Jiquilisco Bay accounts for the greatest extension of brackish water and mangrove forest in El Salvador, and is a unique ecosystem in the Central American Pacific region. The seagrass fields in the country are distributed across Golfo La Perra, Golfito, San Juan del Gozo and El Icacó. This seagrass serves as fodder for fish, mollusks, crustaceans, and especially green sea turtles and hawksbill turtles. The Jiquilisco Bay is the main site in importance in the Eastern Pacific, with 70% of hawksbill turtle nesting sites. Other sea turtles also nest here: Olive Ridley, leatherback, and green sea turtles. An islet across from the island of San Sebastián known as El Bajón, is the only known colony in Central America of the black skimmer (<i>Rynchops niger</i>) sea bird, and more numerous populations in El Salvador of least terns (<i>Sterna antillarum</i>), Wilson's plover (<i>Charadrius wilsonia</i>), and American oystercatchers (<i>Haematopus palliatus</i>). Other threatened species located in the area include spider monkeys, the only wild primate species in the country.
Garita Palmera-Barra de Santiago mangrove forest Located between the Paz and Grande Sonsate rivers, the main beach in this region is Barra de Santiago, with a main channel with an average width of 400 meters and 5 km in length.	This is an important space for conservation of threatened species in the country. The species that can be observed in this system include the Tropical gar (<i>Lepisosteus –Atractosteus- tropicus</i>), the largest population of spectacled cayman (<i>Caiman crocodylus</i>) in the country concentrated in a single site, American crocodiles (<i>Crocodylus acutus</i>), yellow-naped amazons (<i>Amazona auropalliata</i>), nutrias (<i>Lontra longicaudus</i>), and important sites and beaches for sea turtle nesting.
Los Cóbanos Reef System. This system has an extension of 21,312 hectares, and is the largest section of protected marine surface.	This system has the greatest coastal and marine biodiversity in El Salvador, home to over 1,500 species. Due to the coral wealth, unique marine flora have developed, with 81 species of macroalgae recorded and 248 species of microalgae. Whale sharks (<i>Rhinocodon typus</i>) and humpback whales (<i>Megaptera novaeangliae</i>) have been sighted from December to March.

Source: MARN, 2014.

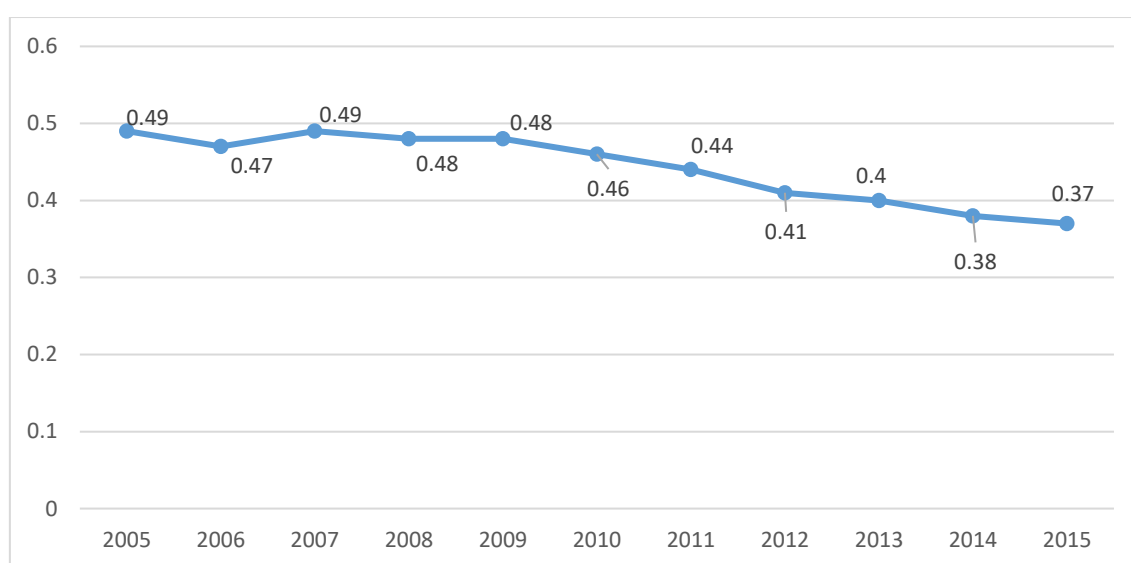
3.2. Socioeconomic Aspects

Beneficiaries Profile: The 2007-08 agricultural census IV reported the existence of 395,588 producers nationwide. Of this total, 325,044 (82.2%) are small farmers, and 70,544 (17.8%) are categorized as commercial agriculture. In this last category, the census identifies 7.806 "special operations".

Women account for 14% of the producers in the agricultural sector, most without access to ownership of the land. In terms of age, producers in the agricultural sector are an older population, with an average age over 50 years old with only 4.3% of the total population classified as young.

The Gini coefficient reflects a trend to improve the income distribution, given that between 2005 and 2015 there is a reduction from 0.49 to 0.37. Inequality in income distribution has been reduced in 10 percent points (figure 14).²

Figure 14. GINI Coefficient 2005-2015



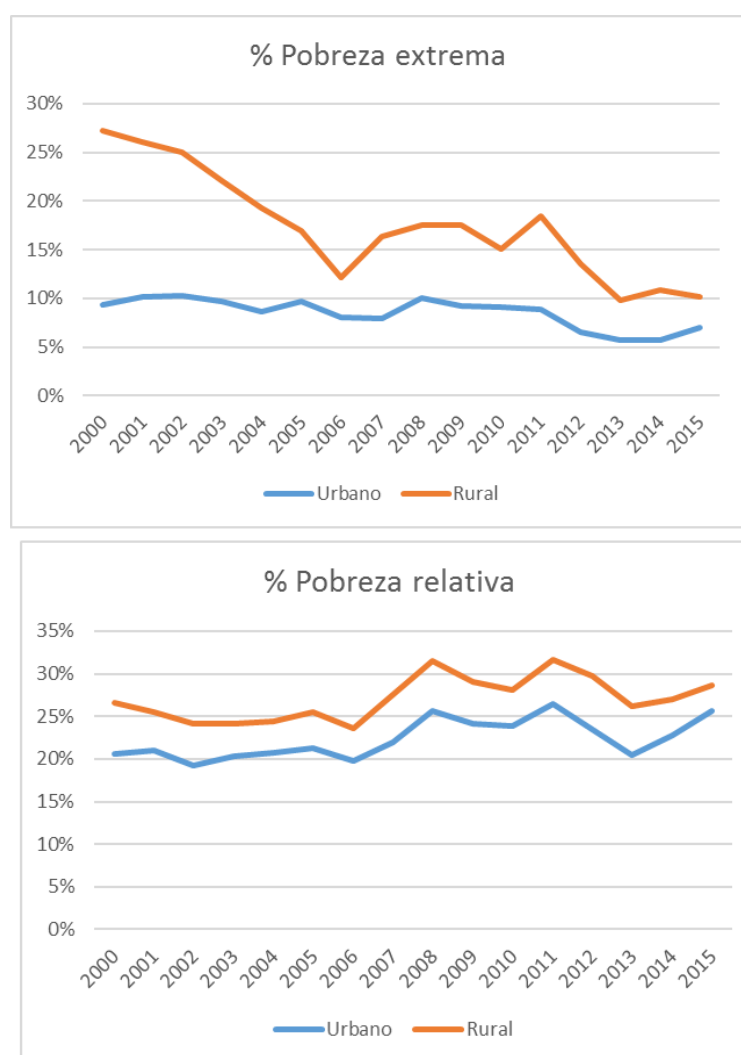
Source: EHPM, several years.

Farms covers a total area of 961,600.70 hectares, where 74.2% result owned by producers. 20.9% of farms are operated on leased land and 4.9% are operated on property categorized as free use, partial ownership or shared occupation.

Economic activity: Poverty continues to be mostly rural in El Salvador. While extreme poverty has significantly reduced in rural areas, relative poverty has increased in recent years. For this reason, overall poverty rates follow the same trends.

² The GINI coefficient is a number from 0 to 1, where 0 corresponds to perfect equality (everyone with the same income) and 1 represents total inequality (one person has all the income, and the rest have nothing).

Figure 15. Trends for extreme and relative urban and rural poverty in El Salvador: 2000-2015



Source: EHPM, several years.

Socio-economic conditions of the rural population are characterized by the prevalence of high levels of poverty that are kept in the higher rates above the national mean (table 5). Up to 2015, data reveals that 38.8% of the rural homes are in a situation of poverty, while 10.1% live in extreme poverty; that is, they do not have the capacity to cover the cost of the basic food basket in the rural area.

Table 5. Populations and rural homes per gender and poverty situation (2015)

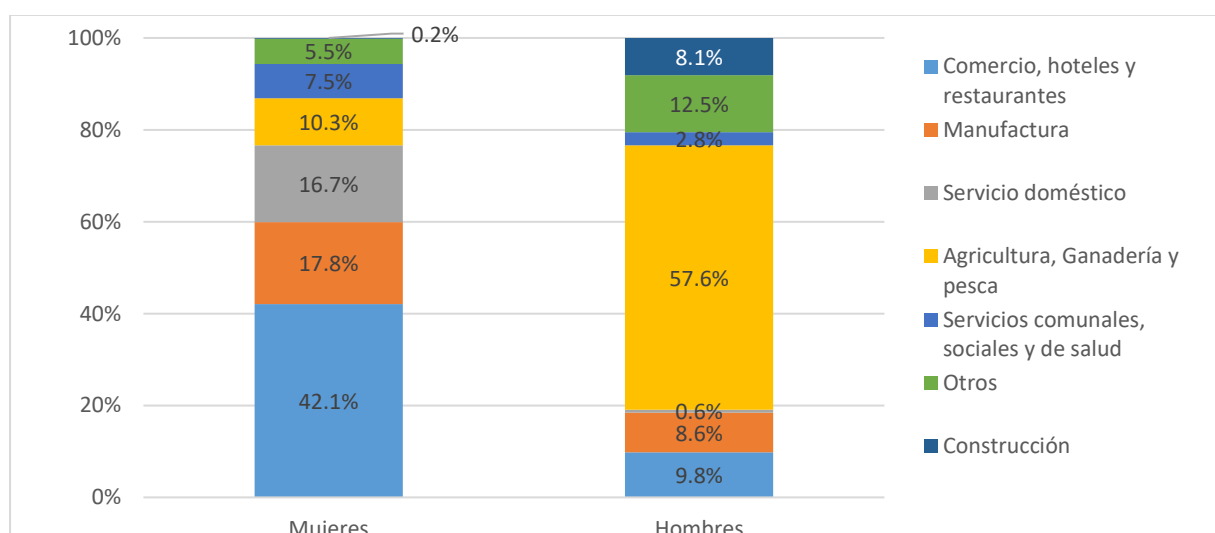
Population	Poverty	Extreme poverty	Relative poverty
Population	45.1%	12.6%	32.5%
Men	48.8%	49.3%	48.6%
Women	51.2%	50.7%	51.4%
Households	38.8%	10.1%	28.7%
Men	72.1%	75.3%	70.9%
Women	27.9%	32.8%	41.0%

Source: EHPM, 2015.

In the particular case of women, poverty conditions are accentuated even more due to factors such as lack of access to the labor market, receiving less income, early motherhood and the adoption of domestic roles in the household, considered to be a tradition, limiting opportunities in the labor market, and from participating in vocational training and personal growth processes.

The economically active population amounts to 2,867,966 persons at national level. From this total, men represent 61% and women 39% of those with an occupation, the latter number being lower in rural areas (29%). 76.6% of rural women working perform trade related activities (42.1%), manufacture (17.8%), and domestic help (16.7%); comparatively, most remunerated jobs in the agricultural sector, fishing, and construction, are mainly performed by men (figure 16). Meanwhile, the conditions under which women are incorporated in the labor force continue to be unfavorable, as they usually perform tasks with the least added value and thus, the lower remuneration.

Figure 16. Labor occupation by economic activity and gender in the rural area (2015)



Source: EHPM, 2015.

Lack of access to permanent income sources deepens the vulnerability conditions of the rural population, particularly women, increasing their propensity to experiment vulnerability and poverty situations throughout their life cycles. In this context, a factor of concern in the country is the amount of youth who, besides their lack of income do not attend school. According to the 2015 EHPM, 26.6% of youth at the national level are neither studying nor working, with this number rising in rural areas (32.2%).

Tenure: According to the 2016 national household survey, access to land in rural areas appears to be mainly by lease (45% of farmers, varying from 40 to 47% depending on the department); followed by free occupants for 27% of farmers (variation from 20 to 32%); and then by ownership for 21% of farmers (varying from 12 to 21 %). Despite variation in between departments and, probably, in between project targeted municipalities the order is the same.

At central level, land tenure organizational framework involves three institutions: the *Instituto Salvadoreño de Transformación Agraria* (ISTA), the *Instituto de Legalización de la Propiedad* (ILP) and the *Centro Nacional de Registro* (CNR). ISTA is responsible for ensuring beneficiaries land access over the properties obtained by the Agrarian Reform process and the registration of beneficiaries' tenure rights. During the last decade, ISTA has been modernizing the registration process to ensure increasing of title delivery. The beneficiaries of the Agrarian reform respond to a series of criteria amongst which are the entrepreneurship skills, farming skills, family status, family incomes, and financial soundness. Over the 2009 –2017 period, ISTA reached the delivery of 73 266 land certificates and projects to deliver further 18 000 until the end of 2019. These results have allowed diminishing an important

bottleneck for the beneficiaries of the agrarian reform: 170 000 beneficiaries had a pending registration in 2012³. This project allows also absorbing consecutive modifications made on the land received through the Agrarian Reform (intra family transmission and sub division of parcel).

RECLIMA will define the type of access to land for farmers (lease, ownership or free occupant in the context of the baseline activity foreseen during the inception phase to better identify the tenure situation of project beneficiaries. This activity will seek to determine the following information:

- for land lease: most common duration of contract and modalities/ possible barriers to improve lease duration for lessees or land tenant;
- for land ownership: proportion of rights recorded and up to date/ barriers to recorded rights for beneficiaries of the intervention areas/ proportion of subdivided parcel (in compare to original agrarian reform parcel);
- for free occupant: most common duration and modalities. This analysis should serve to determine possible hindering factor of the adoption of sustainable agriculture practices linked to land tenure

In addition, the project will undertake a land tenure legal framework review to identify gaps to promote sustainable agricultural practices and adaptation to climate change. In particular this should look at land lease contract, land fragmentation and tenure rights recognition, possible support to revert land fragmentation.

Finally, a land tenure task force will be established with relevant institutions with to recommend tenure solutions for sustainable agricultural practices and adaptation to climate change.

³ Sennhauser, Ethel; Rajack, Robin; Galeana, Fernando; Munoz, Jorge; McWilliams, Katie; Morataya, Marcial; Vreugdenhil, Daan. 2012. *El Salvador country land assessment (English)*. Washington DC; World Bank Group. <http://documents.worldbank.org/curated/en/122551468027660574/El-Salvador-country-land-assessment>

4. LEGAL AND INSTITUTIONAL FRAMEWORK

4.1. *Relevant Public Policies*

The country has advanced in the last 5 years generating public policy tools to establish priorities and action frameworks related to the environmental and climate change subjects. The most relevant are:

- National Policy of the Environment (PNMA) 2012;
- Forest Policy 2016-2036;
- National Energy Policy 2010-2024;
- National Strategy for the Environment (ENMA) 2012;
- National Strategy for Climate Change ENCC (2013);
- Forest Strategy (2017);
- National Strategy of Hydrological Resources (ENRH) 2013;
- Strategy for Hydrological Watersheds (2017);
- National Strategy for Environmental Sanitation (ENSA) 2013;
- National Strategy for Biodiversity (ENB) 2013;
- Environmental Strategy for Climate Change Mitigation and Adaptation of the Agricultural, Husbandry, Forestry, Fishing, and Aquaculture sectors (2015);
- National Plan for Climate Change (PNCC) 2015;
- Climate Change Plan of MAG (2017);
- National Plan for the Comprehensive Management of Water Resources (PNGIRH) 2016;
- National Plan for the Implementation of the Stockholm Convention (2012);
- Center for the Monitoring of Natural Hazards (2011);
- National Programme for the Restoration of Ecosystems and Landscapes (2013);
- National Plan for Restoration and Reforestation (2016);
- National Programme for the Comprehensive Management of Solid Wastes (2010).

On November 2015, El Salvador officially presented its Nationally Determined Contribution (NDC) as part of its commitment to support a new binding agreement applicable to all Parties of the UNFCCC. This commitment includes, first, the establishment of a legislation and institutional arrangements framework that orient economic and social development towards low emissions and climate change adaptation. Likewise, some quantitative targets are introduced for the years 2025 and 2030 that will be duly taken to consensus, quantified and presented in some cases, before COP 22 and COP 23.

4.2. *Applicable Legal Framework*

The Rio Summit of 1992 signaled the beginning of an international level for a generation process of an important amount of binding normative instruments (Conventions, Protocols, etc.) that regulate, determine, and harmonize the attention and responsibility of the State and civil society before the issue of a sustainable development.

This international dynamic for the establishment of commitments on environmental issues assumes to date, the undersigning of at least 19 instruments, among them the Vienna Convention for the Protection of the Ozone Layer of 1988, the United Nations Framework Convention on Climate Change of 1992, the Convention on Biological Diversity of 1993, the United Nations Convention on Combating Desertification and Drought of 1994, the Stockholm Convention on Persistent Organic Pollutants of 2004, the Montreal Protocol on Substances that Deplete the Ozone Layer of 1989, and the Kyoto Protocol of the United Nations Framework Convention on Climate Change of 2005, among others.

Within this framework, MARN has also doubled efforts to take advantage of international instruments of support to sustainable development, in such a manner that its official adoption by the country translates in additional support to advance the implementation of the national environmental agenda, including resource mobilization to start actions or measures established in said instruments. Table 6 below summarizes the most relevant national standard that addresses the environmental issue, the

management of natural resources, uses of the soil, and aspects related to climate change. This normative highlights the shift in the focus from productive and natural resources exploitation towards the incorporation of environmental perspectives, that presently determine the management of natural resources considering social and territorial aspects.

Table 6. Relevant policy framework related to the Environment and Climate Change

Legislation	Objective
Environmental Act Competent Authority: Ministry of the Environment and Natural Resources.	Develop the provisions of the Constitution of the Republic referring to protection, conservation, and recovery of the environment; the sustainable use of natural resources that allow the improvement of the quality of life of the present and future generations; also rule the public and private environmental management norm, and the environmental protection as a basic obligation of the State, the municipalities, and inhabitants in general; and assure the application of international treaties or conventions concluded by El Salvador on this issue.
Seeds Act Competent Authority: The Ministry of Agriculture and Livestock	Establish the normative to guarantee the genetic identity and purity, physical, physiological, and hygienic quality of the seeds, as well as their investigation, production, and commercialization.
Forest Act (2002) Competent Authority: The Ministry of Agriculture and Livestock	Regulate increase, management and utilization, in a sustainable manner, of forest resources and timber industry development.
Natural Protected Areas Law Competent Authority: Ministry of the Environment and Natural Resources.	To regulate the establishment of the legal regime, management and expansion of the Natural Protected Areas in order to conserve biological diversity, ensure the functioning of essential ecosystem processes, and guarantee the perpetuity of natural systems.
Civil Protection, Disaster Prevention, and Mitigation Law (2005) Competent Authority: General Civil Protection Department, Disaster Prevention and Mitigation.	To prevent, mitigate, and tend to natural and anthropogenic disasters in the country and display, in its eventuality, the public service of civil protection. Constitutes the National System of Civil Protection, Disaster Prevention and Mitigation, and determines objectives and participants.
Law of Creation of the Fund for the Civil Protection, Disaster Prevention and Mitigation (2005). Competent Authority: FOPROMID - Ministry of Finances.	To prevent and counteract the effects caused by natural phenomena such as earthquakes, tropical storms, hurricanes, floods, droughts, among others.
Territorial Planning and Development Law (2011). Competent Authority: National Council of Land Management and Development.	Develop the constitutional principles related to land management and development; regulate planning instruments, programming, land evaluation and management; and strengthen institutional capacity of the State to order the land use, and orient public and private investments necessary to reach sustainable development.

Source: Internally-produced based on documentary review.

5. APPLICABLE SAFEGUARDS POLICIES

The project was subject to an environmental and social assessment against FAO's environmental and social safeguards⁴. From this, it has been determined there will be no large-scale, significant or irreversible environmental impacts associated with the project. The potential impacts identified are mainly localized impacts associated with activities including the involvement of communities on a purely voluntary and demand basis, which can be effectively mitigated and are addressed using the screening criteria and environmental and social management plan (ESMP).

Risk Classification of the Proposal

According to FAO's environmental and social risk classification, the project is moderate risk.

Moderate risk projects are defined as:

- a) Projects with environmental and/or social impacts potentially identified.
 - It is possible that they may be affected by some native species that use buffer areas for their vital activities.
 - It is possible that the natural development of native biodiversity be affected.
 - Natural processes in soil and water may be affected.
 - Social, cultural, and ethnicity aspects may be affected.
- b) Potential impact is not without precedents in the project area.
 - Activities foreseen to be developed have already been implemented by the interested parties, indigenous peoples, and the private sector, since it refers to well-known farm activities.
- c) Potential impacts are limited to the project footprint.
 - In case of verifying some of the potential identified impacts, these will happen within the project intervention area.
- d) Potential impacts are neither irreversible nor cumulative.
 - Potential impacts are reversible and not cumulative, as long as they correctly apply the proposed practices in the RECLIMA models.
 - Potential impacts will be treated in productive systems individually and cumulatively, as follows: relevant farms in Component 1 of the project will not be greater than 1 hectare individually and will be disseminated in the intervention area, thus reducing the probability of cumulative impacts. Positive socio-economic impacts will be equitably distributed among beneficiary households. On the cumulative side, particular precaution will be taken in buffer zones of Natural Protected Areas, Ramsar sites and Biosphere Reserves, given its effect on vital activities developed by native species in these areas, taking special actions to mitigate said effects. For example, RECLIMA will promote only integrated pest management for pest control and diseases that may affect productive models in the buffer zones. In cases where project activities include planting trees and forest landscapes restoration, a clear landscaping planning will be carried out to assure implementation in areas with natural potential, avoiding the effect on native forests, guaranteeing the recovery of riverside areas, gallery forests, water catchment areas, water sources protection, especially with native species, and fostering connectivity of ecosystems through biological corridors. Thus improving the livelihoods of the communities living in these areas, while conserving natural protected areas.
- e) The possible negative impacts may be resolved by means of the use of good acknowledged management practices, or pollution reduction, and it has been demonstrated that they have been used successfully in the areas of the project.

⁴ FAO's Environmental and Social Management Guidelines available at: <http://www.fao.org/3/a-i4413e.pdf>

- By means of the good practices application, possible impacts will be mitigated (see biodiversity management plan). Models have been developed based on the practical experiences in El Salvador, thus the proposal has been proven in project areas.

By design, the project is expected to have far greater environmental benefits than adverse environmental impacts. The potential adverse environmental impacts from the project are likely to be small and limited. However, it is recognized that such impacts can accrue into larger impacts if they are not identified early during the planning cycle, and their mitigation measures integrated into the project planning and implementation.

5.1. *FAO Applicable Safeguards*

Table 7. FAO Safeguards triggered

FAO Safeguard	App lies	Justification
ESS1: Natural Resource Management	No	Not applicable.
ESS2: Biodiversity, Ecosystems and Natural Habitats	Yes	The project area includes protected areas and natural habitats. Farmers with plots located in fragile areas will implement conservation practices according to the physical, geographical and climatic specificities of their land. Some agricultural activities such as chemical pesticides will not be implemented in case of buffer zones. A biodiversity management framework is included in the ESMF.
ESS3: Plant Genetic Resources for Food and Agriculture	Yes	The project will work with local and traditional varieties. All FAO protocols for procurement and use of seeds will be implemented.
ESS4: Animal - Livestock and Aquatic - Genetic Resources for Food and Agriculture	No	Not applicable.
ESS5: Pest and Pesticide Management	Yes	For the control of pests, Integrated Pest Management approach will be promoted. Only in cases where chemical pesticides are needed, FAO's policy for pest and pesticide management will be implemented (See Annex 4).
ESS6: Involuntary Resettlement and Displacement	No	Not applicable.
ESS7: Decent Work	Yes	All personnel hired in the climate stations will be respecting what has been established by the labor laws, working schedules, and fair salaries offering equal opportunities to women and men, mainly equal salary for same work.
ESS8: Gender Equality	No	Not applicable.
ESS9: Indigenous Peoples and Cultural Heritage	Yes	Among the direct beneficiaries there are indigenous communities. A free, prior and informed consultation process has been carried out and engagement will be continuous through the life of the project as per indigenous peoples planning framework (See section 7).

5.2. Green Climate Fund Safeguards

GCF has provisionally adopted the Performance Standards (PS) and directives of implementation of the International Financial Corporation. There are 8 Performance Standards that include the main environmental and social questions that must be considered when starting a project, using the best international practices.

Table 8. FAO ESS and IFC PS

IFC - Performance Standards	FAO Standards
PS 1: Assessment and Management of environmental and social risks and impacts	ESS 1: Natural Resource Management ESS 8: Gender Equality
PS 2: Labor and Working conditions	ESS 7: Decent Work
PS 3: Resource efficiency and and pollution prevention	ESS 5: Pests and pesticides management
PS 4: Community health, safety and security	ESS 7: Decent Work (partially)
PS 5: Land acquisition and involuntary resettlement	ESS 6: Involuntary Resettlement and Displacement
PS 6: Biodiversity conservation and sustainable management of living natural resources	ESS 2: Biodiversity, Ecosystems and Natural Habitats ESS 3: Plant genetic resources for food and agriculture ESS 4: Animal - Livestock and Aquatic - Genetic Resources for Food and Agriculture
PS 7: Indigenous Peoples	ESS 9: Indigenous Peoples and Cultural Heritage
PS 8: Cultural Heritage	

An exclusion list specifying the activities the project will not finance is available in Annex 2.

6. STAKEHOLDER ENGAGEMENT

6.1. Stakeholder Identification

A no objection letter was released by the Ministry of Foreign Affairs as Designated National Authority. This no objection letter allowed FAO to initiate the process of proposal design.

Among initial tasks, a mapping of institutional stakeholders was carried out to identify relevant parties to be involved and consulted through the preparation and implementation of the proposal.

Table 9. Main stakeholders in RECLIMA

Stakeholder Name	Interest/Role in the project
Food and Agriculture Organization of the UN	• Accredited Entity • Member of the Executive Steering Committee
Ministry of Environment and Natural Resources (MARN)	• Member of the Executive Steering Committee
Ministry of Agriculture and Livestock (MAG)	• Member of the Executive Steering Committee
National Center for Agricultural and Forestry Technology (CENTA)	• Member of the Executive Steering Committee
Ministry of Foreign Affairs	• Designated National Authority • Member of the Executive Steering Committee
Directorate for Development Cooperation of the Ministry of Foreign Affairs	• Member of the Executive Steering Committee
Vice-Ministry of Cooperation for Development	• Member of the Executive Steering Committee
Technical and Planning Secretariat of the Presidency	• Coordinates the country's territorial order with the Ministry of Government and Territorial Development.
Corporation of Municipalities of the Republic of El Salvador (COMURES).	• Coordinates the Associations of municipalities and the Departmental Councils of Mayors
Non-Governmental Organizations (to be defined)	• Service suppliers and organizational development opportunities.
Water Administration Boards	• Project partners for rainwater catchment activities
Community Development Associations (ADESCO)	• Direct Beneficiaries
Academia (to be defined)	Technology developers and options for the application of scientific knowledge.
Project Beneficiaries (to be defined)	50,000 small producers located in 114 municipalities (20,500 indigenous peoples)

Institutional Stakeholders have been defined. Other stakeholders, such as the NGOs that will act as service suppliers will be identified through national competitive process. Beneficiaries will be identified during the consultations at municipal level, in coordination with local authorities and on the basis of the following criteria:

- drought threat
- ecosystems for restoration
- productive potential
- land use / conflict
- water recharge
- scenario A2 to year 2100 (average annual temperature increase projection)
- poverty
- malnutrition and hunger

6.2. Stakeholder Engagement

The consultation process allowed an organized process of information exchange with all stakeholders identified. Throughout the process they expressed their views, expectations, concerns and ideas for the proposal during and beyond the life of the project.

Before initiating the consultation process, a meeting was held with the Ministry of Governance and Territorial Development, where the Deputy Minister, Governors and Deputy Governors participated. In the context of this meeting the proposal was presented and support was requested for the consultation processes with officials.

An interdisciplinary team (including specialists in territorial management, sustainable land and water management, institutional strengthening, disaster risk management, social and gender, productive systems, livelihoods, value chains, agriculture, economy, landscape restoration, agricultural production and monitoring and evaluation) was organized on the basis of the thematic needs of the various consultations. The consultations were carried out both with officials from previously identified institutions and with people at territorial level. The process was divided in 5 stages:

a) Municipal Characterization and Consultation Process Planning

During the initial stage of the process, a characterization of the municipalities was carried out to determine the main criteria for identification of priority areas of implementation. The agreed criteria are:

- drought threat
- ecosystems for restoration
- productive potential
- land use / conflict
- water recharge
- scenario A2 to year 2100 (average annual temperature increase projection)
- poverty
- malnutrition and hunger

Based on the above, the Consultation Plan was drafted to include primary and secondary information sources, consultation places and time, representatives and participants to be engaged.

b) Municipality level Consultations

Consultations were carried out in 78 out of the 114 municipalities where activities are to be implemented. The objective of the consultations was to update contacts with officials, collect documentation that would support the analysis and studies to be carried out, as well as to assess interests in the types of activities to be implemented. Invitations to the next stage of consultations were extended.

In this stage, meetings were held with Governors, Mayors, Association Managers, Representatives of Community Development Associations (ADESCO), officials from governmental and non-governmental institutions and organizations that are currently implementing projects in the intervention areas.

The information requested was related to the existence of Units on environment, women, agriculture and food security at municipal level; as well as relevant documentation such as Strategic Plans and Disaster Risk Management Plans, among others.

c) Local Level Consultations

Four workshops were organized with community level stakeholders. Participants included representatives from associations, governmental and non-governmental institutions, church, community groups, water boards, community development associations, cooperatives, producer associations, women's and youth groups among others to collect information on sustainable land and water management, restoration of ecosystems, socio-economic and gender activities, institutional and organizational capacities, financing and incentive mechanisms, environmental monitoring and information generation.

d) Consultation with CENTA

The National Center for Agricultural and Forestry Technology (CENTA) is a strategic partner in the proposal. The institution is in charge of generation and validation of technologies, as well as the technological transfer and extension at national level. Four workshops were held according to the geographic-territorial distribution of CENTA center, with the objective of understanding their territorial intervention strategy, their technology transfer methodologies, identify their strengthening needs and determine their support to the program.

Workshops were held through thematic consultation tables with Regional Supervisors, Agency Heads, Technicians, Gender Unit Managers and producers assisted by CENTA. According to the profile required for each topic, the participants of each workshop were distributed in the following working groups: transfer and technology, gender and social, strengthening needs and livelihoods.

e) Validation of Information

A final round of stakeholder engagement was carried out with designated officials from the Ministry of Agriculture and Livestock (MAG), the Ministry of the Environment and Natural Resources (MARN), CENTA and the Ministry of Foreign Affairs as members of the Technical Steering Committee to analyze the results and validate the conclusions and agreements, such as the selection criteria for the beneficiaries.

Throughout the engagement process, bilateral meetings were held to identify institutional support needs, confirm information and evaluate opportunities for joint actions with officials of the Ministry of Agriculture and Livestock and its units (climate change, agrobusiness, forestry, watersheds and irrigation), the Ministry of Environment and Natural Resources and its divisions (Environmental Observatory, Meteorology, Citizen Management), the National Center for Agricultural and Forestry Technology (CENTA) and the Research, Transfer, Planning and Gender managements and the General Directorate of Civil Protection, among others.

Among the outcomes and information obtained from the above engagement process, stakeholders were asked to identify potential environmental and social risks from the proposal to the environment and to communities. Below are the risks identified by stakeholders:

- Use of pesticides and fertilizers that may increase pollution problems and soil and water as a result of the promotion of productive systems based on staple grains
- Low participation/involvement of vulnerable sectors of the population, such as women, youth and indigenous groups as they have not been targeted as beneficiaries in past interventions related sustainable land management

The above impacts have been considered and mitigation actions are included to ensure the above risks are fully addressed.

The engagement process is foreseen as a continuous commitment throughout the life of the project to ensure sustainability of interventions and continuous feedback by stakeholders.

The stakeholder engagement process (all 5 stages) will be carried out 4 times in the project. The first one has been completed (as described above). The second engagement process will be during inception phase to present the project, define activities, intervention areas at community level and beneficiaries.

The third stakeholder engagement process will take place at the end of the third year of implementation to identify progress and the need for corrective measures, validate the beneficiaries and assessment of new beneficiaries as needed.

The fourth stakeholder engagement process takes place before closure of the project with the aim of participatory analysis of achievements, lessons learned and identification of good practices and exit strategies to ensure the sustainability of impacts.

Annex 3 presents the list of consultations carried out and results of the engagement process.

6.3. Consultation process with Indigenous peoples

During the stakeholder engagement process, consultation with indigenous peoples was held and the process for free, prior and informed consent carried out as per FAO's corporate policy on indigenous peoples. (See section 7, Indigenous Peoples Planning Framework).

6.4. Gender Analysis

El Salvador continues to work towards equality and inclusion in population groups structurally marginalized. The approval of the Law on Equality, Fairness, and the Elimination of Discrimination Against Women in El Salvador, the Special Holistic Law for a Life Free of Violence for Women, the Law on the Integral Protection of Childhood and Adolescence, the General Law on the Youth and the Law on Development and Social Protection are proof. The International Conventions and Agreements are the benchmark for all legal reforms started, as well as the preparation of public policies.

FAO carried out a gender assessment in 2015 reflecting that women live a reality different from that of men: 54% of the working age population (WAP) are women, and 46% are men. This comprehensive participation rate or labor force is 80.2% among men and 46.7% among women.

In 2017, during the formulation of the project, a specialist in gender and citizen participation was hired to develop a methodology to consult different social actors on gender related issues. Specific consultations were developed with women and focus groups with gender specialists belonging to institutions that promote equality. As a result, a gender analysis and a strategy for the implementation of gender equality were developed. On this basis, the actions to ensure gender equality in the context of RECLIMA are included in the ESMF workplan (Annex 1).

As El Salvador continues to work in legal frameworks and women's rights, the proposal includes a gender action plan to address gender gaps and promote gender equality across activities.

6.5. Disclosure

Disclosure of relevant project information helps stakeholders effectively participate. FAO will disclose information in a timely manner, that is accessible and culturally appropriate, placing due attention to the specific needs of community groups which may be affected by project implementation (such as literacy, gender, differences in language or accessibility of technical information or connectivity).

For moderate risk projects FAO releases the applicable information as early as possible, and no later than 30 days prior to project approval. The 30 day period commences only when all relevant information requested from the project has been provided and is available to the public.

FAO will undertake disclosure for all moderate risk projects. For this, a disclosure portal has been established to publicly disclose projects' documentation related to environmental and social safeguards (environmental and social analyses, environmental and social impact assessments, Environmental and Social management frameworks, Indigenous Peoples Plans and other relevant documents). The website is: <http://www.fao.org/environmental-social-standards/disclosure-portal/en/>.

In order to ensure the widest dissemination and disclosure of project information, including any details related to applicable environmental and social safeguards, local and accessible disclosure tools including audiovisual materials such as flyers, brochures, videos and community radio broadcasts will be utilized in addition to other tool. Furthermore, particular attention will be paid to farmers, indigenous peoples, illiterate or technological illiterate people, people with hearing or visual disabilities, people with limited or no access to internet and other groups with special needs. The dissemination of information among these groups will be carried out with the project counterparts and local actors such as municipalities, producers' associations, indigenous associations and leaders, government and other territorial actors.

6.6. *Grievance Redress Mechanism*

FAO is committed to ensuring that its programs are implemented in accordance with the Organization's environmental and social obligations. In order to better achieve these goals, and to ensure that beneficiaries of FAO programs have access to an effective and timely mechanism to address their concerns about non-compliance with these obligations, the Organization, in order to supplement measures for receiving, reviewing and acting as appropriate on these concerns at the program management level, has entrusted the Office of the Inspector-General with the mandate to independently review the complaints that cannot be resolved at that level.

FAO will facilitate the resolution of concerns of beneficiaries of FAO programs regarding alleged or potential violations of FAO's social and environmental commitments. For this purpose, concerns may be communicated in accordance with the eligibility criteria of the Guidelines for Compliance Reviews Following Complaints Related to the Organization's Environmental and Social Standards⁵, which applies to all FAO programs and projects (.

Concerns must be addressed at the closest appropriate level, i.e. at the project management/technical level, and if necessary at the Regional Office level. If a concern or grievance cannot be resolved through consultations and measures at the project management level, a complaint requesting a Compliance Review may be filed with the Office of the Inspector-General (OIG) in accordance with the Guidelines. Program and project managers will have the responsibility to address concerns brought to the attention of the focal point.

The principles to be followed during the complaint resolution process include: impartiality, respect for human rights, including those pertaining to indigenous peoples, compliance of national norms, coherence with the norms, equality, transparency, honesty, and mutual respect.

Project-level grievance mechanism

The project will establish one or more grievance mechanisms at field level to file complaints. Contact information and information on the process to file a complaint will be disclosed in all meetings, workshops and other related events throughout the life of the project. In addition, it is expected that all awareness raising material to be distributed will include the necessary information regarding the contacts and the process for filing grievances.

The project will also be responsible for documenting and reporting as part of the safeguards performance monitoring on any grievances received and how they were addressed.

⁵ Available online at: <http://www.fao.org/3/a-i4439e.pdf>

The mechanism includes the following stages:

1. In the specific case of indigenous peoples, complaints will be raised either orally or in writing to the leaders of their indigenous organizations who will receive and present them to the corresponding project counterpart. In the instance in which the claimant has the means to directly file the claim, he/she has the right to do so, presenting it directly to the Project Management Unit (PMU). The process of filing a complaint will duly consider anonymity as well as any existing traditional or indigenous dispute resolution mechanisms and it will not interfere with the community's self-governance system.
2. The complainant files a complaint through one of the channels of the grievance mechanism. This will be sent to the PMU coordinator to assess whether the complaint is eligible. The confidentiality of the complaint must be preserved during the process.
3. Eligible complaints will be addressed by the PMU or the applicable institution. The PMU coordinator will be responsible for recording the grievance and how it has been addressed if a resolution was agreed.
4. If the situation is too complex, or the complainer does not accept the resolution, the complaint must be sent to a higher level, until a solution or acceptance is reached.
5. For every complaint received, a written proof will be sent within ten (10) working days; afterwards, a resolution proposal will be made within thirty (30) working days.
6. In compliance with the resolution, the person in charge of dealing with the complaint, may interact with the complainant, or may call for interviews and meetings, to better understand the reasons.
7. All complaint received, its response and resolutions, must be duly registered.

Internal process

1. Project Management Unit. The complaint could come in writing or orally to the PMU directly. At this level, received complaints will be registered, investigated and solved by the PMU.
2. Executive Steering Committee (ESC). If the complaint has not been solved and could not be solve in level 1, then the chair of the EC should send it to level 2.
3. FAO Representative. The assistance of the FAO Representative is requested if a resolution was not agreed in levels 1 and 2.
4. FAO Regional Office for Latin American and the Caribbean. FAO Representative will request if necessary the advice of the Regional Office to resolve a grievance, or will transfer the resolution of the grievance entirely to the regional office, if the problem is highly complex.
5. The FAO Regional Representative will request only on very specific situations or complex problems the assistance on the FAO Inspector General who pursuits its own procedures to solve the problem.

Resolution

Upon acceptance a solution by the complainer, a document with the agreement should be signed with the agreement.

Project Management Unit	Must respond within 5 working days.
Executive Steering Committee MAG, CENTA, MARN, MRREE/VMCD	Any organization may receive a complaint and must provide proof of receipt,. If the case is accepted, the receiver must send the information to all Executive Steering Committee members and call for a meeting to find a solution. The response must be sent within 5 working days after the meeting of the Executive Steering Committee.
FAO representation in El Salvador	Must respond within 5 working days, in consultation with ESC. FAO Representative: Alan González

	FAO-SV@fao.org ; alan.gonzalez@fao.org Tel. (+503) 2223-4787
FAO Regional Office for Latin America and the Caribbean	Must respond within 5 working days in consultation with FAO's Representation. FAO Representative: Julio Berdegue RLC-ADG@fao.org ; Julio.Berdegue@fao.org Tel: (56 2) 2923 2100
Office of the Inspector General (OIG)	To report possible fraud and bad behavior by fax, confidential: (+39) 06 570 55550 By e-mail: Investigations-hotline@fao.org By confidential hotline: (+ 39) 06 570 52333

7. INDIGENOUS PEOPLES PLANNING FRAMEWORK

In line with the relevant international legal framework, the FAO Policy on Indigenous and Tribal Peoples⁶ and the FAO Environmental and Social Management Guidelines⁷, the following Indigenous Peoples Planning Framework has been developed to ensure that all due efforts will be made to respect, include and promote Indigenous Peoples issues during project implementation, including their right to Free, Prior and Informed Consent (FPIC). The framework will constitute the basis for the engagement of Indigenous Peoples as stakeholders of the action, the promotion of continued consultations throughout the duration of the project life as well as the establishment of a feedback and complaint mechanism, monitoring and evaluation arrangements of the agreement, the minimization and mitigation of any potential adverse effects and to ensure that all project activities are implemented in a culturally appropriate way.

7.1. *Indigenous Peoples in El Salvador*

Indigenous peoples in El Salvador have faced a series of social, economic and political issues, including discrimination and violence, for many years. Data on population size is not exact and consequently it is difficult to determine the exact number of indigenous peoples residing in the project areas of RECLIMA. In view of the fact that indigenous peoples are characterized, among other criteria, on the basis of self-identification, they do not constitute the entire population of a specific territory. Indigenous peoples in El Salvador are distributed in four main groups: the Cacaopera (31%), the Nahua Pipil (27%), the Lenca (15%) and other groups (27%).

The 2007 Census reported a total of 13,310 people self-identifying themselves as indigenous peoples, constituting approximately 0.23% of the total population of the country. However, a 2003 World Bank study⁸ reports that the proportion of indigenous peoples ranges between 10 to 12% of the national population. This would translate to a least between 600,000 to 720,000 individuals living in both urban and rural settings. A recent school census of 2016⁹ also reported a total of 66,307 students belonging to different indigenous peoples' groups with the majority of them (49%) being located in the Sonsonate department. This data denotes that the proportion of indigenous peoples in El Salvador is much larger than what was previously reported in the 2007 census.

Indigenous Peoples in El Salvador are socially and economically vulnerable, and as a result of a series of historical processes, they no longer have access to fertile lands. Many of them are currently living in extreme poverty, surviving as daily labourers on neighbouring farms in their communities. The 2003 World Bank study reported that in El Salvador, 38.3% of the total indigenous peoples' families were in extreme poverty, 61.1% in poverty and only 0.6% had the basic standards of living. Concerning the three main indigenous peoples' groups, they are located in the following departments :

- The **Nahua/Pipils**, living in the departments of Ahuachapán, Santa Ana, Sonsonate, La Libertad, San Salvador, La Paz, and Chalatenango;
- The **Lencas**, who belong to the Potón branch and live in the departments of Usulután, San Miguel, Morazán, and La Unión;
- The **Cacaoperas**, located in the department of Morazán

⁶ FAO Policy on Indigenous and Tribal Peoples: <http://www.fao.org/3/a-i4476e.pdf>

⁷ FAO, 2015. Environmental and Social Management Guidelines. <http://www.fao.org/3/a-i4413e.pdf>

⁸ World Bank, 2003. Perfil de los Pueblos Indígenas en El Salvador. <http://documentos.bancomundial.org/curated/es/939901468234885618/pdf/647480PUB0Portugese00PUBLIC0.pdf>

⁹ Ministerio de Educación, 2016. Censo Escolar Año 2016. Gobierno del El Salvador. <http://www.transparencia.gob.sv/institutions/mined/documents/188840/download>

In addition to the above groups, the indigenous peoples located in the areas known as “Nonualcos” “Tepezontes” are considered to belong to the Nahua/Pipil group despite the fact that throughout history, they have maintained their own cultural traits.

The nature of indigenous peoples as minority groups with vast experience and ancestral knowledge in food production and land and water preservation makes them key allies in the process of restoration of degraded lands. As such, indigenous peoples will represent a crucial stakeholder for the implementation of the RECLIMA project.

7.2. Project and Policies for Indigenous Peoples

The commitment of the Government of El Salvador with the national and international normative framework on the consultation and implementation mechanisms constitutes the basis to ensure meaningful participation of indigenous peoples in the community. In this context, Free, Prior and Informed Consent is acknowledged as a fundamental right and a safeguard of the cosmovision and indigenous culture, and it remains a duty of the Government to engage in joint work with the indigenous communities. Moreover, in order to respond to national priorities, in April 2012, a proposal to revise Article 63 of the Constitution of the Republic of El Salvador was voted in favour of and ratified accordingly with the objective of modifying said article as follows: *"El Salvador acknowledges Indigenous Peoples and will adopt public policies in order to maintain and develop their ethnic and cultural identity, cosmovision, values, and spirituality"*¹⁰.

While El Salvador has not yet signed in favour of ILO Convention 169, it has ratified ILO Convention 107¹¹ on the protection and integration of indigenous and other tribal and semi-tribal populations in independent countries. Likewise, El Salvador voted in favour of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). The UNDRIP is a non-legally binding declaration establishing how Indigenous individuals and peoples should be treated. The Declaration sets out the individual and collective rights of Indigenous peoples, as well as their rights to culture, identity, language, employment, health and education, among other issues.

The UNDRIP also emphasizes the rights of indigenous peoples to maintain and strengthen their own institutions, cultures and traditions, and to pursue their development in keeping with their own needs and aspirations. The Declaration prohibits discrimination against indigenous peoples while promoting their full and effective participation in all matters that concern them and their right to remain distinct. The overall objective of the Declaration is to encourage signatory countries to work alongside indigenous peoples to solve global issues, like development, multicultural democracy and decentralization. It also emphasizes the fact that indigenous peoples will be able to protect their cultural heritage and other aspects of their culture and tradition in order to preserve their heritage.

FAO, in its Policy on Indigenous and Tribal Peoples establishes the need to respect, include, and promote relevant matters for indigenous peoples in their work. As an organization specialized in food security and the reduction of rural poverty, it is imperative for FAO to consider indigenous peoples as fundamental stakeholders and active partners for the implementation of its activities. Said policy was created in response to the legal international agreements, such as the UNDRIP and the 169 Convention of ILO. Moreover, as part of the revised FAO Project Cycle introduced in 2015 and in line with FAO's Environmental and Social Management Guidelines from 2015, FAO has included a safeguard (Environmental and Social Safeguard -ESS 9 on Indigenous Peoples and Cultural Heritage) to ensure that the UNDRIP is respected in all FAO's actions by guaranteeing the application of the principle of Free, Prior and Informed Consent of indigenous peoples along all the phases of the project cycle. ESS 9 also acknowledges the importance of the tangible and intangible cultural heritage.

¹⁰Dictamen No.135, Comisión de Legislación y Puntos Constitucionales, Asamblea Legislativa de El Salvador

¹¹ International Labour Convention 107 (ILO Co. 107). Indigenous and Tribal Populations Convention. Convention concerning the Protection and Integration of Indigenous and Other Tribal and Semi-Tribal Populations in Independent Countries

The fundamental principles of the FAO Policy on Indigenous and Tribal Peoples are: self-determination, respect for indigenous wisdom, culture, and traditional practices which contribute to sustainability and equal development; and free, prior and informed consent. Through the Policy, the following is sought:

- To assure that the United Nations Declaration on the Rights of Indigenous Peoples is respected in all FAO projects and programmes;
- To promote the right to self-determination and development (the right to decide the type of development that takes place among the people, on their lands and territories, according to their own priorities and conceptions of well-being). The right to self-determination refers specifically to the right of all peoples to freely pursue their economic, social and cultural development;
- Guarantee the application of the principle and right of Free, Prior and Informed Consent to obtain indigenous peoples' authorization before implementing projects or programmes that may affect them. FPIC emphasizes that indigenous peoples must be included in consultative processes, that the time requirements for these processes be respected and that information on the likely impact of activities be disclosed in advance. The adoption of FPIC ensures that activities or actions planned, respond to indigenous peoples' concerns and interests, thereby allowing a self-determined development process.
- Acknowledge, respect and preserve the rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, and villages.
- Protect cultural heritage and avoid its alteration, damage or removal.

Guiding principles

The following guiding principles will be applied in the development of foreseen consultation activities within the framework of the project:

The focus is based on human rights: these include the right to self-determination, the right to development with identity, the right to Free, Prior and Informed Consent, the right to full and effective participation at every stage of any action that may affect them directly or indirectly, the rights over land and other natural resources on which indigenous peoples depend for survival, collective rights that include recognition of their specific histories, languages, identities and cultures but also recognition of their collective rights to the lands, territories and natural resources.

Another important right of indigenous peoples relates to cultural distinctiveness and their right not to be subjected to forced assimilation or destruction of their cultures. In fact, indigenous peoples are entitled to live in accordance with the traditions and the customs that underlie their integrity and way of life. In this regard, the State must respect and acknowledge the different institutions and representative authorities, as well as the decision making process of indigenous peoples. As such, processes and procedures must be in line with their cosmovision, traditions and customs. In order to ensure this, that State must ensure:

- Equality of rights. Assure the recognition of prerogative inherent to all people, because of their human condition.
- Good faith. To assure an honest and fair interaction that is not misleading and based on the value of the word, building a harmonious and honest relationship respecting the agreements that assure trust.
- Multiculturalism. Based on respect for cultural and geographical diversity, implying the management of relationships in a horizontal and equitable manner.

7.3. Free, Prior and Informed Consent Process

The consultation methodology adopted by the project was designed on the basis of existing national and international normative frameworks and in line with the implementation steps outlined in the FAO Manual on Free, Prior and Informed Consent¹².

Another important tool to guide the process was the "Five Year Development Plan (PQD) 2014-2019: productive, educated and safe El Salvador"¹³ of the Government of El Salvador which is a public policy instrument of the highest level that follows the principle of equality and complies with national and international obligations. The PQD proposes the implementation of specific actions oriented towards groups that have been traditionally excluded from development. The Plan recognizes indigenous peoples as priority populations for a number of interventions and acknowledges their constitutional rights. The eighth objective of the PQD establishes the importance of "promoting culture as a right, cohesion factor and identity, and transforming force in society", where one of the components is the "Promotion of the right of Indigenous Peoples".

The implementation of the FPIC process followed the following steps as outlined in the FAO FPIC Manual:

7.3.1. Identification of the Indigenous Peoples Concerned and their Representatives.

As part of this step, the project collected information on the communities that will be affected by the project activities and how these are structured. Interviews and discussions, encouraging broad community participation, were carried out following the approval of the relevant indigenous leaders. During this process, the project explained its mandate and the nature of the activities proposed.

A dedicated support team was established and accounted with the participation of leaders from the Salvadoran Indigenous Coordinating Council, with whom the consultation process was coordinated at the national level. This exercise was led and coordinated by an expert of indigenous identity hired during the formulation stage of the project proposal. Meetings were initially carried out with leaders from relevant indigenous organizations (National Indigenous Table of Natural Resources -MNIMA, National Team of Indigenous Leadership- ENACI, Consejo Coordinador Indígena Salvadoreño-CCNIS, Asociación de Desarrollo Indígena-ASDEI and Consejo de Pueblos Cacahuirias y Lencas-COPULENCA) to obtain their approval prior to the commencement of the consultations. Only after receiving the approval, consultations were carried out in the project intervention areas (in June 2017), and later on, the related results were shared and validated with the leaders of the different indigenous organizations.

7.3.2. Documentation of Geographic and Demographic Information.

In order to have a better understanding of where indigenous peoples live, what their land and natural resources are and the existence of any customary rights, under this step of the FPIC process, the project team documented land and natural resources usage ensuring that participation of the local community. A compilation of primary and secondary information on the socio-economic, productive, and organizational characterization of indigenous peoples in the areas of intervention of the project was carried out, including a brief description of the context on indigenous peoples at the national level.

¹² FAO, 2016. Free Prior and Informed Consent: An indigenous peoples' right and a good practice for local communities. <http://www.fao.org/3/a-i6190e.pdf>

¹³ Gobierno de El Salvador, 2015. El Salvador Productivo, Educado y Seguro-Plan Quinquenal de Desarrollo 2014-2019. <http://www.presidencia.gob.sv/wp-content/uploads/2015/01/Plan-Quinquenal-de-Desarrollo.pdf>

7.3.3. *Preparation of a Participatory Communication Plan and Execution of Iterative Discussions to Disclose Project Information.*

As part of this process, the project team ensured that the local communities were duly informed, in a transparent and impartial way, about the project activities being proposed. Iterative discussions on the proposed project activities were carried with the related outcomes being documented and made available to all parties. The overall process of iterative discussions at local and national level accounted with the participation of 35 indigenous communities, 93 indigenous women and men leaders and two high-level indigenous leadership platforms.

Prior to carrying out iterative discussions to disclose and discuss the project information, consultations with representatives of the indigenous peoples were held in order to agree on the activities to be implemented as part of the participatory communication plan. In this regard, the following actions and activities were agreed upon:

- A content index of the consultation report was proposed, which was to be validated by the project design coordinating team;
- Designing of a methodology for the consultation process that respected the cosmovision and indigenous identity, and took into account the provisions under the ILO Convention 169 on Indigenous and Tribal Peoples and the United Nations Declaration on the Rights of Indigenous Peoples;
- The consultations were to be carried out through interviews, workshops, focus groups discussions, and other instruments which are considered well established in the previously mentioned conventions and declarations;
- The development of the consultation process with indigenous peoples in the areas of intervention of the RECLIMA project had to contemplate aspects of governance, gender and syncretism, among other variables;
- Consultations were to be carried out together with the dialogue tables or platforms which group indigenous peoples and climate change representatives;
- Stemming from the results of these consultations, a Consultation Document with the recommendations and actions to be included in the formulation of the project was to be delivered.

Once an agreement on the approach to be followed for the iterative discussions with the local community was reached, consultations were carried out in the project intervention areas. The results of such consultations were shared with the leaders of the relevant indigenous organizations. Workshops and interviews were organized with spiritual guides, indigenous leaders, indigenous farmers, technicians with indigenous identity and the indigenous environmental board, among others. In addition, a review of written sources and a process of analysis and synthesis of both primary and secondary information were carried out.

In order to guarantee the establishment of a trust-based relationship between the project and the Indigenous Peoples, it was decided to recruit an indigenous person to support the implementation of the FPIC process and to guarantee that due consideration given to the cosmovision and cultural distinctiveness.

As part of the review process of the project proposal, indigenous peoples recommended to amend the document in order to keep the indigenous vision clearly defined. This included the need to review the terminology and definition of indigenous peoples. In this regard, the local community requested not to be referred to as an indigenous population but as indigenous peoples, given the related political connotations and social structure implications.

The review process of the project proposals focused around the actions of the project, the budget, the implementation arrangements, and monitoring and evaluation. The details comments and recommendations are provided hereunder:

7.3.4. Proposals and recommendations on the actions of the Project Implementation

1. FAO to incorporate indigenous leaders, technicians, both men and women in the process of project formulation.
2. The main considerations to be incorporated in the projects design are the following:
 - *Ancestral wisdoms and cosmovision.* These encompass the production techniques, the use of native seeds for sustainable agriculture, following the moon phases and other planets throughout the agricultural cycle, traditional practices regarding planting and production, etc.
 - *Indigenous science and technology.* The project should include indigenous traditional practices and agricultural technologies and knowledge developed and practiced to date by indigenous peoples. For example: reading of atmospheric time (climate information), management of sacred calendars (farmers and solar), use of traditional working instruments (macana, cuma, etc.), wisdom transfer from the elders with oral techniques and in the context of the "milpa"¹⁴ system, pest control through spirituality, use of plants such as chiltepe (hot pepper), tobacco, etc.
 - *Maintenance of livelihoods.* For indigenous peoples, livelihoods are considered as "resources". In their cosmovision, livelihoods are elements with which indigenous peoples co-live. As mentioned by one of the experts on indigenous spirituality, livelihoods are part of a space because they have a specific function within it. For example, for reforestation processes in the territories, trees stemming from the same region need to be planted, responding also to feeding, medicinal, fuel, and aromatic resins needs for the ceremonies. In addition to the trees, bushes and plants are used as food and shelter for wild species. It is important to consider that the trees need to feel in harmony with the space chosen for them.
3. In case of the livelihoods, it is important to consider water and its use, incorporating it as an element of nature, useful for life reproduction, not only for humans, but also for other species.

• Recommendations related to the Budget

- To allocate a section of the budget to strengthen existing indigenous organizations that have a legal status, like the ones which are recognized by the communities. This strengthening has three fundamental elements: a) organizational strengthening; b) administrative strengthening, that allows them to execute projects and manage resources, and c) technical strengthening that allows them to acquire skills and abilities to prepare projects and technical proposals.
- Budget allocations must include salaries, wages, or stipends to indigenous educators or facilitators (not extension workers), who are the bearers of wisdom. This would provide the indigenous educators the necessary place and would value the work that they do when transmitting indigenous knowledge.

• Recommendations related to Implementation Arrangements

Indigenous leaders insisted on the need to be incorporated as fundamental actors or partners during the design phase. For this, it is recommended:

- To involve a group of indigenous leaders in the development and design of the activities of the project. In this context, two fundamental aspects to take in considerations are: a) actions need to

¹⁴ Milpa: traditional farming system

be friendly to the environment, not to alter at all the conditions of territories, and b) actions need to be directly performed by people from the communities, especially if indigenous peoples are involved.

- To implement planned activities under the leadership of the indigenous recognized ancestral authorities, through their structures or their delegates, considering that these organizational expressions and indigenous leadership work in unison with their cosmovision.

Additional considerations provided were:

- Not to promote crops that over-exploit the land, like monocultures, crops that need too many chemical inputs and that require the use of technology that damages the land and the environment;
- Respect or make a respectful use of the resources offered in the territory, focused especially on the care and conservation of water, not as a useful input, but as an element of the environment, as a multiplier of life.
- It is recommended to rescue the water sources, springs, plant vegetable species that catch water from the environment and filter it to the underground water bodies, vegetable species that help towards de-contamination of water, and finally, harvest water that may be used for minor crops in agriculture, and respect topography of the territories, without altering its own nature, respecting watersheds, wooded areas, use agricultural production areas intelligently, and areas destined for ceremonial centers.

- **Recommendations for the implementation of actions:**

- Build native seeds banks to rescue sustainable agriculture productions as per the technology and experience of the indigenous farmers who have performed this task for years. This would include: selection of the plant that will give the seeds, selection of the seeds, treatment for its conservation and storage. Take into consideration that the subject matter is not only corn and beans, but all existing seeds and crops.
- To implement "milpa" systems that combine corn with at least some 20 species, among which we can mention: beans, bell pepper, cassava, cacao, annatto, cucumber, watermelon, etc.
- Pedagogic processes. One of the advantages of the milpa system is that it allows the development of teaching-learning processes incorporated from indigenous science and technology, reviewing also language and artistic expressions, which peoples still use, not to mention calendars and the reading of the planets transit (cosmovision). Another pedagogic proposal is teaching the planting process within the family, involving the youth and childhood who learn from the elders.

- **Recommendations related to the Monitoring and Evaluation**

the following proposals emerged in the context of the workshops :

- A. When creating the indicators within the logical framework and having them disaggregated by gender, culture, and age groups, they would be part of the monitoring and evaluation process, and therefore it is suggested that indigenous organizations be an active part in this process, proposing the following: a) CCNIS with national presence uniting other organizations; b) COPULENCA: covers the Lenca and Kakawira peoples and their corresponding organizations, settled in the eastern part of the country; c) MUPOKCH: organization uniting mainly indigenous organizations from the Central and Western areas; d) Integrated Movements of Nahuizalco; e) existing confraternities who can delegate a representative; f) Indigenous Round Table on the Environment, as a consultation entity for specific climate change matters, who have representatives from indigenous organizations, but also from State bodies and ministries.

B. While the National Council of Indigenous Peoples is becoming official and will be warrantor to monitor the National Action Plan of Indigenous Peoples of El Salvador (PLANPIES), an instrument articulating all governmental interventions and those of international cooperation with the indigenous peoples of El Salvador, it is proposed that the leading team who has been in charge of facilitating PLANPIES, monitors RECLIMA, guaranteeing:

- That actions and strategies strengthen the unity of the indigenous peoples, constituting a catalyst to call to unity and not separation of the peoples.
- Within the monitoring and evaluation process, establish contributions made for the consolidation of culture, including educational and training processes.
- Monitor and evaluate how actions, activities, and strategies, leave installed capacities that may continue serving the peoples. Mention among others, the following: Native seeds banks. Local educators with ancestral wisdom, Communal lands for collective production of food, Consolidation of productive, agricultural, artisan, and other processes, Rescue wooded areas contemplating also sacred places and ceremonial sites.

Other Recommendations

- Link PLANPIES 2016 - 2021 with RECLIMA, considering the following:
- Although the Plan has not yet become official, it is the result of an extensive consultation process with indigenous peoples leaders, communities, and organizations. The methodology and strategy used for this process allowed the prioritization of issues of concern to indigenous peoples and the agenda of the indigenous peoples of El Salvador. In this context, the project should contribute to reach the goals and objectives, mission and vision of the PLANPIES.
- The results of the consultations provide sufficient inputs to inform the project activities and indicators related to indigenous peoples. In fact, the consultations gathered the perspectives and feelings of the indigenous leaders, delegated by their communities.
- All project proposals must respond to what is established in the PLANPIES. In this context, the project will support the implementation of the PLANPIES. Project activities will contribute to the achievement of the results of the PLANPIES.
- To incorporate the wisdom of the elders regarding science, culture and indigenous technologies. In this context, all the documents of the project reflect the need to discuss with the beneficiaries. In case of a technical matter, the issue needs to be mediated and interpreted by a professional who is familiar with indigenous issues.
- To create materials pedagogically appropriate for the indigenous peoples (popular version), that are easily understood and can be used in groups. These should be delivered to the communities directly by the organizations, leaders, and educators of the indigenous peoples.
- Recommends that FAO: a) carries out an assessment of knowledge on indigenous peoples among FAO personnel; and b) undertakes an educational process with all personnel on Culture, Cosmovision, and Indigenous Peoples, involving an elder who knows and practices values and principles from the indigenous peoples, as well as traditional practices and ancestral culture.
- To strengthen the capacities of indigenous peoples leaders in order for them to lead processes, contributing to the governance of youth as a contribution to the inter-generational transfer of knowledge (through scholarships, trainings for them to be trainers or surveyors, etc.).

Additional considerations emerged at the end of the consultations included the following:

- The consultative work performed constitutes a healthy exercise for both the indigenous peoples and FAO. FAO's engagement in the project is perceived with great respect. There is an environment of full trust and there is a recognition that FAO will act respectfully during the implementation of the RECLIMA project.
- In order to manage the expectations from the indigenous communities, it was clarified that the process undertaken only constitutes preparatory work, which is critical to inform the design and the implementation of the activities. However, the project is yet to be approved.

7.3.5. Reaching consent and documenting indigenous peoples' needs to be included in the project

A consent by the indigenous peoples' representatives involved in the project was obtained. The agreement reached was documented and it included the mutually agreed feedback and complaint mechanism to be put in place during the implementation of the project. The agreement also included the signatory parties, evidence of the consent, a summary of the project information and the terms for an eventual withdrawal of the consent.

As part of this step, the final project proposal which took into account the recommendations and changes proposed by all stakeholders was presented to the indigenous leaders. Following its acceptance, the related free prior and informed consent agreement was signed by the indigenous leaders of the National Team of Indigenous Leadership (ENACI) and the National Indigenous Table of Natural Resources (MNIMA).

Process leading to Consent

On January 30, 2018 the leaders of the indigenous organizations that are part of the National Indigenous Table of Natural Resources (MNIMA) and the National Team of Indigenous Leadership (ENACI) met with the objective of understanding the final project proposal, review the incorporation of indigenous peoples and give consent to the implementation of the RECLIMA project.

Dr. Alan González, Representative of FAO in El Salvador presented the commitment of FAO to respect the cosmovision of indigenous peoples, the work to reduce the deterioration of the environment, to strengthen public policies, guarantee the rights of indigenous peoples, and recognize the bond that indigenous peoples have in the care and preservation of mother earth.

It was emphasized that initial consultations with MNIMA and ENACI had taken place and that the implementation of the project will benefit the indigenous peoples of Nahua Pipil, Lenca and Kakawira, who inhabit the areas where the project will intervene.

Some important aspects highlighted during the implementation of FPIC process and related to the formulation of the RECLIMA project are:

- a) The importance of developing the process of Free, Prior and Informed Consent together with indigenous peoples right from the formulation phase of the project;
- b) The fact that indigenous peoples recognized the FPIC process and were provided with reports on its implementation during the formulation process;
- c) The fact that social and environmental safeguards have been observed;
- d) The commitment from FAO to ensure that the activities of the project do not affect the territories, livelihoods, knowledge, social fabric, traditions, systems of governance, etc. of the indigenous peoples;
- e) The fact that indigenous peoples are recognized as key actors in the implementation of the project.

Relevant project indicators were shared with indigenous peoples, noting that some changes to the proposal may be required during the formulation phase. The indicators shared include the following:

- 50,000 family farmers improve their capacity to react to events of drought, including 19,000 women and 3,500 indigenous peoples;
- 114 municipalities improve their capacity to respond to extreme weather events;
- 1,750 community extension workers, of which 35% women and 5% indigenous peoples, improve their ability to implement actions to respond to the drought;
- 62 water management groups jointly efficiently manage rural aqueducts resulting in 21,700 families, of which 1,100 indigenous peoples families, i.e. 97,650 people having access to safe water;
- Designing instruments to measure the impact of activities on the improvement of the quality of life in households, also focused on measuring the use of time by women, indigenous peoples and youth to participate in RECLIMA activities and decision-making processes.

The agreement was reviewed by the National Indigenous Table of Natural Resources (MNIMA) and the National Team of Indigenous Leadership (ENACI) and all persons present on behalf of their organizations signed the agreement giving consent to the implementation of the project: RECLIMA: "Climate resilience of ecosystems of the dry corridor of El Salvador".

The text of the FPIC Agreement is included below in English, as well as the original text signed in Spanish.

Free, Prior and Informed Consent Agreement

This document serves to certify that a Free, Prior and Informed Consent process was conducted with indigenous organizations of El Salvador for the project known as **RECLIMA: "Climate Resilience of Agro-Ecosystems in the Dry Corridor of El Salvador"**, and that the project's final summary has been disseminated among indigenous leaders.

Indigenous leaders from the National Team of Indigenous Leadership (**Equipo Nacional de Conducción Indígena, ENACI**) and the National Indigenous Table of Natural Resources (**Mesa Nacional Indígena de Recursos Naturales, MNIMA**), agreed on the following points:

- Dissemination of the final proposal of the project to indigenous organizations at a territorial level;
- Regarding the dissemination mechanism: local and accessible dissemination tools will be used to allow indigenous peoples to learn about the project and any instance related to environmental and social safeguards. This dissemination will be carried out with project partners and local stakeholders such as municipal governments, producers' associations, indigenous associations and leaders, governor's offices and other territorial actors. Communications will be conducted orally and in writing in Spanish, given that speakers of other languages also speak Spanish;
- Indigenous peoples will be recognized as key actors in project implementation, monitoring and evaluation, as well as in discussion and decision-making processes;
- The project grievance mechanism will be disseminated. "In the specific case of indigenous peoples, claimants can submit oral or written claims to the leaders of their indigenous organizations, who receive them and submit them to the Coordination and Management Unit (abbreviated UCG in Spanish). However, if claimants have the means to submit claims by themselves, they have the right to do so, submitting them directly to the Coordination and Management Unit (UCG). This measure is taken in order not to interfere with their own forms of governance". In turn, the Coordination and Management Unit (UCG) of the RECLIMA project will implement territorial strategies to guarantee the anonymity of the grievance mechanism.
- Consent may be withdrawn in case of lack of compliance with the agreements established in the present document. For this purpose, the procedure will be conducted through written communication to the Coordination and Management Unit (UCG) submitted one month in advance by the Coordinator of the National Indigenous Table of Natural Resources (MNIMA) or

the National Team of Indigenous Leadership (ENACI), providing the rationale for this decision. This withdrawal request will be analyzed via the appropriate system set by the grievance mechanism established by the project. In this case, a dialogue and negotiation space will be set up to reach a consent and reconcile the situation of conflict. Should no conciliation be reached, the consent will be terminated within the time stipulated by the agreement.

Through this document, the good faith of FAO is attested. This will ensure that the activities of the project do not affect the territories, the livelihoods, the knowledge, the social fabric, the traditions, the governance structure, the culture and the heritage (physical, not physical and intangible) within and/ or outside of the area of the project inhabited by indigenous peoples.

Considering the aforementioned, and in the presence of the FAO Representative in el Salvador Dr. Alan González, on 30 January 2018 the leaders of the indigenous organizations sign the present consent to the implementation of the project titled **RECLIMA: “Climate Resilience of Agro-Ecosystems in the Dry Corridor of El Salvador”**.

Signed on behalf of the National Team of Indigenous Leadership (ENACI) and of the National Indigenous Table of Natural Resources (MNIMA).

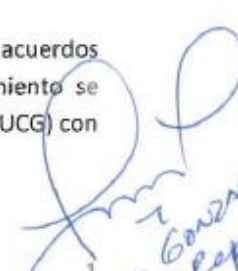
CARTA DE CONSENTIMIENTO LIBRE, PREVIO E INFORMADO

Sirva la presente para hacer constar que se desarrolló un proceso de consentimiento libre, previo e informado del proyecto: RECLIMA “Resiliencia climática de los agroecosistemas del corredor seco de El Salvador”, con organizaciones indígenas de El Salvador y que se socializó con las y los líderes indígenas el resumen final del proyecto¹.

A su vez se acordó con las y los líderes indígenas del **Equipo Nacional de Conducción Indígena, (ENACI)** y con la **Mesa Nacional Indígena de Recursos Naturales (MNIMA)**, lo siguiente:

- La socialización de la propuesta final del proyecto a las organizaciones indígenas a nivel territorial.
- En cuanto al mecanismo de divulgación: se pondrán en práctica herramientas de divulgación locales y accesibles que les permita conocer el proyecto y todo lo relacionado con salvaguardas ambientales y sociales. Esta divulgación se llevará a cabo con las contrapartes del proyecto y actores locales como las municipalidades, asociaciones de productores, asociaciones y líderes indígenas, gobernación y otros actores territoriales. La vía de comunicación será oral y escrita en español, dado que los hablantes de otros idiomas también hablan español.
- Que se reconocerá a los pueblos indígenas como actores claves en la implementación, monitoreo y evaluación del proyecto, así como en los espacios de diálogo y de toma de decisiones.
- Se socializará el mecanismo de reclamaciones del proyecto. “En el caso específico de pueblos indígenas, la persona demandante puede presentar una queja de forma oral o escrita a los líderes de sus organizaciones indígenas quienes las reciben y presentan a la Unidad de Coordinación y Gestión (UCG). No obstante, si la persona demandante cuenta con los medios para interponer el reclamo por sí misma, está en todo el derecho de hacerlo, presentándolo directamente a la Unidad de Coordinación y Gestión (UCG) de proyectos. Esta medida se toma con el objetivo de no interferir en sus propias formas de gobernanza”. A su vez la Unidad de Coordinación y Gestión (UCG) de RECLIMA implementará estrategias territoriales para asegurar el anonimato en el mecanismo de reclamos.
- Que el consentimiento se puede retirar en caso de incumplimiento de los acuerdos establecidos en el presente documento. Para este efecto el procedimiento se realizará por comunicación escrita a la Unidad de Coordinación y Gestión (UCG) con

¹ Anexo 1 Resumen del proyecto


Alan González
FAO Rep.

un mes de anticipación, por el/la Coordinador(a) de la Mesa Nacional Indígena de Recursos Naturales o por el Equipo Nacional de Conducción Indígena, (ENACI) explicando las razones de su decisión. Esta solicitud de retiro de consentimiento se analizará en la instancia pertinente del mecanismo de reclamos establecido por el proyecto. En dicho caso se abrirá un espacio de diálogo y negociación con el objetivo de consensuar y conciliar el conflicto presentado. En dado caso no haya acuerdo se dará por finalizado el consentimiento dentro del plazo estipulado en el acuerdo.

A través de este documento se da fe de la buena voluntad de la FAO, que garantizará que las actividades del proyecto no afecten los territorios, los medios de subsistencia, el conocimiento, el tejido social, las tradiciones, los sistemas de gobernanza y la cultura o el patrimonio (físico y no físico o intangible) dentro y / o fuera del área del proyecto de los pueblos indígenas.

Teniendo en cuenta lo anterior, y en presencia del Representante de FAO El Salvador Dr. Alan González, las y los líderes de las organizaciones indígenas, firman el presente consentimiento a la implementación del proyecto: RECLIMA "Resiliencia climática de los agroecosistemas del corredor seco de El Salvador", a los 30 días del mes de enero de 2018.

Firmado en nombre del Equipo Nacional de Conducción Indígena (ENACI) y de la Mesa Nacional Indígena de Recursos Naturales (MNIMA):

 Betty Elisa Pérez V.	 Paul Flores H.
Por	Por
Equipo Nacional de Conducción Indígena (ENACI)	Mesa Nacional Indígena de Recursos Naturales (MNIMA)


ALAN GONZALEZ
FAORep.

Proceso de consentimiento a la implementación del proyecto: RECLIMA "Resiliencia climática de los agroecosistemas del corredor seco de El Salvador"

San Salvador, El Salvador.
30 de enero de 2018

Nombre	Organización	Firma
Lidia Juliana Ama	José Feliciano Ama	
Juan Antonio Patillo Rada	ATAIS	
Juana Heriberta Graiz	ACOLCH	J. H. Graiz
Filipe Gaudes Paz	Arri-Sanis	
Mina Elizabeth Hernandez	CINAJU/CCNIS	
Valentín Perez	WIRAK Katanga	
Idalia Tesorero	ARCAS	
Victoriano Kumiriza	FUNTRAC	
Maria Magdalena Perez Pineda	CCNIS ADECC Sol	
Los Campesinos de la zona	CEIS	

3

Alan
Gonzalez
FAORep

Proceso de consentimiento a la implementación del proyecto: RECLIMA "Resiliencia climática de los agroecosistemas del corredor seco de El Salvador"

San Salvador, El Salvador.

30 de enero de 2018

Nombre	Organización	Firma
Rosario Alvarez	Cuna Nahuat	
Jilisa A. Piche	TopoTumo 1	
Claudia Guadalupe Mauricio	ANARCI	
Rene Antonio Ponce Pacheco	MANUALCOS CENS	
Ama Gloria Dominguez	ADESCOMIIZ	
Guillermo Boris Martinez	RED DE JOVENES INDIGENAS	
Guillemapes	Cuna Nahuat	
Julie Campos	ANARCI	
Maria Ignacia Sanchez	Cuna Nahuat	MIS
Sabat Clavel	Funtrac	

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ALAN
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Proceso de consentimiento a la implementación del proyecto: RECLIMA "Resiliencia climática de los agroecosistemas del corredor seco de El Salvador"

San Salvador, El Salvador.
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Nombre	Organización	Firma
Myrica Leixes Yegor	ADTAIS	MLLM
Luis Eduardo Abana	Fundación ama/ccnis	
Claudia P. Valiente	CCNIS	
Jose Guerrero Portio	ADTAIS CCNIS	
Alfredo Rivera	CCNIS	
Jesús Amador Yegor	CCNIS	
Christian Mauricio Altamirano	Red Nacional de Jueces Indígenas	


4
ACAN CORRAL
FAO Rep

Pictures of the Consent













7.3.6. Next steps of the FPIC process: Participatory monitoring and evaluation of the Agreement and documentation and disclosure of the lessons learned

Following the commencement of project activities, two additional steps of the FPIC process will need to be carried out throughout the lifespan of the project. These include the participatory monitoring and evaluation of the agreement as well as the documentation and disclosure of the lessons learned.

The participatory monitoring and evaluation of the agreement will guarantee that the conditions outlined in the Agreement reached are followed and adhered to. The participation of the community during this process will be essential as indigenous peoples were recognized as key actors.

The Project Management Unit will ensure that the community is regularly informed about the progress of the project, allowing its members to raise questions and concerns, and inspect activities being implemented in their territories. For such purpose, independent monitors which are acceptable to all stakeholders will be utilised, also to solicit feedbacks.

The use of the mutually agreed feedback and constraints mechanism will also ensure anonymity of claimants. Public sessions to share and discuss the finding of the monitoring and evaluation process will be held on a regular or ad-hoc basis as mutually agreed and deemed appropriate by all project stakeholders. This will allow the community members to confirm or oppose the findings.

Under this step of the FPIC process and throughout the lifespan of the project and thanks to the implementation of the grievance mechanism put in place together with the indigenous communities the upholding of the consent should be ensured. However, should this not be the case, a series of renegotiations of the agreement will take place. In the vent that such discussions will not lead to a confirmation of the consent, the withdrawal procedure reported in the Agreement will take place and should no final conciliation be reached, the consent will be terminated within the time stipulated by the agreement

The documentation of lessons learned and their disclosure will be jointly carried out by the project Coordination and Management Unit and the indigenous communities so as to learn and understand the strengths and weaknesses at each stage of the FPIC process and further improve the implementation and ultimately the impact of the project.

8. BIODIVERSITY MANAGEMENT FRAMEWORK

The environmental risks on biodiversity of the project “Upscaling climate resilience measures in the dry corridor agroecosystems of El Salvador” (RECLIMA) are low and to the contrary, it is expected that activities generate positive environmental benefits due to their design and implementation characteristics. In fact, ecosystem restoration activities (under component 2) and productive activities (under component 1) will jointly contribute with biodiversity conservation and climate change adaptation. Specific for biodiversity, the project will contribute to:

- restoration of forests with native species;
- increase of buffer protection in natural protected areas (NPA), which are the habitat for threatened and endangered species of flora and fauna;
- improvement of connectivity stemming from biological corridor restoration, allowing mobility for wildlife;
- expansion of forest coverage at landscape level, increasing the ecosystem services flow, in particular water related ecosystem services;
- increase of timber availability at landscape level, with an expected reduction of deforestation, and therefore biodiversity loss;
- reduction of inadequate practices for agricultural production, such as burns and the excessive use of pesticides that affect the soil and water, as well as biodiversity living in them;
- introduction of productive practices that harmonize production with natural resources and biodiversity conservation.

It is worth mentioned that no RECLIMA activity is expected within natural protected areas. Besides, project activities will involve increase in forest and vegetation cover that will contribute to conservation of Natural Protected Areas (NPA), Ramsar sites and Biosphere Reserves.

The project is also expected to improve the livelihoods for local communities in these landscapes. Further, forest restoration activities will respond to a local landscape planning to assure restoration efforts are located in vital areas that could potentially improve ecosystem services at landscape level.

8.1. Objectives and biodiversity approach

The objective of this framework is to define the approach to be adopted by RECLIMA in relation to the mitigation and management of biodiversity issues and impacts related to program implementation.

Overall, the project will directly restore 17,333 hectares of forest in water catchment areas, riversides, and buffer zones. This will in turn, result in increased protection of the water ecosystem service provision, and the increase of carbon stocks. The promotion of agro-forestry and forest plantations systems will contribute to climate change adaptation and mitigation.

Landscape restoration is proposed in three categories (see Figure 17). At farm level, component 1 will promote agroforestry and sylvo-pastoral systems, which will:

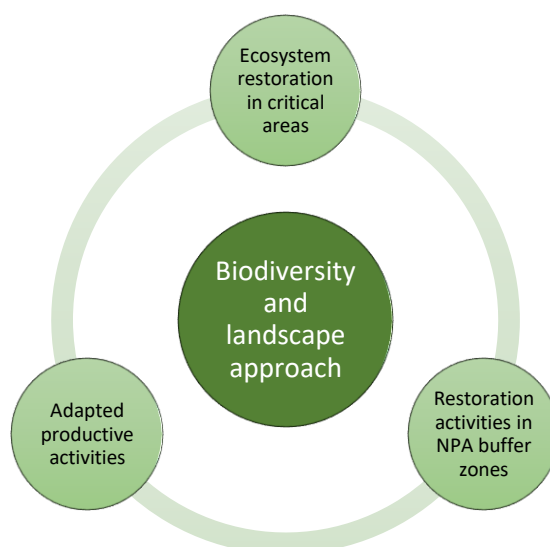
- diversify tree stratum of the productive systems providing new habitats for species,
- improve soil micro-climatic conditions allowing recovery of its biodiversity,
- increase infiltration capacity improving water availability at landscape level.

At landscape level, the component is expected to enhance the provision of key ecosystem services. Component 2 will restore ecosystems through induced forest restoration and reforestation practices, which will:

- increase tree coverage of native species, increasing therefore landscape structural connectivity with the consequent positive effects on biodiversity conservation,
- create buffer effect for natural protected areas, improving biodiversity conservation in National Protected Areas System.

Implementation of activities under components 1 and 2 will therefore increase the adaptive capacity and reestablish key ecosystem functions in the prioritized landscapes, assuring sustainable development and welfare to the population that depends on those ecosystem services.

Figure 17. Biodiversity and landscape approach



Productive practices will not only improve soil carbon storage, but also soil health and biodiversity, increasing land productivity and a more efficient water use. Restoration processes will provide significant farm and landscape improvements that will sustain and eventually increase agricultural productivity and farmers' incomes, increasing carbon stocks at the same time.

Landscapes and their ecosystem and agroecosystem components have multiple uses and purposes, each one valued differently by different actors. Therefore, tradeoffs between different uses emerge and need to be reconciled (Sayera, y otros, 2012).

For this reason, RECLIMA will promote, under component 2, participatory planning of specific interventions in each of the 6 landscapes, which will allow integration of agriculture and conservation priorities. Specifically, Activity 2.1.1. refers to the “Facilitation of plans and agreements to implement restoration of ecosystems/areas of particular importance for resilience in the intervention landscapes”. Project technicians will provide advisory and facilitation support to participatory community-based exercises, which will result in:

- The identification of priority sites for restoration in order to optimize the resilience of ecosystem flows under conditions of climate change (critical areas for water protection and aquifer recharge);
- Characterization of the selected localities in terms of the current status of the vegetation, needs for protection and restoration, and tenure status.
- Norms and agreements, negotiated as appropriate with current owners, occupiers and users of the selected areas, regarding restoration options, permitted uses and activities, and responsibilities.

- Definition of organizational arrangements and responsibilities for carrying out restoration, protection and maintenance work

Activities under component 3, particularly "Activity 3.2 Strengthen local planning, governance and coordination in support of adaptation and restoration" will allow the evaluation of the integrated implementation of RECLIMA actions to maximize positive impacts of restoration actions on biodiversity.

In this sense, work at landscape level provides a person-centered approach that enables negotiation and integration. During the inception phase of the project, mitigation measures for impacts on biodiversity will be detailed in specific biodiversity management plans for each sub-activity.

In the context of the Environmental and Social Management Framework of RECLIMA, in the early stages of the project and once beneficiaries have been identified, in the context of the assessments to determine the farm plans, an environmental and social screening exercise will be carried out at sub-activity level using FAO's environmental and social screening checklist. This tool will help identify those sub-activities that may require mitigation measures, including those stated in this framework. For sub-activities that require mitigation measures in place, an environmental and social management plan will be developed to be monitored through implementation phase. The ESMF Workplan in annex 1 includes the activities related to biodiversity and conservation.

8.2. Biodiversity characterization

The goal of landscape restoration for ecosystem-based adaptation is to restore key ecosystem functions at landscape level, increasing their resilience and ability to cope with future change, thus ensuring the flow of ecosystem services to local communities. Adaptation strategies proposed by RECLIMA related to the ecosystems restoration will help the country to maintain ecosystem services on which livelihoods of small rely on, such as water supply, aquifer recharge, soils fertility, habitat connectivity, pollination and pest control, among others.

A landscape approach is proposed for the implementation of components 1 and 2 of RECLIMA, for which adaptation alternatives are developed. The landscape approach is a conceptual framework whereby stakeholders in a landscape aim to reconcile competing social, economic and environmental objectives. It seeks to move away from the often-unsustainable sectoral approach to land management. A landscape approach aims to ensure the realization of local level needs and action (i.e. the interests of different stakeholders within the landscape), while also considering goals and outcomes important to stakeholders outside the landscape, such as national governments or the international community (Denier, Scherr, Chatterton, Hovani, & Stam, 2015).

During the implementation of RECLIMA, adaptation alternatives will be planned at the local level, selecting the areas for management, protection and recovery of ecosystems, and for increasing resilience of productive systems. This section describes the natural elements in intervention landscapes that will need to be considered as a basis to determine possible impacts on biodiversity and adaptation measures.

The National Biodiversity Strategy (MARN, 2013) and the National Program for Restoration of Ecosystems and Landscapes identify the most important ecosystems for the provision of services to the Salvadoran population, including mangroves and other coastal ecosystems, riverine forests, tropical forests remnants, and coffee plantations (MARN, 2012)¹⁵.

While the National Biodiversity Strategy (2013) points to a scenario in which El Salvador undertakes massive processes of restoration and ecosystems inclusive conservation, for recovering the country's capacity to sustain current and future development (MARN, 2013); agriculture plays a central role in

¹⁵ The country lacks tree cover in 64% of main areas of water recharge, in 42% of areas prone to landslides and in 67% of margins of the main rivers (MARN, 2013). This situation is aggravated taking into account that El Salvador is the only country in Central America with a condition of water stress (CEPAL, 2012).

the Strategy, focusing on agrobiodiversity and recognizing the scarcity of natural ecosystems in the country.

In this sense, the Programme of Work on Protected Areas of the CBD establishes that by 2015, all protected areas will be integrated into the broader terrestrial and marine landscapes, to maintain ecological structure and function, involving relevant sectors, applying the ecosystem approach and taking into account ecological connectivity and the concept of ecological networks.

As many of natural ecosystems remnants of El Salvador, are conserved in the National Protected Areas System¹⁶, which constitutes a central element of the national strategy for the conservation and sustainable use of biodiversity. One of its objectives is to consolidate a management model that allows permanent provision of ecosystem services, through three fundamental axes: integration of biodiversity in the economy, restoration and conservation of ecosystems and biodiversity for people (MARN, 2017).

The project will intervene in six landscapes with different biodiversity, ecosystems and ecosystem services. There are 40 protected areas in the project intervention area, covering over 12,600 hectares, distributed in the 6 landscapes (see figure 18). This includes national natural protected areas, and international declared natural areas including RAMSAR sites and Biosphere Reserves (see Table 1).

Table 11. Types and definition of international and national natural protected areas

Type	# areas	Definition
Biosphere reserves	2	Biosphere reserves are areas comprising terrestrial, marine and coastal ecosystems. Each reserve promotes solutions reconciling the conservation of biodiversity with its sustainable use. Biosphere reserves are ‘Science for Sustainability support sites’ – special places for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity. Biosphere reserves are nominated by national governments and remain under the sovereign jurisdiction of the states where they are located. Their status is internationally recognized (UNESCO, 2018).
RAMSAR sites	4	A Ramsar site is a wetland site designated of international importance under the Ramsar Convention. Ramsar identifies wetlands of international importance, especially those providing waterfowl habitat. Wetlands included in the RAMSAR list acquire a new status at the national level and are recognized by the international community as being of significant value not only for the country, or the countries, in which they are located, but for humanity as a whole. The Convention establishes that “wetlands should be selected for the List on account of their international significance in terms of ecology, botany, zoology, limnology or hydrology” (RAMSAR Convention, 2018).
Natural Protected Areas	35	Natural Protected Areas (NAP) are areas in national territory owned by the State, Municipalities, autonomous or private entities and natural persons; legally established in order to enable the conservation, sustainable management and flora and fauna restoration and its related resources and their natural and cultural interactions, which have a high significance for their function or for their genetic, historical, scenic, recreational values, archaeological and protective, in such a way as to preserve the natural state of the biotic communities and the unique geomorphological phenomena (MARN, 2018)

¹⁶ Some protected areas in the System already has a legal declaration while others are in process to be legally established.

There are some forest remnants that are not integrated in the National Protected Areas System, but have a central role in providing ecosystem services at landscape level which will be considered and duly identified in the assessment of sub-activities (see figure 19).

Figure 18. Natural protected areas in landscapes of intervention for RECLIMA

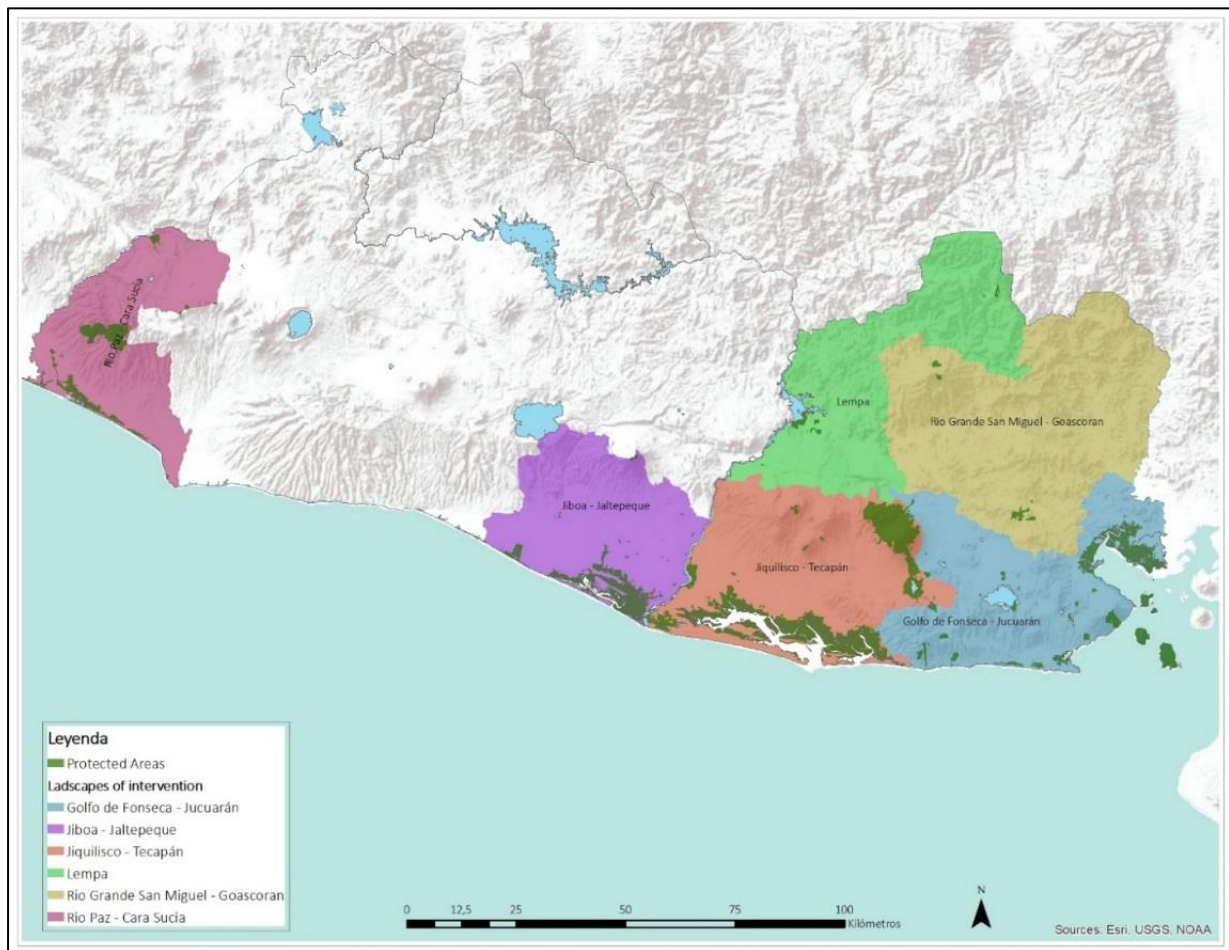
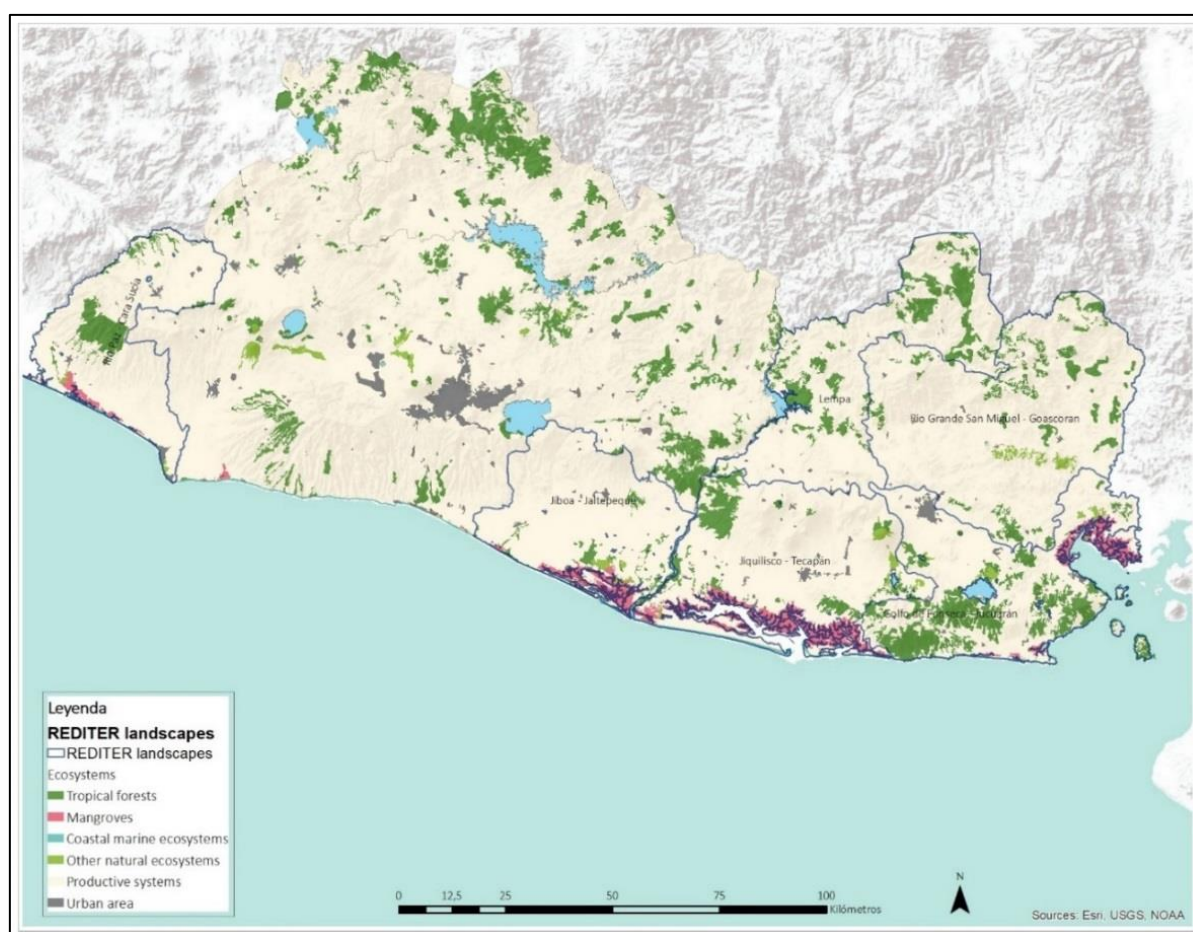


Figure 19. Ecosystems in El Salvador



Buffer Zones

Buffer zones are those areas created to enhance the protection of areas under management for their biodiversity importance. In El Salvador, the Law of Natural Protected Areas defines Buffer areas as *"Fragile areas adjacent to Natural Protected Areas, and with direct impact over them. Only those activities that are in line with sustainable management of natural resources, in line with relevant management plans and that minimize negative impacts inside and outside NPAs can be implemented."*

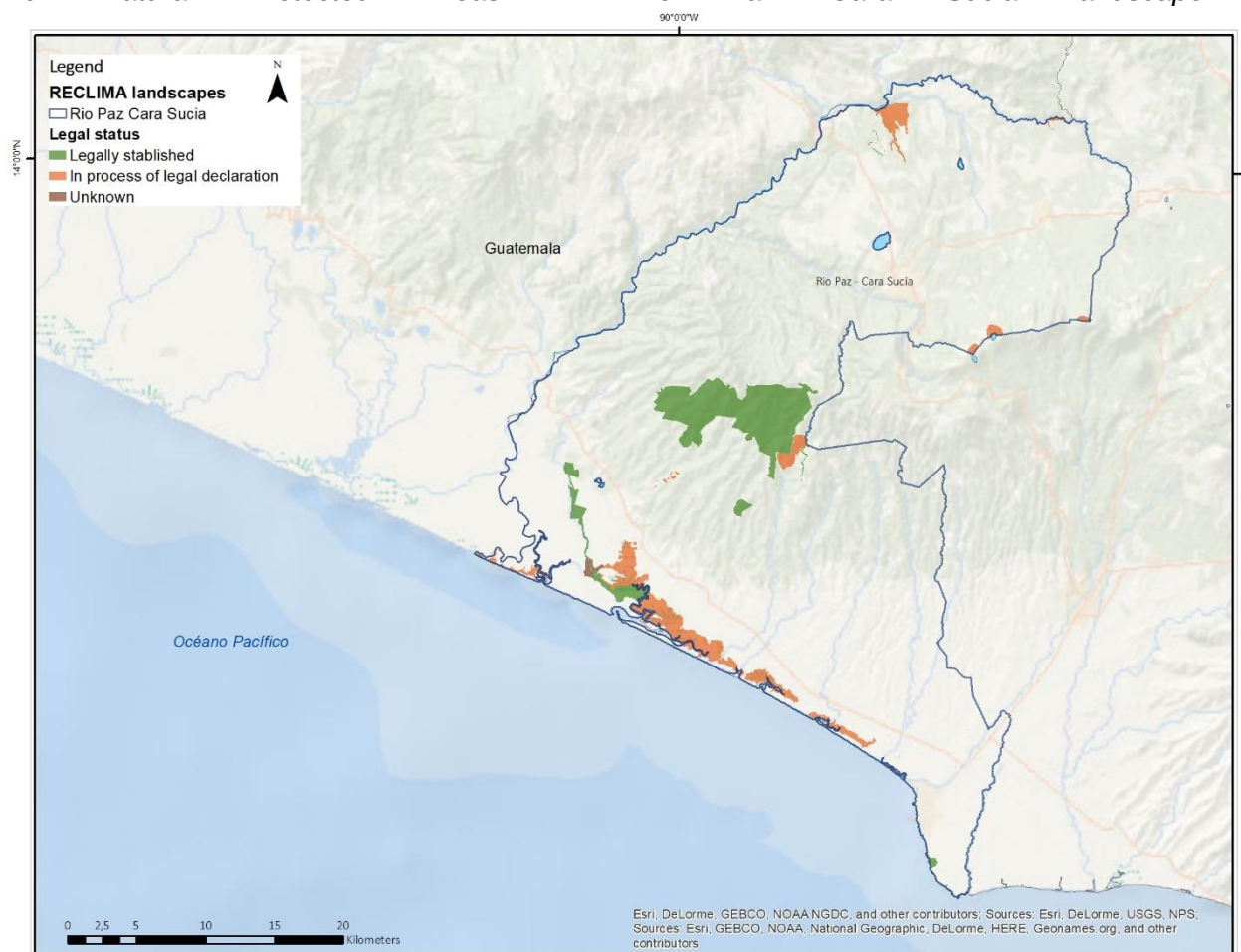
RECLIMA will intervene on priority buffer zones without tree cover by implementing natural and induced forest restoration activities (when there are remnants of degraded forests in the areas to be restored, actions to recover the natural vegetation will be implemented; but when forests cannot be recovered by natural means, induced restoration actions will be required).

National legislation does not establish a minimum buffer area around its protected areas. The Program will use a minimum buffer area of 50 meters adjacent to the NPAs. Actions will not only reduce edge effect over the NPA, but will also improve connectivity through landscape. All intervention in buffer areas will be carried out in accordance with management plans of the relevant NPA.

8.2.1. Río Paz– Cara Sucia

8.2.1.1. Natural ecosystems and protected areas

With an extension of 120,000 ha, this landscape corresponds to Cara Sucia and Paz hydrographic regions. Matrix¹⁷ is dominated by productive systems (82.91%) but conserves 12.68% natural ecosystems, primarily conserved in 21 protected areas, 12 of which are legally established, including: Barra de Santiago Ramsar site, El Chino, Cara Sucia, El Imposible, Hoja de Sal, Las Marías, Los Cóbanos, Los Laureles, Salinitas, San Francisco El Triunfo, Santa Águeda and Tahuapa (see table 12 and Figure 20. Natural Protected Areas in Río Paz Cara Sucia landscape



20). Buffer zones around the NPAs present areas without tree cover which are considered as priority in the interventions by RECLIMA in buffer zones (see figure 21).

¹⁷ Matrix: technical term used in landscape ecology to designate the land use that dominates the landscape.

Figure 20. Natural Protected Areas in Rio Paz Cara Sucia landscape

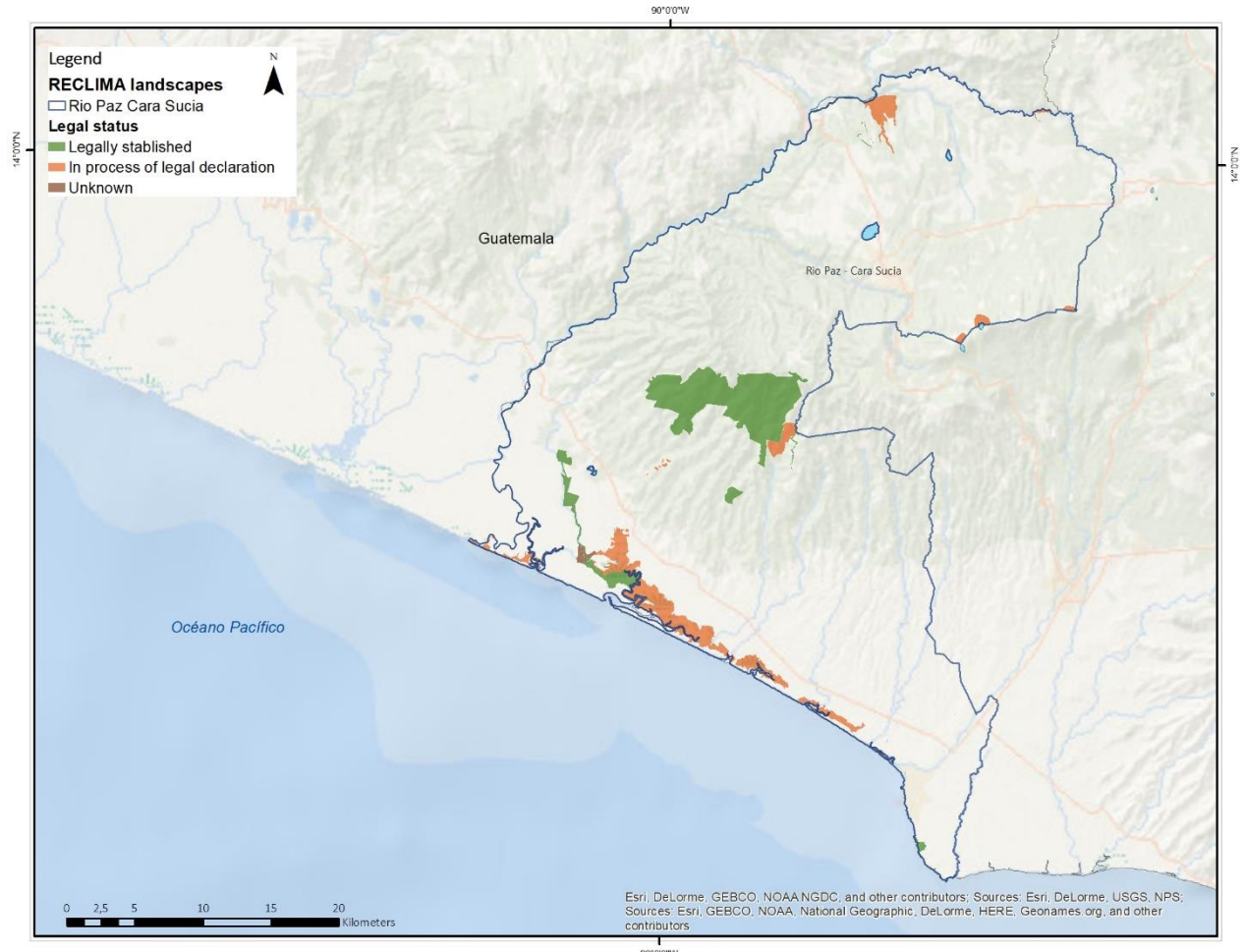
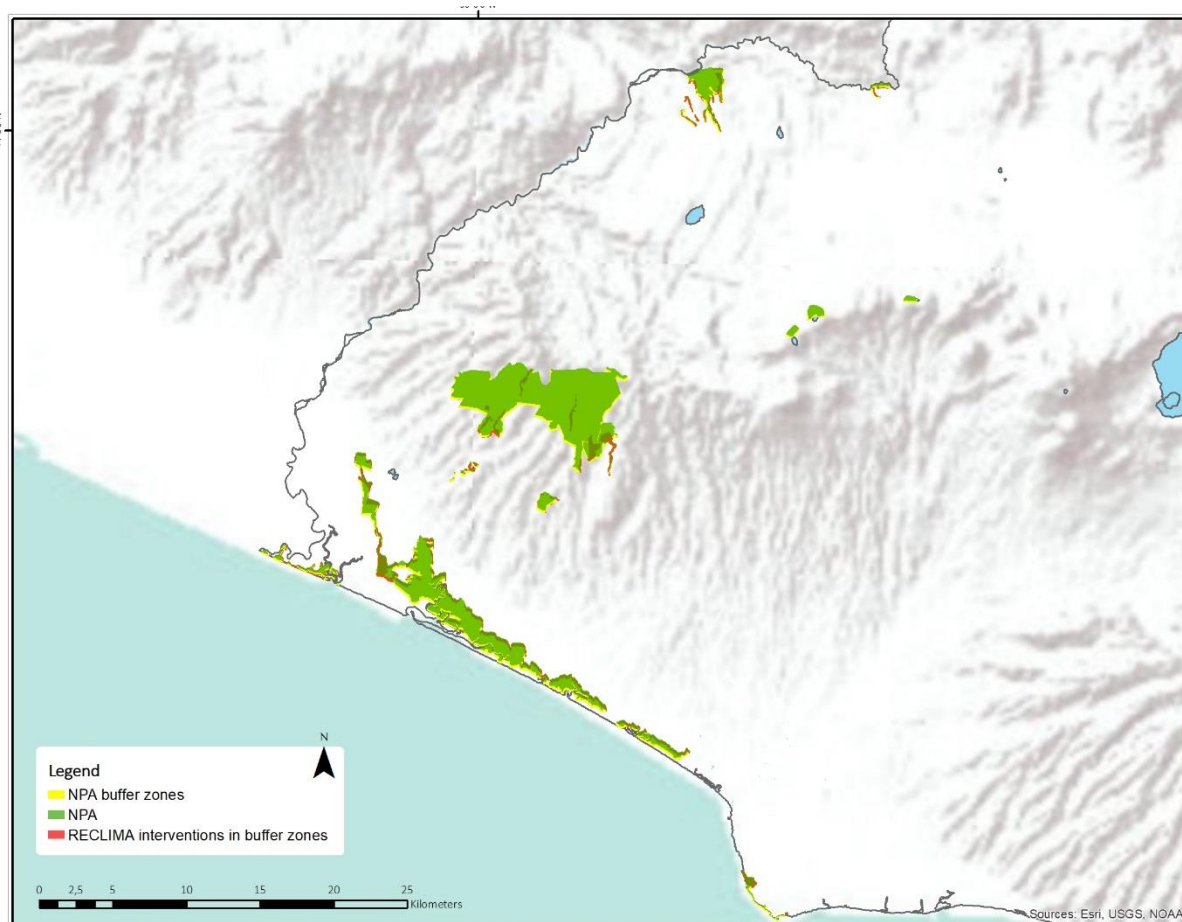


Figure 21. Buffer zones in Rio Paz Cara Sucia landscape



In the coastal zone, 2,545 ha of mangrove forest and 6,900 ha of evergreen forests and coastal beach vegetation are conserved, providing critical ecosystem services such as protection against tidal waves, reducing the impact of coastal erosion, rising sea levels and coastal flooding. Mangrove ecosystems are mainly conserved in the Barra de Santiago, a national protected area also declared Ramsar site. It also acts as main refuge and bridge between the species that live in the mangrove swamps of the central coast of El Salvador and the coast of Guatemala, and it sustains vulnerable and endangered species, as well as the threatened ecological communities (see table 13).

Deciduous and pre-montane tropical forest ecosystems conserved in El Imposible protected area represent the largest and most biodiverse area of this type of ecosystems nationwide. It fulfills essential functions in terms of climate regulation, increased infiltration, water production, runoff reduction and soil protection in this landscape.

Table 12. Natural Protected Areas in the Rio Paz Cara Sucia landscape

Protected area	Legally Established	Area (ha)
Complejo Barra de Santiago (Ramsar site)¹⁸	X	2012
El Chino	X	310
Cara Sucia	X	40
Complejo El Imposible	X	3762
Hoja de Sal	X	93
Las Marías	X	1
Los Cóbanos	X	25
Los Laureles	X	60
Salinitas	X	2
San Francisco El Triunfo	X	1
Santa Águeda o El Zope	X	40
Tahuapa	X	15
Buenos Aires y El Carmen		25
El Cortijo Aguachapio		23
Laguna de Las Ninfas		36
Laguna Verde		76
Manglar Bola de Monte		122
Manglar Metalio		193
Monte Hermoso		226
Rancho Grande o El Junquillo		387
San Jose Los Amates		26

Table 13. Threatened and endangered species in Rio Paz Cara Sucia landscape.

Group	Species	Status
Flora	<i>Brabea salvadorensis</i> <i>Rhizophora mangrove</i> <i>Rhizophora racemosa</i> <i>Acrostichum aureum</i> <i>Cedrela odorata</i>	Threatened
Fish	<i>Epinephelus quinquefasciatus</i> <i>Aetobatus narinari</i>	Critically endangered - IUCN Red list
	<i>Atractosteus tropicus</i>	Endangered at the national level
	<i>Hippocampus ingens</i>	Appendix II CITES / vulnerable - IUCN Red list / Threatened at the national level
Amphibians	<i>Dermophis mexicanus</i>	Vulnerable according to IUCN Red list, and threatened at the national level
Reptiles	<i>Caiman crocodilus</i> <i>Crocodylus acutus</i> <i>Eretmochelys imbricata</i>	Endangered / Appendix I CITES

¹⁸ Barra de Santiago Ramsar Site includes two natural protected areas: Barra de Santiago and Santa Rita-Zanjón El Chino. The wetland has a Local Plan of sustainable extraction, which has by object the use and sustainable management of natural resources, namely that the practices to be implemented by RECLIMA are fully compatible with this purpose.

Group	Species	Status
	<i>Olive Lepidochelys</i> <i>Dermochelys coriacea</i> <i>Chelonia mydas</i>	Appendix II CITES / threatened
	<i>Iguana iguana</i> <i>Boa constrictor imperator</i> <i>Micrurus nigrocinctus</i>	
Birds	<i>Amazona auropalliata</i>	Endangered / Appendix I CITES
	<i>Aratinga bolochlora</i> <i>Aratinga canicularis</i> <i>Brotogeris jugularis</i> <i>Buteogallus urubitinga</i> <i>Rostrbamus sociabilis</i>	Endangered / Appendix II CITES
	<i>Veniliornis fumigatus</i> <i>Charadrius Plover</i> <i>Belted torquata</i> <i>Reptiles niger</i>	Endangered at national level
	<i>Chlidonias niger</i> <i>Jacana spinosa</i> <i>Porphyryla Martinique</i> <i>American Coot</i> <i>Burhinus bistratus</i>	Threatened
Mammals	<i>Agouti paca nelsoni</i> <i>Conepatus leuconatus nicaraguae</i> <i>Natulus stramineus minor</i> <i>Trachops cirrbosus</i> <i>Myotis elegans</i>	Threatened
	<i>Diaemus youngi</i> <i>Eumops underwoodi</i>	Endangered
	<i>Lontra longicaudis</i>	Appendix I CITES

8.2.1.2. Livelihoods

The main use of the land in this landscape is a combination of staple grains (maize, rice and sorghum), sugar cane, pasture for cattle ranching, vegetables (melon and watermelon) and sesame seeds. As presented in Table 14. *Landcover in Rio Paz Cara Sucia landscape* staple grains represent 27% of the landscape, followed by coffee plantations (14%) and pastures (13%). It should also be emphasized that the area around the national protected area Barra de Santiago is home to a significant number of people whose main livelihoods include fishing and shellfish collection, closely related to the ecosystem services provided by mangroves.

Table 14. Landcover in Rio Paz Cara Sucia landscape

Landcover (MARN, 2011)	Area (ha)	Percentage (%)
Staple grains	32715	27,19
Coffee plantation	16488	13,70
Pastures	15376	12,78
Annual crops associated with permanent crops	10691	8,88
Mosaic of crops and pastures	8351	6,94
Sugar cane	6998	5,82
Evergreen forest	6442	5,35

Landcover (MARN, 2011)	Area (ha)	Percentage (%)
Agricultural land with natural vegetation	4833	4,02
Urban and commercial areas	4746	3,94
Mangrove	2545	2,12
Deciduous forest	2193	1,82
Riparian forest	2191	1,82
Banana plantations	1678	1,39
Other irrigated crops	1654	1,37
Low shrub vegetation	893	0,74
Forest plantations	617	0,51
Beaches	459	0,38
Marshy meadows	327	0,27
Rivers, lagoons and freshwater wetlands	257	0,21
Palm	233	0,19
Natural herbaceous vegetation	167	0,14
Coastal lagoons	163	0,14
Fruit trees	73	0,06
Rockiness, lavas	43	0,04
Shrimp farms	35	0,03
Agroforestry systems	29	0,02
Total	120328	100,00

8.2.1.3. Challenges over biodiversity and related RECLIMA actions

Current conditions of mangrove degradation in the lower basin of the Paz River result of combined processes such as deforestation, land use change and alterations in its hydrological regime. This has led to a reduced capacity to provide ecosystem services.

It is estimated that between 15 to 20% of mangroves nationwide require some type of restoration, including mangroves remaining in this landscape, since they suffer the impacts of diminishing freshwater supply due to the deviation of the main channel of the river occurred in previous years thus affecting its structure, composition and resilience (Gallo & Rodríguez, Wetlands and livelihoods in the Lower Basin of the Paz River, 2010; Rodríguez, 2010).

The project will favor riverine forest restoration in Cara Sucia, Cuilapa, Cauta, San Pedro and Paz rivers, (which supply water to coastal wetlands), favoring aquatic life and the survival of the *Atractosteus tropicus*, a unique species in Barra de Santiago. These practices will also increase structural connectivity between coastal and mountain forests, acting as altitudinal corridors for fauna, a central issue for biodiversity adaptation to climate change.

Extraction of firewood and wood for construction is a widespread activity in this landscape. Although the Ministry of Environment and Natural Resources grants extraction permits¹⁹, illegal logging for firewood or building materials has occurred in the area. This is of utmost importance, since the activities of reforestation and restoration of deciduous and pre-montane tropical forest, as well as the promotion of agroforestry systems can supply a large proportion of wood, contributing to the conservation of forest ecosystems within the landscape and improving connectivity between natural areas by increasing vegetation cover. It should be noted that within these NPA no project activities are foreseen.

The main use of the land in this landscape is for production of sugar cane, staple grains (maize, rice and sorghum), vegetables (melon and watermelon) and sesame seeds, as well as for pasture for cattle

¹⁹ Such as maximum 5m³/year for a family of 6 members

ranching. This affects the buffer zones of protected areas, including forests, mangroves and other coastal wetlands by negatively impacting the hydrology of the area. RECLIMA will propose best practices for the production of basic grains and grasses, including the establishment of silvo-pastoral systems, agroforestry and forest restoration, thus contributing to the restoration of degraded lands.

The siltation of channels of the estuary constitute an additional threat to biodiversity due to the contribution of sediments, particularly during extreme events. In this context, practices such as implementation of conservation of soil, agroforestry and conservation agriculture promoted by RECLIMA can generate significant benefits in terms of reducing the contribution of sediments. Similarly, the increase in vegetation cover helps meet the demand of local wood, thus reducing the pressure on the mangrove ecosystem.

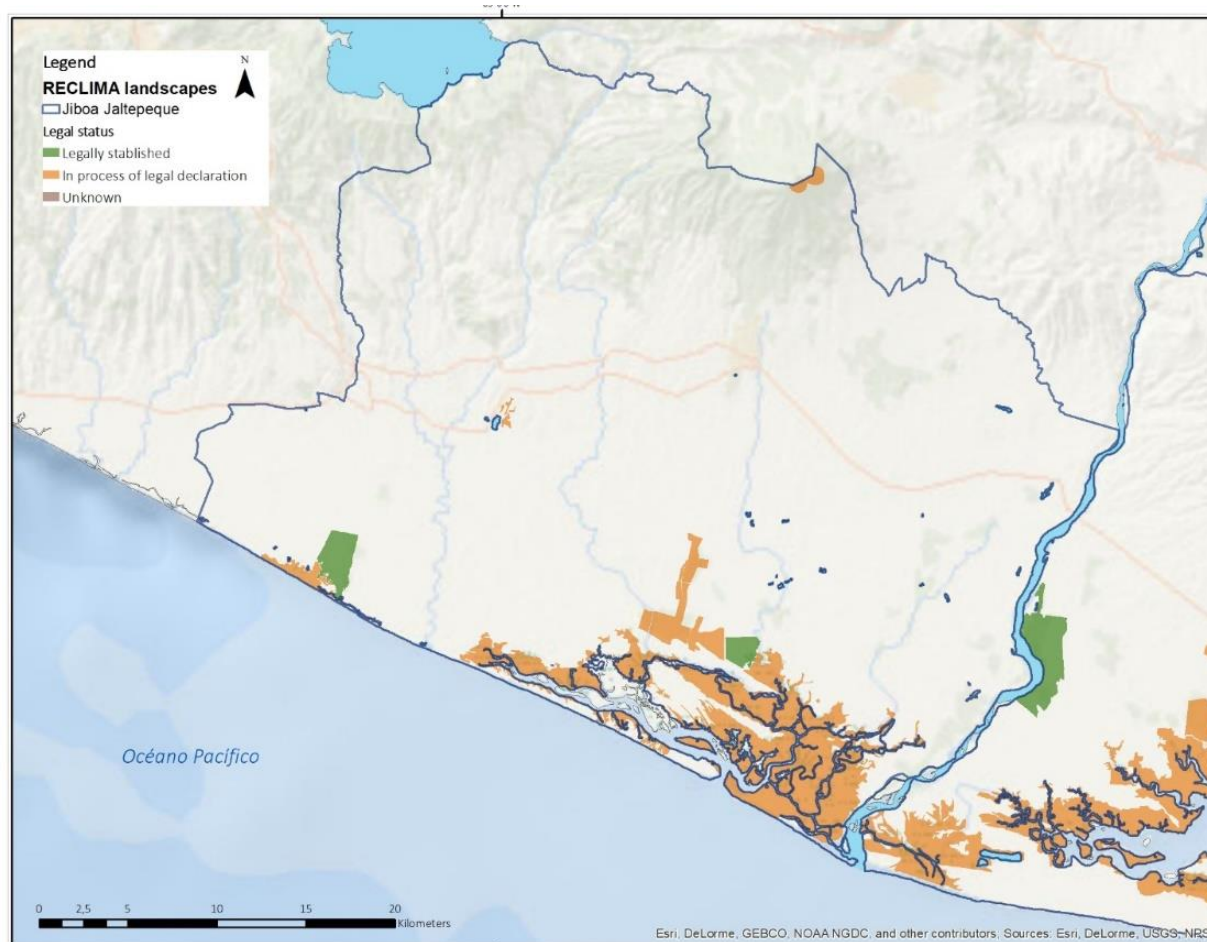
8.2.2. Jiboa– Jaltepeque

8.2.2.1. Natural ecosystems and protected areas

This landscape covers 130,155 ha and corresponds to the hydrographic region Jiboa - Estero de Jaltepeque. Landscape matrix is dominated by productive systems (79%), while natural ecosystems cover 17% of the landscape. Mangroves (4% of the landscape) and evergreen lowland forests (3% of the landscape) are the main natural ecosystems on coastal plains. On mountain summits and slopes there are remnants of mixed semi deciduous and deciduous forests (3% of the landscape).

Jaltepeque RAMSAR site, Escuintla, El Astillero and Santa Clara natural areas are the legally established protected areas and hold the largest extensions of natural ecosystems in the landscape (see figure 22).

Figure 22. Natural Protected Areas in Jiboa Jaltepeque landscape



There are other remnants of evergreen forests outside the NPA system that also play an important role in regulating periodic floods affecting this area, and it's local communities (Gallo, Programa de vulnerabilidad del Bajo Lempa: Prevención y mitigación de desastres naturales Los Bosques, 2000) which should be considered in landscape planning during the implementation of the project (see **Error! Not a valid bookmark self-reference.**). Around the NPAS, buffer zones without tree cover will be prioritized in the interventions by RECLIMA in buffer zones (see figure 23).

Figure 23. Buffer Zones in Jiboa Jaltepeque landscape

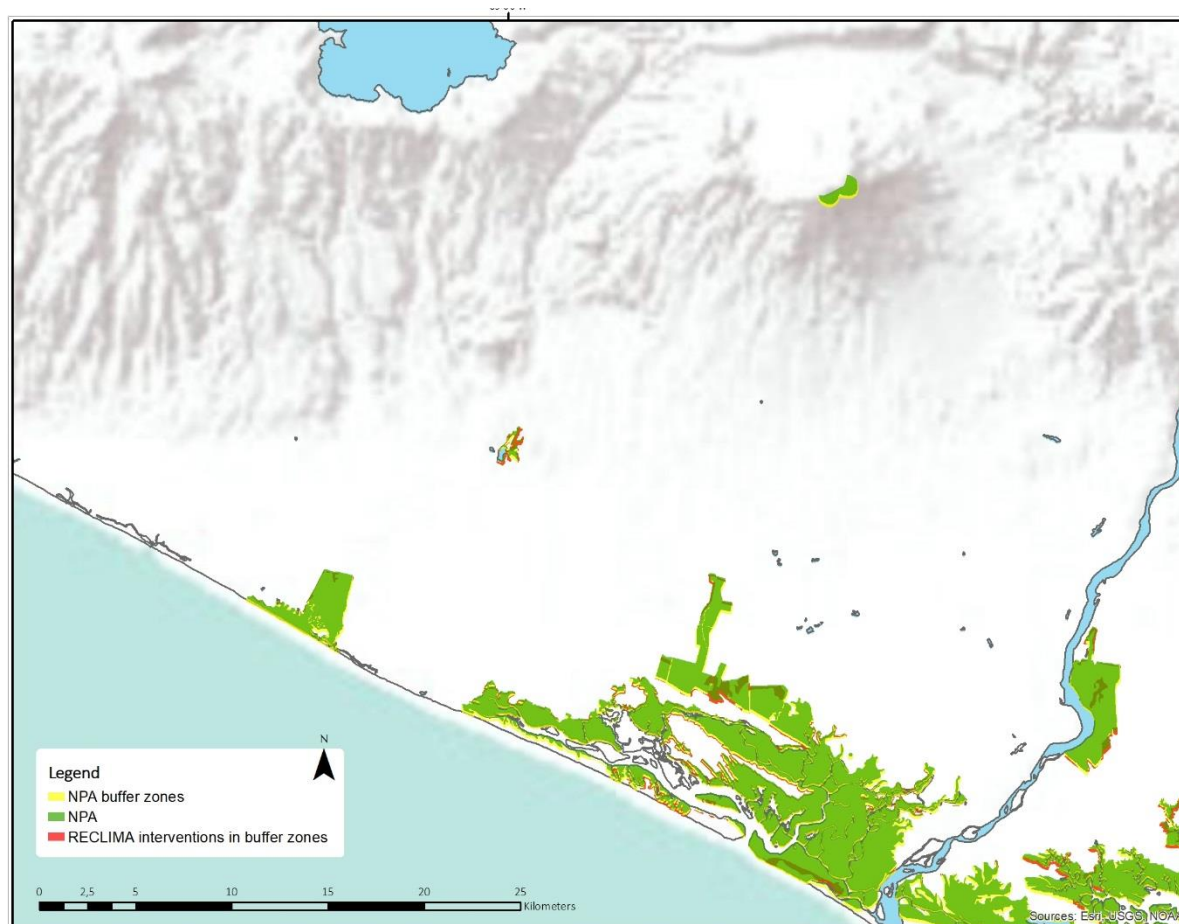


Table 15. NPA in Jiboa Jaltepeque landscape.

Protected area	Legally established	Area (ha)
Jaltepeque (Ramsar site)²⁰	X	12542
El Astillero	X	266
Santa Clara	X	525

The Jaltepeque Ramsar site is the second largest extension of mangrove forest in El Salvador (MARN, 2012). It comprises several seasonal and permanent wetlands such as Escuintla and El Astillero, freshwater swamps, bars of sand and beaches in Costa del Sol, a lagoon area of fresh water and forests seasonally saturated connected with mangroves in the estuary of Jaltepeque²¹. As it constitutes one

²⁰ Jaltepeque Ramsar Site includes all protected areas in this landscape.

²¹ As indicated in the management plan of Jaltepeque wetland this is a protected natural which emphasizes the management of natural resources mainly for the sustainable use. That means that the practices to be implemented by RECLIMA are fully compatible with this goal, and even focus on preserving part of the territory under natural conditions, through reforestation and restoration of degraded areas.

continuous extension of mangrove, it has an important hydrological influence in the context of regulation or stability of the regional climate. It is also one of the main centers of bird concentration in the country and the habitat for several endangered species (see table 16).

Table 16. Threatened and endangered species in Jiboa Jaltepeque landscape

Group	Species	Status
Flora	<i>Brabea salvadorensis</i> <i>Rhizophora mangrove</i> <i>Rhizophora racemosa</i> <i>Bravaisia integerrima</i>	Threatened
Reptile	<i>Caiman crocodilus</i> <i>Crocodylus acutus</i> <i>Eretmochelys imbricata</i> <i>Lepidochelys olivacea</i> <i>Dermochelys coriacea</i> <i>Chelonia agassizi</i> <i>Ctenosaura quinquecarinata</i> <i>Ctenosaura similis</i> <i>Leptodeira septentrionalis</i> <i>Masticophis mentovarius</i> <i>Oxybelis aeneus</i> <i>Oxybelis fulgidus</i> <i>Rhinoclemmys pulcherrima</i> <i>Iguana iguana</i> <i>Boa constrictor imperator</i>	Endangered on a scale and some present in Appendix I and II of CITES
Birds	<i>Brotogeris jugularis</i> <i>Buteogallus urubitinga</i> <i>Rostrbamus sociabilis</i>	Endangered and listed in Appendix II of CITES
	<i>Veniliornis fumigatus</i> <i>Charadrius Plover</i> <i>Belted torquata</i> <i>Reptiles niger</i>	Endangered at national level
	<i>Chlidonias niger</i> <i>Jacana spinosa</i> <i>Porphyrola Martinique</i> <i>American Coot</i> <i>Burhinus bistriatus</i>	Threatened

8.2.2.2. Livelihoods

Agriculture (staple grains and sugar cane) and livestock are of high importance in this landscape. Staple grains represent almost 22% of this landscape, followed by sugar cane (17%) and a mix of annual and permanent crops (10%) (see There are other remnants of evergreen forests outside the NPA system that also play an important role in regulating periodic floods affecting this area, and it's local communities which should be considered in landscape planning during the implementation of the project (see **Error! Not a valid bookmark self-reference.**). Around the NPAS, buffer zones without tree cover will be prioritized in the interventions by RECLIMA in buffer zones (see figure 23).

Figure 23. Buffer Zones in Jiboa Jaltepeque landscape



Table 15. NPA in Jiboa Jaltepeque landscape.17). La Paz department accounts for about 3% of the national corn production and 2% of the national beans production (smaller with respect to other areas of the country). With the intervention of RECLIMA, this situation can change through cultivation of staple grains with improved seeds, which would increase yields of these crops and contribute to the local economy.

Table 17. Landcover in Jiboa Jaltepeque landscape.

Landcover (MARN, 2011)	Area (ha)	Percentage
Staple grains	28023	21.54%
Sugar cane	22706	17.46%
Annual crops with permanent crops	13081	10.06%
Coffee plantation	12048	9.26%
Pastures	10170	7.82%
Mosaic of crops and pastures	9212	7.08%
Mangrove	6012	4.62%
Agricultural land with natural vegetation	4886	3.76%
Evergreen tropical forest	4204	3.23%
Urban and commercial areas	3796	2.92%
Deciduous forest	2281	1.75%
Natural herbaceous vegetation	2059	1.58%
Low shrub vegetation	1923	1,48
Riparian forest	1248	0,96

Landcover (MARN, 2011)	Area (ha)	Percentage
Eco tonal zones	1212	0,93
Mixed semi deciduous forest	1207	0,93
Other irrigated crops	1128	0,87
Marshy meadows	1023	0,79
Coastal lagoons and estuaries	993	0,76
Sclerophyllous or thorny vegetation	895	0,69
Oil palm trees	887	0,68
Forest plantations	735	0,56
Lakes, lagoons and freshwater wetlands	115	0,09
Shrimp farms	62	0,05
Beaches, dunes and sand	59	0,05
Fruit trees	53	0,04
Spaces with sparse vegetation	42	0,03
Coastal shrub vegetation	21	0,02
Total	130081	100%

8.2.2.3. Challenges over biodiversity and related RECLIMA actions

Main rivers that drain into the landscape include the Comapa, Jalponga, El Pajarito, El Guayabo and Lempa. Most riverine areas are degraded and the lack of forest cover in main watersheds is responsible of soil erosion and sedimentation processes downstream. RECLIMA will promote reforestation and forest restoration in riparian areas, to ensure water flow that mangroves and other ecosystems require for their survival.

Loss of forest habitat due to transformation in agricultural and cattle lands are adverse factors that affect this landscape. Besides that, deforestation is driven to meet the demand for energy and wood for construction. RECLIMA will foster conservation agriculture for a more efficient use of the soil and improvement in the vegetation cover, which will in turn result in the increase of biomass that contributes to satisfy the energy demand at landscape level.

8.2.3. Jiquilisco – Tecapán

8.2.3.1. Natural ecosystems and protected areas

With an area of 181,885 ha this landscape includes the hydrographic regions of Bahía de Jiquilisco and Lempa. Like previously described landscapes, its matrix is dominated by productive systems (75%), while in 21% of its different natural ecosystems are conserved, including 4,230 ha of deciduous forests and 1190 ha of riverine forests in mountainous areas. Coastal zone conserves 18,038 ha of mangrove forest and 5,300 ha of evergreen forests, ecotonal and coastal vegetation.

This landscape encompasses 18 protected areas, 8 of which are legally established including: Bahía de Jiquilisco and El Jocotal RAMSAR sites, Chaguantique, Nancuchiname, El Triunfo Paso Las Iguanas, Isla San Sebastián, La Ortega and Las Nieves (see Buffer zones around the NPAs present areas without tree cover which are considered as priority in the interventions by RECLIMA in buffer zones (see figure 25).

Table 18. *Natural Protected Areas in Jiquilisco Tecapán landscape* and figure 24).

Buffer zones around the NPAs present areas without tree cover which are considered as priority in the interventions by RECLIMA in buffer zones (see figure 25).

Table 18. Natural Protected Areas in Jiquilisco Tecapán landscape

Protected area	Legally stablished	Area (ha)
Bahía de Jiquilisco (sitio Ramsar / Reserva de la Biósfera Xirihualtique-Jiquilisco) ²²	X	18412
Chaparrón o Chaguantique	X	54
Complejo Nancuchiname	X	968
El Triunfo Paso Las Iguanas	X	9
Isla San Sebastián	X	58
La Ortega	X	21
Normandía		494
Manglar Isla Montecristo		1681
El Tercio		36
La Esperanza o Ceiba Doblada		96
Complejo El Jocotal (sitio Ramsar)	X	1490
Las Moritas		s/d
Chilanguera		57
Volcán de San Miguel		10235
Cuesta Empedrada		62
Laguna de Alegría		196
Las Nieves	X	93

²² Biosphere reserve Xirihualtique - Jiquilisco includes as core areas the following NPA: Chaguantique, Complejo Nancuchiname, El Triunfo, Paso Las Iguanas, Isla San Sebastián, La Ortega, Normandía, Manglar Isla Montecristo, El Tercio, La Esperanza o Ceiba Doblada

Figure 24. Natural Protected Areas in Jiquilisco Tecapán landscape

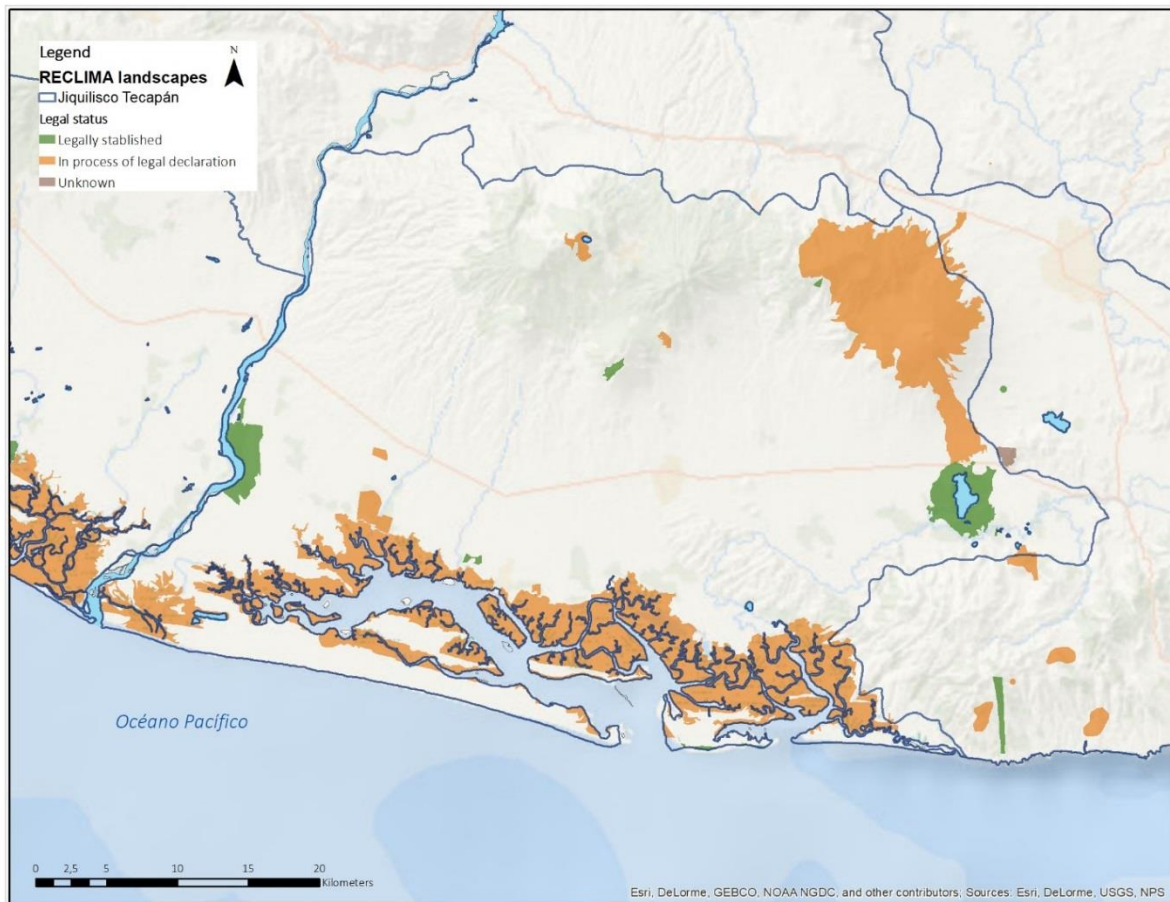
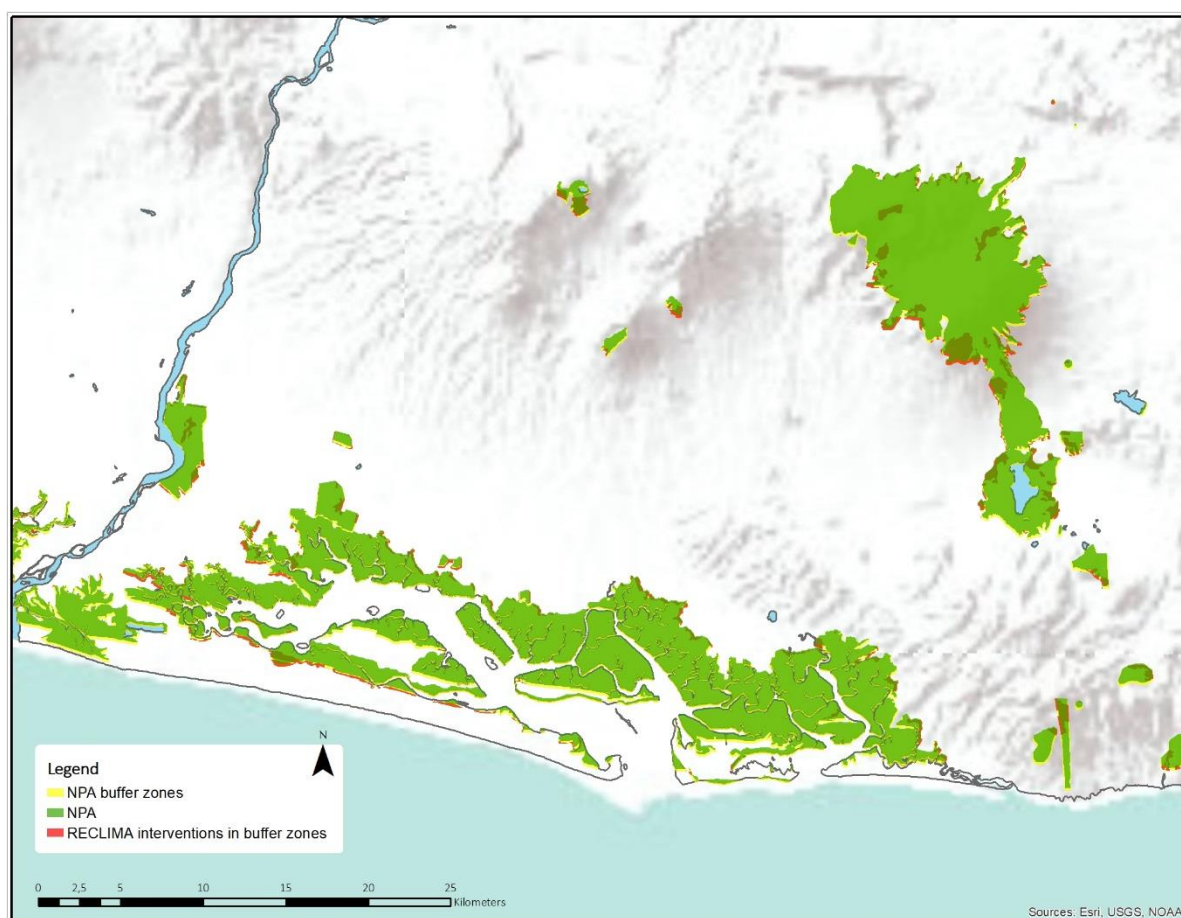


Figure 25. Buffer zones in Jiquilisco Tecapán landscape



Bahía de Jiquilisco has been designated as a Ramsar site and as a Biosphere reserve. The site contains the largest mangrove forest in the country, which represents 47% of Mangroves of the Dry Pacific Coast of Mesoamerica ecoregion (Gallo M. y Rodríguez E., 2007). This area is conformed by numerous estuaries and channels, sandbars and beaches, islands of different size, a lagoon area of fresh water and seasonally saturated forests connected through mangrove forests. It is the habitat of most marine birds in the country, as well as the only nesting site for some of them. It is also habitat for numerous species in danger of local extinction and for unique populations of spider monkeys (*Ateles geoffroyi*), the only primate reported for El Salvador. It also serves as habitat for 87 species of migratory birds. Ecosystems in this area play an important role in reducing risk of coastal erosion and have an important role in erosion control and soil fixation.

Another important international protected area is Laguna El Jocotal, a Ramsar site, which supports a population exceeding 20,000 water birds, including migratory and resident. It represents one of the best examples of flooded freshwater ecosystems in the Central American Pacific and sustains diverse threatened and endangered species (see table 19), as well as ecological threatened communities, as it is the case of seasonally saturated forests (a variant of the dry forest above, including communities especially rare as they are sweet mangrove forest).

Table 19. Threatened and endangered species in Jiquilisco Tecapán landscape

Group	Species	Status
Flora	<i>Bravaisia integerrima</i>	Threatened
Amphibians	<i>Plectrohyla guatemalensis</i>	critically endangered- IUCN
Reptiles	<i>Crocodylus acutus</i> <i>Caiman crocodilus</i> <i>Chelonia agassizi</i> <i>Eretmochelys imbricata</i> <i>Lepidochelys olivaceae</i> <i>Dermochelys coriacea</i>	Appendix I CITES Appendix II CITES endangered under national legislation Appendix I CITES endangered - IUCN critically endangered- IUCN
Birds	<i>Snail sociabilis</i> <i>Anhinga anhinga</i> <i>Ixobrychus exilis</i> <i>Botaurus pinnatus</i> <i>Blue gularis</i> <i>Arenaria interpres</i> <i>Hylomanes momotul</i> <i>Limnodromus griseus.</i>	In danger
	<i>Cairina moschata</i> <i>Coccyzus minor</i> <i>Sterna caspia</i> <i>Laterallus ruber</i> <i>Porphyrio goatfish</i> <i>Calidris himantopus</i> <i>Calidris minutilla,</i> <i>Tyto alba</i>	Threatened
Mammals	<i>Tamandua mexicana</i> <i>Conepatus mesoleucus</i> <i>Agouti paca nelsoni</i> <i>Canis latrans tufted</i>	Threatened
	<i>Saccopteryx leptura</i>	In danger
	<i>Puma yagouaroundi</i>	Appendix I of CITES

8.2.3.2. Livelihoods

Main productive practices include shade coffee cultivation (19%), staple grains (18%), areas dedicated mainly to dairy farming (10%) and pastures (7%) (see Table 20. *Landcover in Jiquilisco Tecapán landscape*). Sugar cane also develops in large areas in the coastal zone of this landscape (6%), with the impacts mentioned above.

Table 20. Landcover in Jiquilisco Tecapán landscape

Landcover (MARN, 2011)	Area (ha)	Percentage
Coffee plantation	34156	18,78
Staple grains	32293	17,75
Mosaic of crops and pastures	18707	10,29
Mangrove	18038	9,92
Annual crops with permanent crops	13555	7,45
Pastures	12167	6,69
Sugar cane	11717	6,44
Agricultural land with natural vegetation	7837	4,31

Landcover (MARN, 2011)	Area (ha)	Percentage
Urban and commercial areas	5182	2,85
Mixed forest semi deciduous	3782	2,08
Evergreen Forest	3562	1,96
Oil palm trees	3165	1,74
Low shrub vegetation	2781	1,53
Marshy meadows	1944	1,07
Eco tonal zones	1886	1,04
Rockiness, lavas	1683	0,93
Coastal lagoons and estuaries	1550	0,85
Natural herbaceous vegetation	1377	0,76
Riparian forests	1194	0,66
Shrimp farms	1369	0,75
Other irrigated crops	881	0,48
Fruit trees	700	0,39
Lakes, lagoons and freshwater wetlands	654	0,36
Deciduous forest	449	0,25
Beaches, dunes and sand	401	0,22
Forest plantations	348	0,19
Spaces with sparse vegetation	309	0,17
Aquaculture perimeter	214	0,12
Sclerophyllous or thorny vegetation	128	0,07
Coastal shrub vegetation	71	0,04
Total	181885	100,00

8.2.3.3. Challenges over biodiversity and related RECLIMA actions

The most important productive activity is subsistence agriculture combined with fishing and shrimp farming in coastal zone, and sugar cane immediately after in wetland areas. Although on a smaller scale, initiatives for agricultural diversification exist. This agricultural activity is of special interest to the project, as there are plans to develop practices such as conservation agriculture and the establishment of agro-forestry systems. Livestock is also notorious, and the wetland includes pasture areas in the municipality of Jiquilisco and Puerto El Triunfo, potential implementation sites of the project to implement good practices, especially through the establishment of silvopastoral systems.

A main threat to biodiversity in this landscape is the constant loss of forest habitats. Mangrove forests and coastal scrub in Bahía de Jiquilisco, are virtually eliminated by livestock and agriculture practices, particularly sugarcane. Deforestation in the Cordillera de Jucuarán forest by slash and burn is also increasing the risk of erosion of the slopes in this landscape. Forest fragmentation and deforestation conduce to habitat and biodiversity loss. RECLIMA will contribute to reduce this threat, as it will promote riverine restoration (through reforestation and natural regeneration) and good agricultural practices, including sylvopastoral systems, agroforestry and conservation agriculture, expanding tree cover all over the landscape and reducing erosion. It should be noted that sylvopastoral systems promoted by the project will benefit ecosystems processes, especially in those areas surrounding the Jocotal lagoon.

In the floodplain of the shore, main productive activities are traditional crops (such as maize, beans, sorghum), sugar cane and cattle grazing. Several rural human settlements located in floodplains are frequently forced to evacuate due to floods of the Grande de San Miguel river during the rainy season. Reforestation and restoration practices to be promoted by RECLIMA are essential, as they will

improve the ecosystem of water storage and purification services, control of floods and recharge of aquifers, among other environmental benefits.

Reforestation and riverine forest restoration promoted by the project will impact positively in catchment areas of Grande de San Miguel river basin and Bahía de Jiquilisco hydrographic region (rivers El Espino, Nanachepa, Aguacayo, El Molino, among others), by reducing sediment flows and soils erosion. Particularly within the Laguna El Jocotal Ramsar site, the transformation of flooded grasslands in dry pastures is medium-severity risk; in this sense, the project has the potential to reduce this adverse factor, while seeking the implementation of sylvopastoral systems that combine tree species with cultivated pastures, improving soils conditions and moisture conservation.

8.2.4. Golfo de Fonseca – Jucuarán

8.2.4.1. Natural ecosystems and protected areas

This landscape expands through 164,133 ha and corresponds to the Sirama hydrographic region, including sectors of the Río Grande de San Miguel hydrographic region. It presents a matrix dominated by productive systems (48%) and natural ecosystems (47%). Most extensive natural ecosystems correspond to semi-deciduous mixed forests (23% of the landscape), deciduous forests (5%) and mangroves (5%).

This is a landscape with a high diversity of environments and richness of species and includes 24 protected areas covering in 13,000 ha (see table below) (MARN, 2012). There are 10 NPA legally established: Laguna de Olomega Ramsar site, San Antonio Silva, Tierra Blanca, Dación El Faro, El Caballito, El Faro Yologual y Suravaya, Maquigue, San Antonio La Pupusa, San Juan Mercedes Silva, and Sirama (see and figure 26). It should be noted that the semi-deciduous mixed forests that develop in the Jucuarán mountain are the most extensive and best preserved in the country (Gallo M. and Rodríguez E., 2007). Buffer zones around the NPAs present areas without tree cover which are considered as priority in the interventions by RECLIMA in buffer zones (see figure 27).

Table 21. NPA in Golfo de Fonseca Jucuarán landscape and figure 26). It should be noted that the semi-deciduous mixed forests that develop in the Jucuarán mountain are the most extensive and best preserved in the country (Gallo M. and Rodríguez E., 2007). Buffer zones around the NPAs present areas without tree cover which are considered as priority in the interventions by RECLIMA in buffer zones (see figure 27).

Table 21. NPA in Golfo de Fonseca Jucuarán landscape

Protected area	Legally established	Area (ha)
Laguna de Olomega (Ramsar site)²³	X	2557
San Antonio Silva	X	160
Tierra Blanca	X	175
Dación El Faro	X	78
El Caballito	X	244
El Faro Yologual y Suravaya	X	562
Maquigue	X	187
San Antonio La Pupusa	X	19
San Juan Mercedes Silva	X	7
Sirama	X	77
Buena Esperanza		190
Chilanguera		208
El Ciprés		72
El Obrajuelo		1

²³ Laguna Olomega Ramsar Site includes San Antonio Silva and Tierra Blanca protected areas.

Protected area	Legally established	Area (ha)
El Once y La Paz o El Güisquil		75
La Redención		241
Manglar Bahía de Jiquilisco		83
Manglar El Icacal		208
Manglar El Tamarindo		541
Manglar Golfo de Fonseca		6944
Manglar Las Tunas		237
San Carlos o Concepción		199
San Francisco Gualpirque		157
Volcán de San Miguel		283

Figure 26. Natural Protected Areas in Golfo de Fonseca Jucuarán landscape

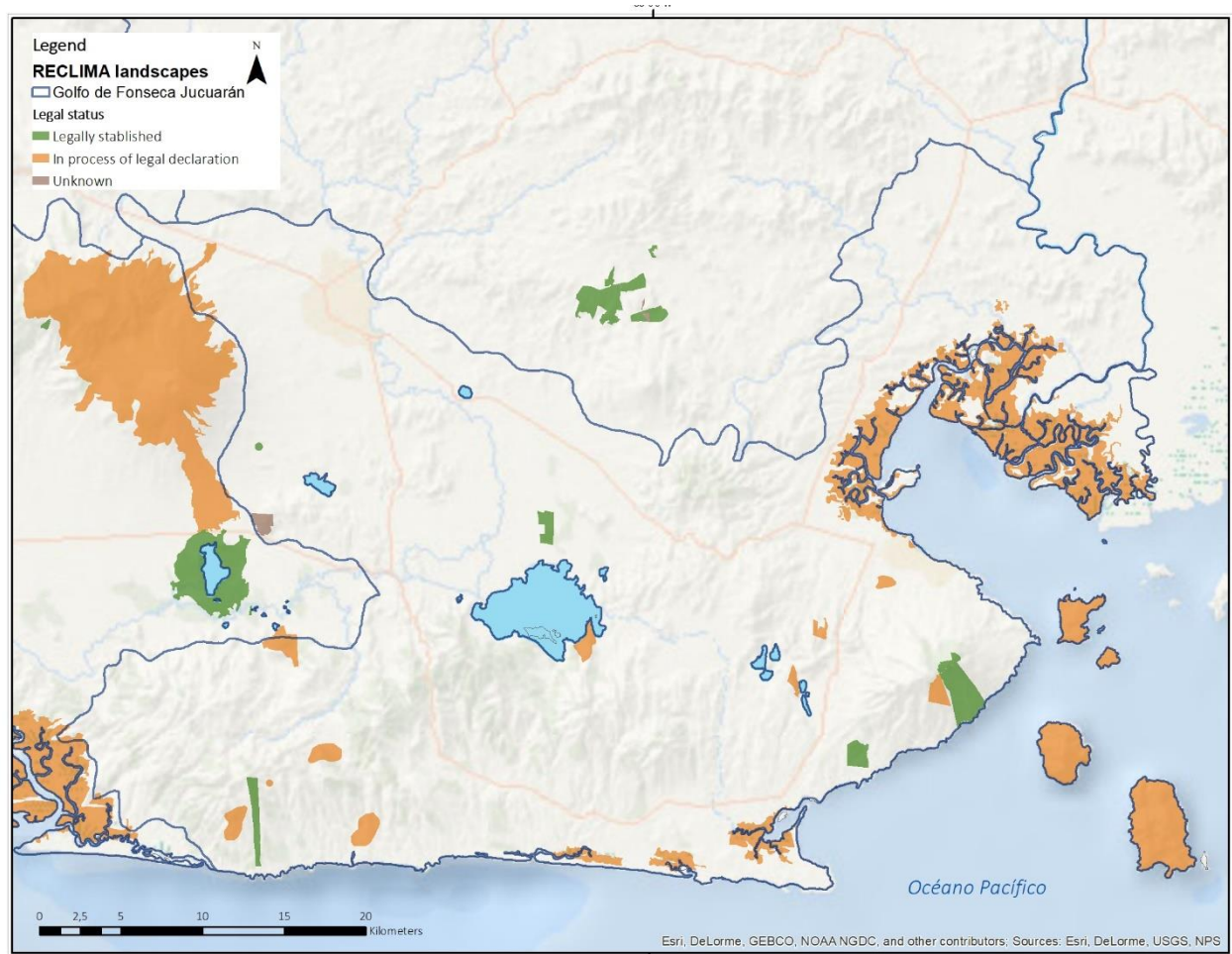
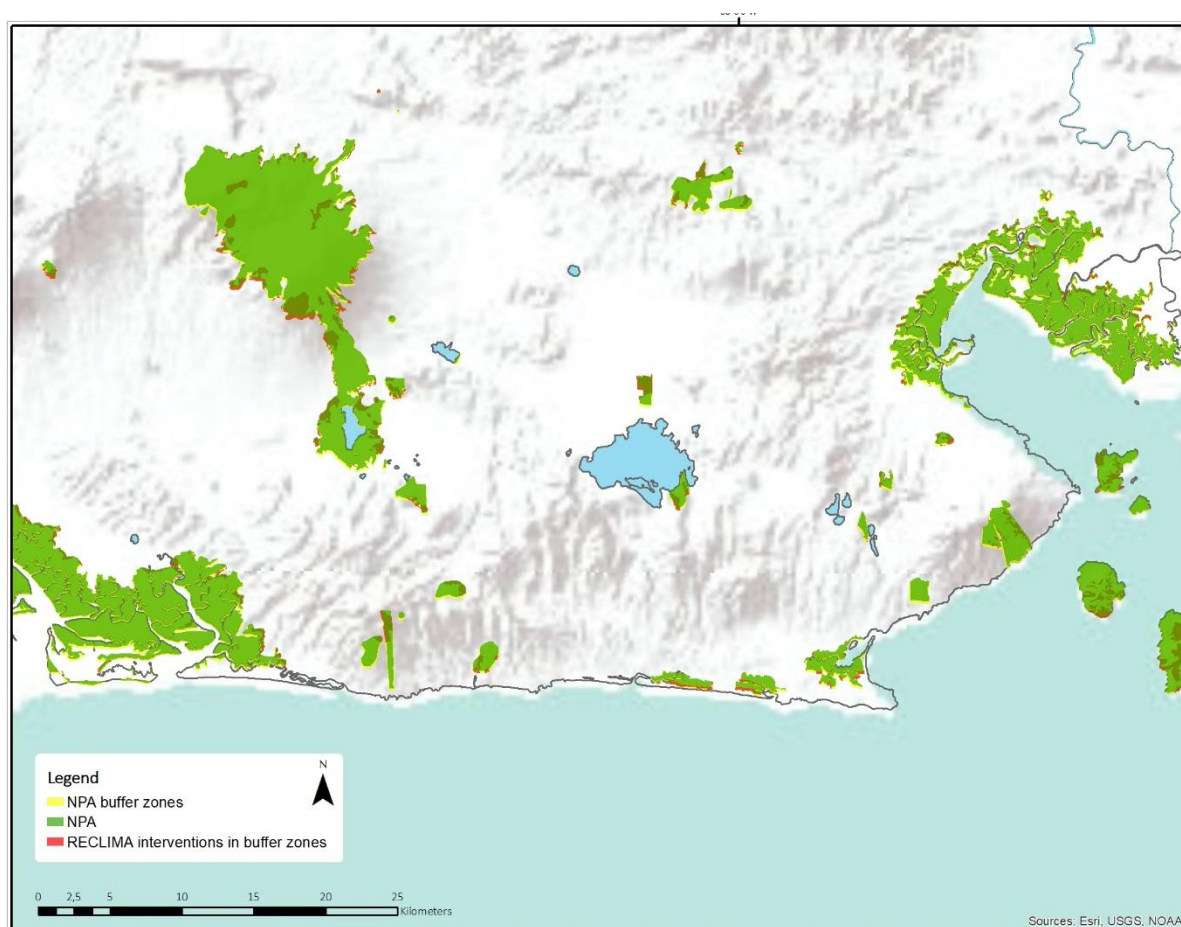


Figure 27. Buffer zones in Golfo de Fonseca Jucuarán landscape



The *Laguna Olomega* is a Ramsar site located in this landscape, and the greater body of fresh water of the coastal plain in El Salvador. In some months of the rainy season, the lagoon receives the waters of Grande de San Miguel river, which feed and drain the lagoon. This site serves as habitat for migratory birds, native fish freshwater species, different threatened or endangered species (see).

Table 22. Threatened and endangered species in Golfo de Fonseca Jucuarán landscape).

Table 22. Threatened and endangered species in Golfo de Fonseca Jucuarán landscape

Group	Species	Status
Reptiles	<i>Plectrohyla guatemalensis</i> <i>Aramus guarauna</i>	Endanger
Birds	<i>Cairina moschata</i> <i>Plegadis falcinellus</i>	Endanger – Appendix III CITES Endanger

8.2.4.2. Livelihoods

Unlike the other landscapes presented previously, this is a landscape with large extensions of mixed semi-deciduous tropical forest, but agricultural activities (corn, beans, sorghum and marañón) as well as cattle grazing in the northern area are of great importance in this landscape. Pastures represent almost 14% of the landscape area, while staple grains cover 11%, followed by a mosaic of crops and pastures (see Table 23. *Landcover in Golfo de Fonseca Jucuarán landscape*).

Table 23. Landcover in Golfo de Fonseca Jucuarán landscape

Landcover (MARN, 2011)	Area (ha)	Percentage
Mixed semideciduous forest	37410	22,79
Pastures	22648	13,80
Staple grains	18489	11,26
Mosaic of crops and pastures	16528	10,07
Low shrub vegetation	10194	6,21
Agricultural land with natural vegetation	9369	5,71
Natural herbaceous vegetation	8932	5,44
Deciduous forest	8207	5,00
Mangrove	7368	4,49
Urban and commercial areas	6407	3,90
Sugar cane	3017	1,84
Spaces with sparse vegetation	1729	1,05
Marshy meadows	1584	0,97
Coastal lagoons and estuaries	1448	0,88
Fruit trees	1364	0,83
Lakes, lagoons and freshwater wetlands	1342	0,82
Backpacks in paddocks	1331	0,81
Shrimp farms	1267	0,77
Evergreen forest	1129	0,69
Annual crops with permanent crops	1075	0,65
Riparian forests	935	0,57
Forest plantations	700	0,43
Coffee plantation	699	0,43
Sclerophyllous or thorny vegetation	239	0,15
Beaches, dunes and sand	239	0,15
Mining	135	0,08
Coniferous forests	117	0,07
Vegetables	89	0,05
Rockiness, lavas	55	0,03
Coastal shrub vegetation	50	0,03
Agroforestry systems	35	0,02
Total	164133	100,00

8.2.4.3. Challenges over biodiversity and related RECLIMA actions

A major threat to biodiversity in this landscape is the constant loss of forest habitats. The RECLIMA project will contribute to the implementation of practices that improve the productivity of crops and its relationship to the natural resources of the Ramsar wetland, and mangroves of Golfo de Fonseca.

At the same time, catchment areas of Bahía de Jiquilisco belongs to thirteen basins (including Grande de San Miguel and Lempa rivers), which are part of the area of intervention of RECLIMA, where its actions will have a direct positive impact in the hydrological regime of the RAMSAR wetland and other coastal ecosystems.

8.2.5. Río Grande de San Miguel– Goascorán

8.2.5.1. Natural ecosystems and protected areas

Deciduous forests are the most extensive and important natural ecosystem in this landscape (20% of the landscape), while coniferous forests cover more than 4% of the landscape and are mainly located in the northern sector of the landscape. There are sparse and isolated natural protected areas in this landscape, but with a fundamental importance for the provision of water to local communities, and their production systems, such as Cerro Cacahuatique. In this landscape there are 7 protected areas covering about 1160 ha, of which 4 are legally established: Cacahuatique, E Socorro, El Tecomatal and San Lucas (see table 24 and figure 28). Buffer zones around the NPAs present areas without tree cover which are considered as priority in the interventions by RECLIMA in buffer zones (see figure 29).

Table 24. Natural Protected Areas in Río Grande de San Miguel Goascorán landscape

Protected area	Legally established	Area (ha)
Complejo Cacahuatique	x	120
El Socorro	x	733
El Tecomatal	x	s/d
San Lucas o Palo Galán	x	69
Cerro Cacahuatique		239
El Obrajuelo		s/d
La Estancia		2

Figure 28. Natural Protected Areas in Río Grande de San Miguel Goascorán landscape

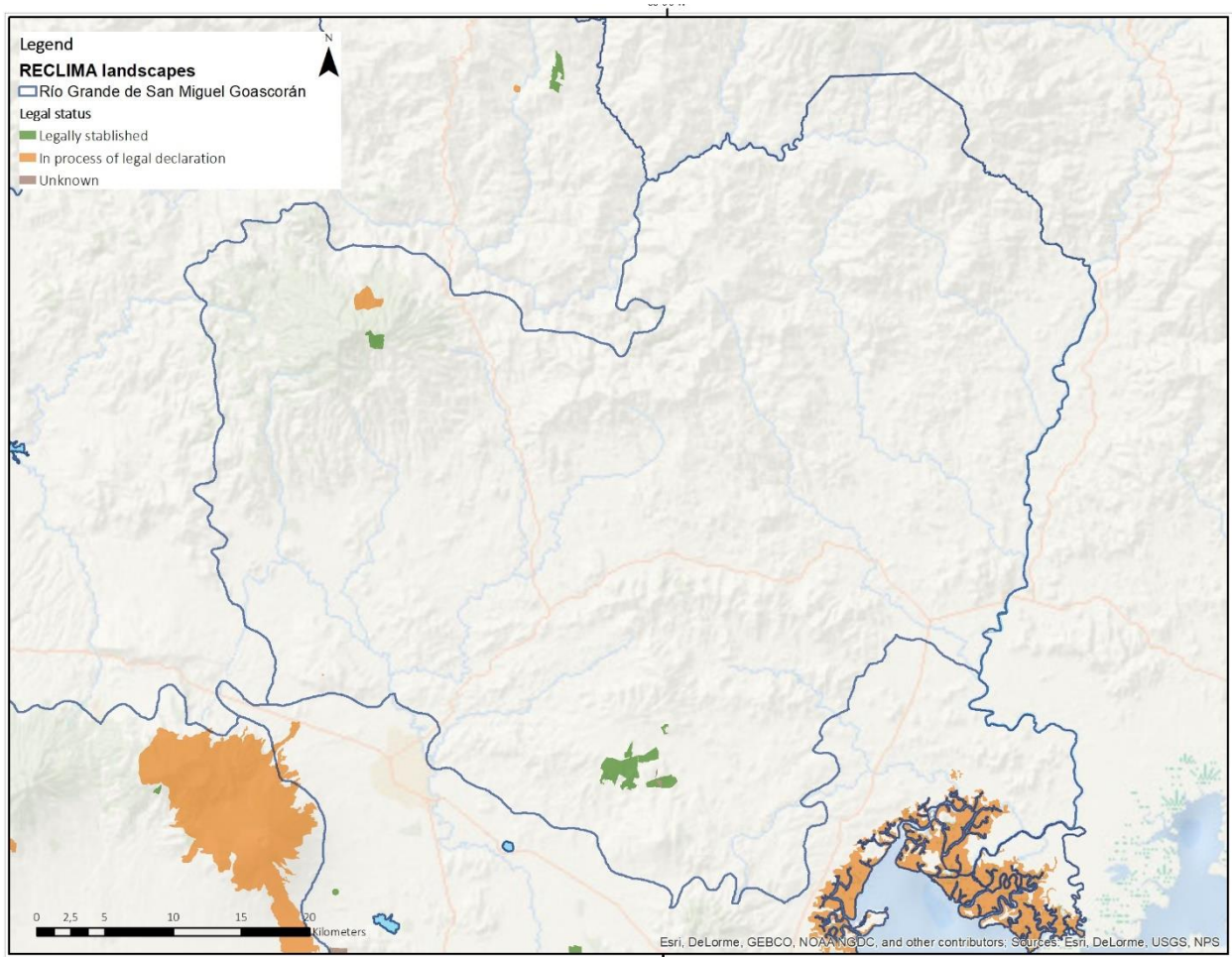
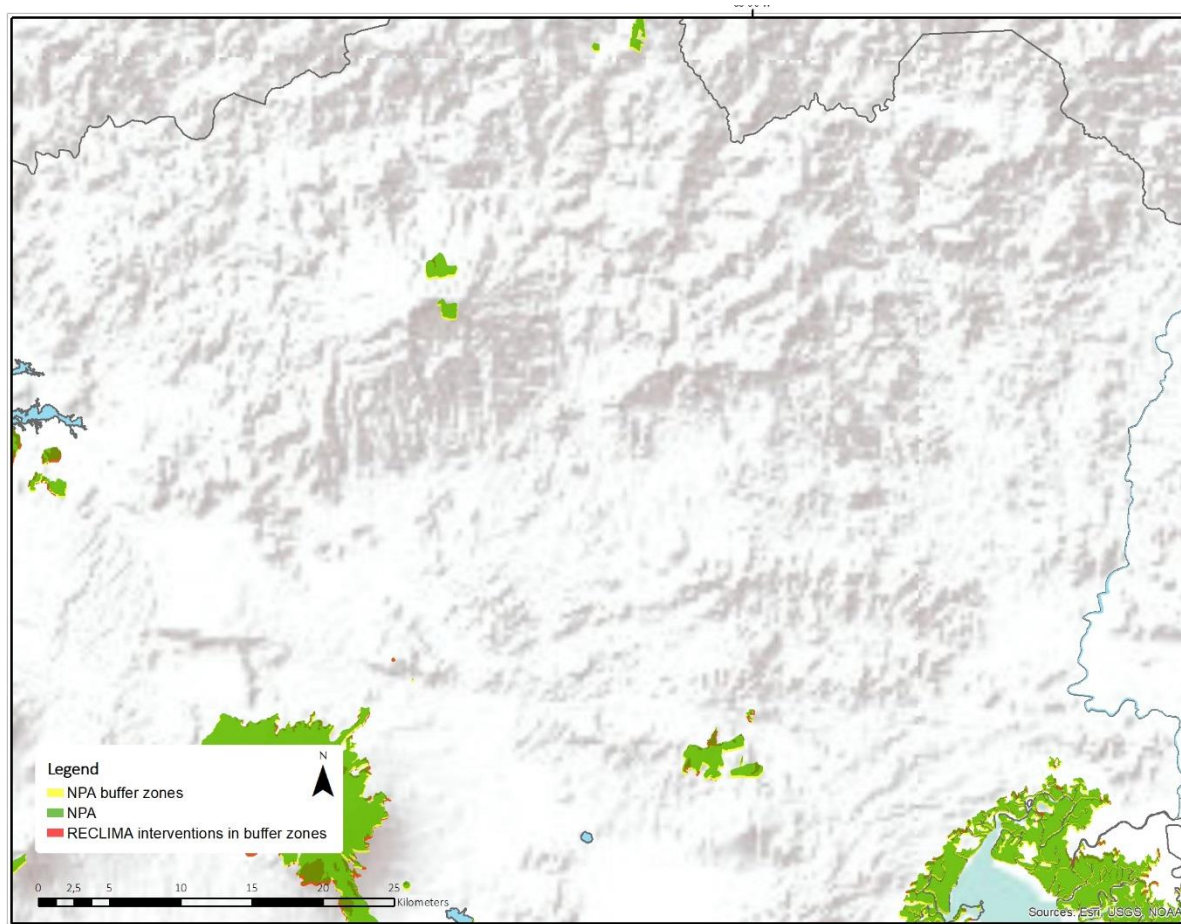


Figure 29. Buffer zones in Río Grande de San Miguel Goascorán landscape



8.2.5.2. Livelihoods

Livestock is of high importance in this landscape, pastures cover 25% of the territory, while mosaic of crops and pasture covers almost 7% of landscape. In this landscape agricultural lands are frequently associated with natural vegetation representing 12% of landscape area (see Table 25. *Landcover in Río Grande de San Miguel Goascorán landscape*).

Table 25. Landcover in Río Grande de San Miguel Goascorán landscape

Landcover (MARN, 2011)	Area (ha)	Percentage
Pastures	62162	25,30
Deciduous forest	48935	19,91
Agricultural land with natural vegetation	30287	12,33
Low shrub vegetation	27360	11,13
Mosaic of crops and pastures	16178	6,58
Staple grains	15039	6,12
Coniferous forests	10005	4,07
Coffee plantation	9116	3,71
Mixed forest semi deciduous	4759	1,94
Spaces with sparse vegetation	4470	1,82
Natural herbaceous vegetation	4220	1,72
Annual crops with permanent crops	3921	1,60
Urban and commercial areas	2419	0,98
Mixed forest	1881	0,77

Landcover (MARN, 2011)	Area (ha)	Percentage
Lakes, lagoons and freshwater wetlands	1789	0,73
Riparian forests	1258	0,51
Sclerophyllous or thorny vegetation	970	0,39
Backpacks in paddocks	497	0,20
Forest plantations	381	0,15
Rockiness, lavas	23	0,01
Evergreen Forest	23	0,01
Vegetables	10	0,004
Other irrigated crops	9	0,004
Total	245719	100,00

8.2.5.3. Challenges over biodiversity and related RECLIMA actions

Livestock has a negative effect on plant regeneration in seasonally saturated forest and dry forests in the landscape. Hence the establishment of sylvo-pastoral systems is an alternative with the potential to reduce the negative effects of ranching.

Deforestation, through logging and agricultural transformation create serious problems of erosion and loss of soil. Logging is especially harmful when done on the few individuals present in the sweet mangrove. For these reasons, the project's foreseen activities of practices such as the no-burning, agroforestry systems and soil and water conservation practices will help contribute to the reduction of erosion and sedimentation, siltation problems, and restoration of ecosystem services by recovering the tree vegetation cover.

Moreover, the use of agrochemicals in catchment areas of Grande de San Miguel river lead to classify this river as one of the most polluted in the country, with negative impacts on the wetlands and biodiversity. RECLIMA will promote the integrated management of pests, favoring the quality of water bodies and aquatic life in rivers and the lagoon in this landscape.

8.2.6. Lempa

8.2.6.1. Natural ecosystems and protected areas

Corresponding to the eastern sector of the Lempa hydrographic region, this landscape has an extension of 162,876 ha. It is dominated by productive systems (51%), and includes natural ecosystems (34% of the landscape), most of them not included in the National Protected Areas System, with only 6 protected areas (approximately 1000 ha), three of which are legally established (El Tamarindo, El Tecomatal and La Ermita) (see figure 30 and

Figure 31.Buffer zones in Lempa landscape

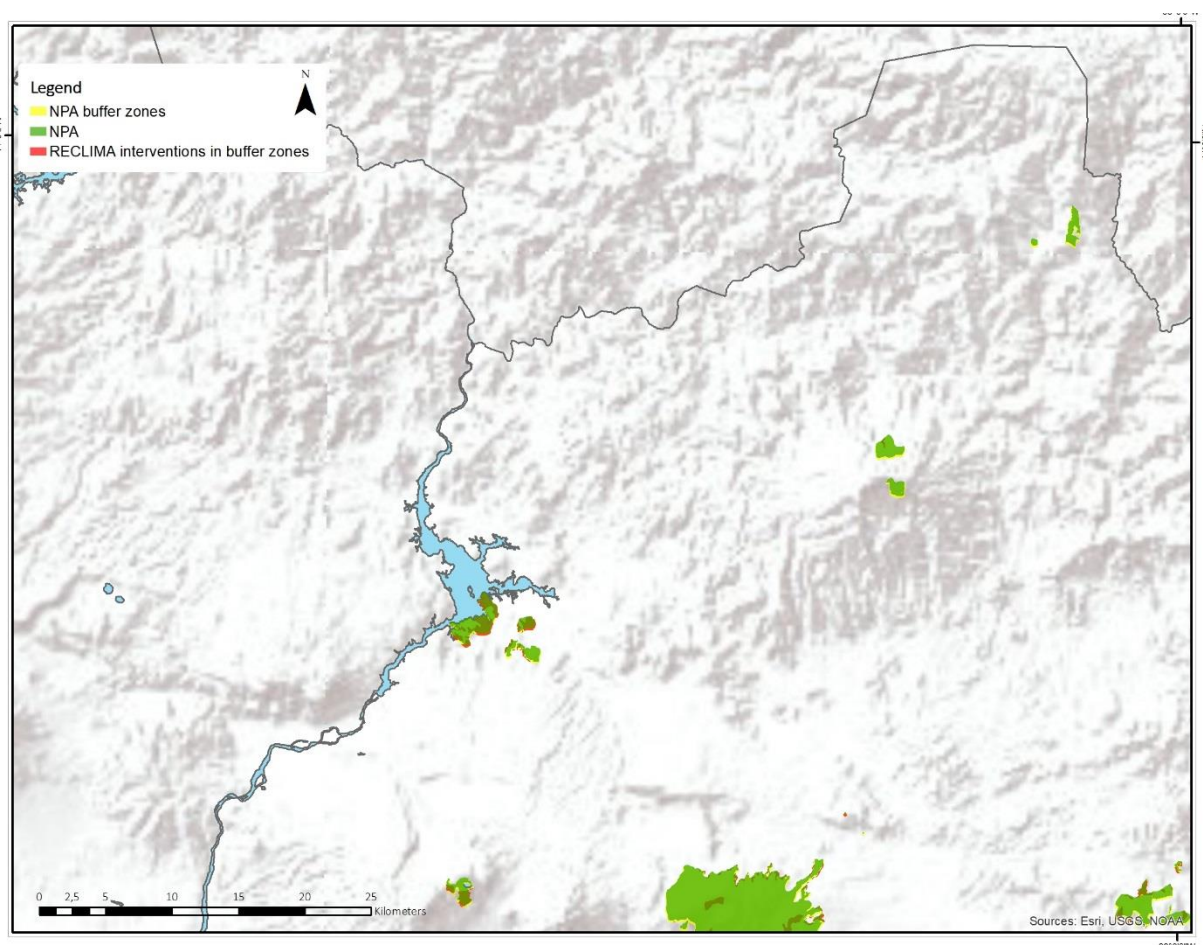


Table 26. *NPA in Lempa landscape*). Buffer zones around the NPAs present areas without tree cover which are considered as priority in the interventions by RECLIMA in buffer zones (see figure 31).

Figure 30. Natural Protected Areas in Lempa landscape

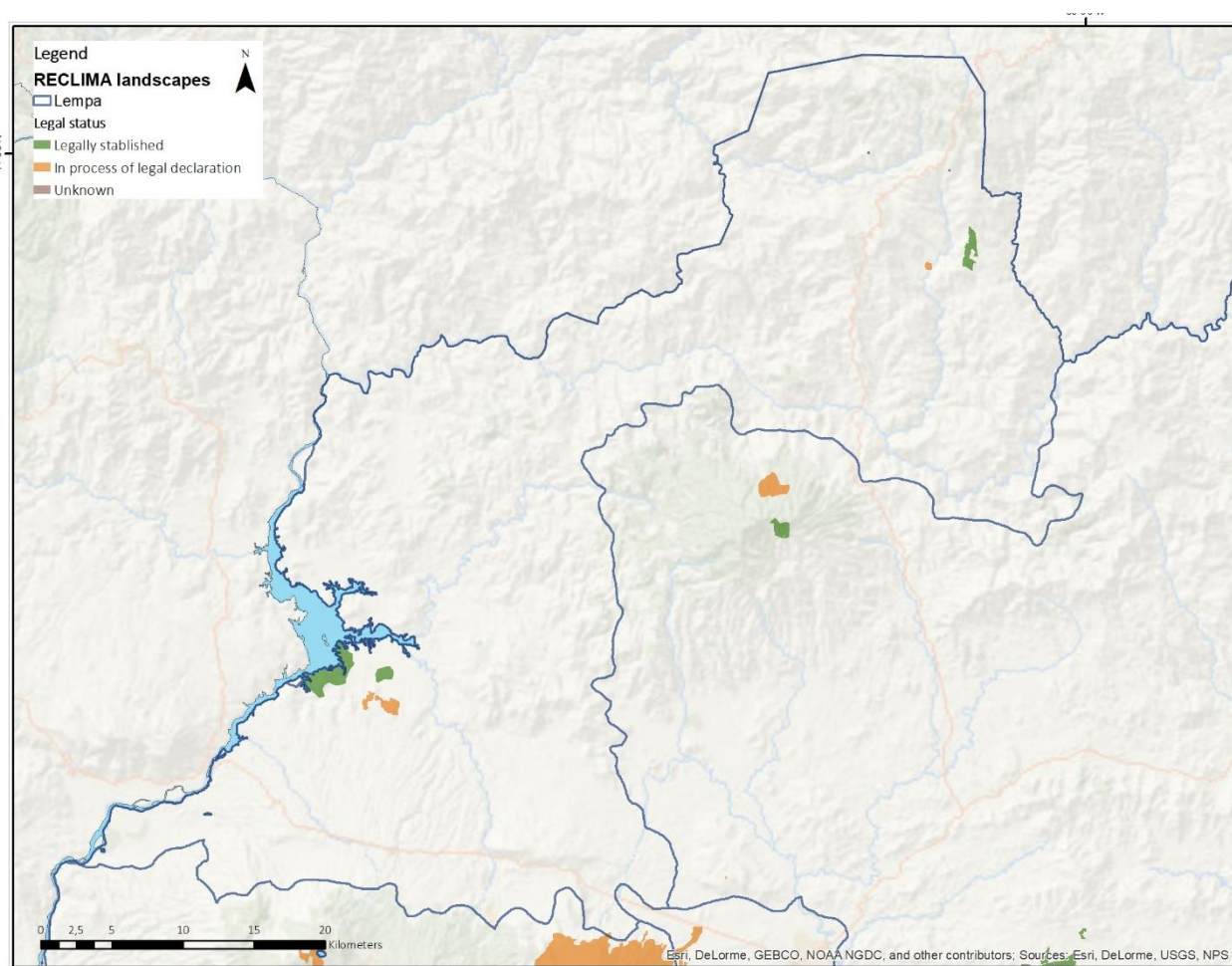


Figure 31.Buffer zones in Lempa landscape

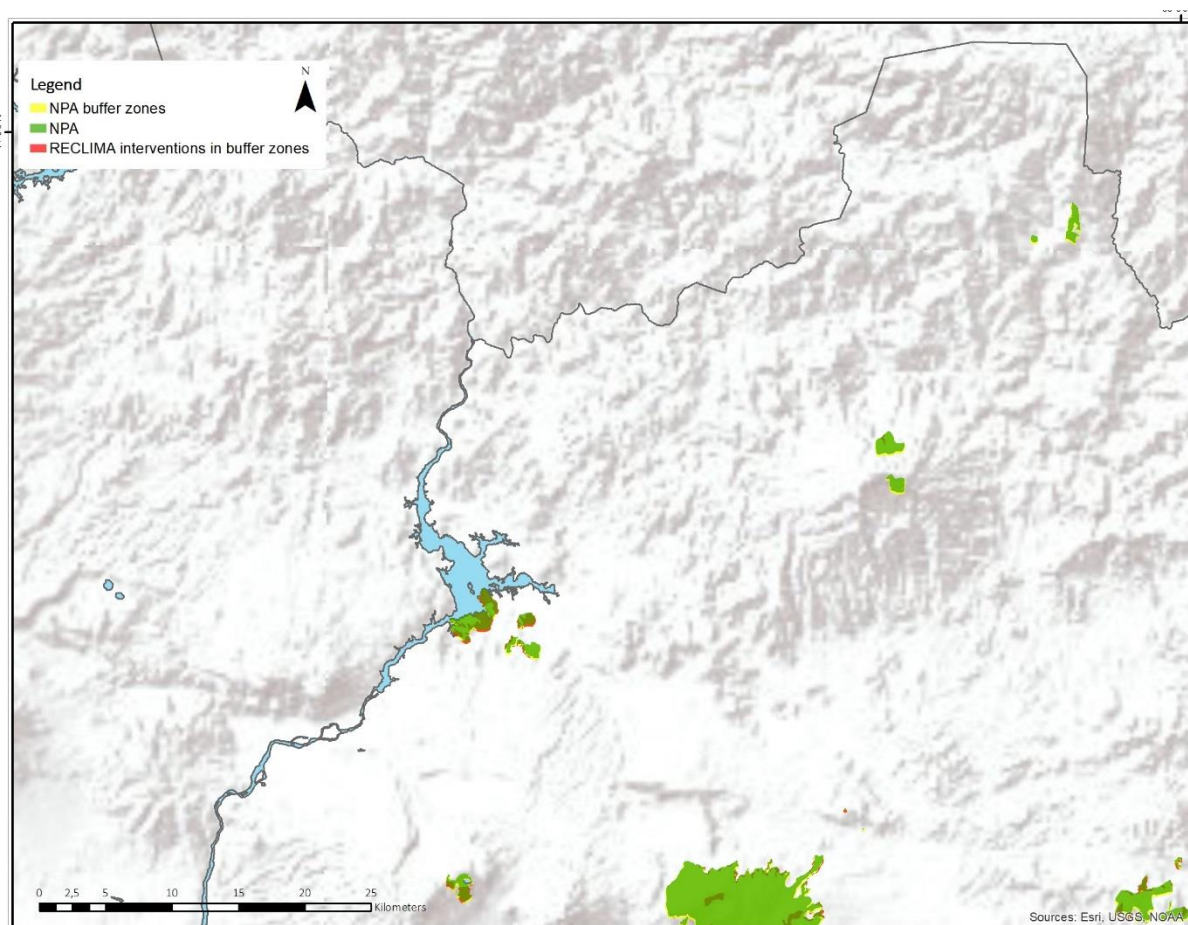


Table 26. NPA in Lempa landscape

Protected area	Legally established	Area (ha)
El Tamarindo	x	107
El Tecomatal	x	536
La Ermita	x	170
El Joco		179
Rio Sapo		23
Volcán de San Miguel		7

Coniferous forests of the northern zone bordering Honduras are the most extensive forests of this landscape (19%), remnants of mixed semi-deciduous forests (4%) and deciduous forests (4%) are also conserved and play a crucial role providing ecosystems services in this landscape. Similarly, forest remnants along the *15 de Septiembre* dam play a vital function regulating the sediment flow to this reservoir.

8.2.6.2. Livelihoods

Regarding production systems, subsistence agriculture and livestock production are the main activities. Staple grains cover 23% of landscape area, followed by pastures (12%) and mosaic of crops and pastures (6%) (see Table 27. *Landcover in Lempa landscape*).

Table 27. Landcover in Lempa landscape

Landcover (MARN, 2011)	Area (ha)	Percentage
Staple grains	37436	22,98
Coniferous forests	31034	19,05
Agricultural land with natural vegetation	26277	16,13
Pastures	20244	12,43
Mosaic of crops and pastures	9798	6,02
Low shrub vegetation	8185	5,03
Mixed semi deciduous forest	6657	4,09
Deciduous forest	6192	3,80
Annual crops with permanent crops	5806	3,56
Urban and commercial areas	2226	1,37
Spaces with sparse vegetation	1999	1,23
Lakes, lagoons and freshwater wetlands	1282	0,79
Coffee plantation	1178	0,72
Mixed forest	1128	0,69
Riparian forests	1040	0,64
Evergreen Forest	666	0,41
Sclerophyllous or thorny vegetation	650	0,40
Forest plantations	258	0,16
Sugar cane	248	0,15
Natural herbaceous vegetation	197	0,12
Marshy meadows	111	0,07
Backpacks in paddocks	107	0,07
Rockiness, lavas	79	0,05
Beaches, dunes and sand	77	0,05
Total	162876	100,00

8.2.6.3. Challenges over biodiversity and related RECLIMA actions

RECLIMA will improve the regulating service of reduction sediment flow by promoting riverine restoration (reforestation and induced forest restoration) in critical catchment areas. The project will also promote good agricultural practices including sylvo-pastoral systems, agroforestry and conservation agriculture, expanding tree cover all over the landscape, reducing erosion and providing connectivity of natural ecosystems both inside and outside the system of protected areas.

8.3. Potential impacts and mitigation measures

Table 28. *Positive impacts and particularities at landscape level* presents all positive impacts on biodiversity expected, and details particular places and actions that could be taken to foster this positive impact at landscape level.

Table 28. Positive impacts and particularities at landscape level

Positive impacts	Rio Paz -Cara Sucia	Jiboa - Jaltepeque	Jiquilisco - Tecapán	Golfo de Foseca - Jucuarán	Río Grande de San Miguel - Goascorán	Lempa
Increase in landscape connectivity due to the increase in forest cover at landscape level. Emphasis will be given riverine zones to foster connectivity among the forested ecosystems for wildlife mobility.	San Francisco, Guayapa and El Diamante rivers will be specially considered for riverine restoration to improve connectivity between El Imposible NPA and Barra de Santiago	Agroforestry and sylvo-pastoral system in buffers zones of NPA will increase connectivity	Agroforestry and sylvo-pastoral system in buffers zones of NPA will increase connectivity	Agroforestry and sylvo-pastoral system in buffers zones of NPA will increase connectivity	Recovery of tree cover in buffer zone of San Carlos NPA in a key element in this landscape improving connectivity in Cerro Cacahuatique.	Agroforestry and sylvo-pastoral system in buffers zones of NPA will increase connectivity
Increase in habitat availability for threatened and endangered species due to decrease in edge effect of ecosystems in NPA	Induced forest restoration and agroforestry practices will be promoted in NPA buffer zones of Barra de Santiago, Complejo El Imposible, Los Cóbano, San Francisco El Triunfo, Santa Águeda and Tahuapa primarily	Induced forest restoration and agroforestry practices will be promoted in NPA buffer zones of El Astillero, Santa Clara and Escuintla primarily	Induced forest restoration and agroforestry practices will be promoted in NPA buffer zones of Bahía de Jiquilisco, Complejo el Jocotal, Volcán de San Miguel, and Laguna La Alegría primary	Induced forest restoration and agroforestry practices will be promoted in NPA buffer zones of Laguna Olomega, San Antonio Silva, Tierra Blanca, Dación El Faro, El Caballito, El Faro Yologual and Maquigüe primarily	Induced forest restoration and agroforestry practices will be promoted in NPA buffer zones of Complejo Cacahuatique, El Socorro, El Tecomatal and San Lucas primarily	Induced forest restoration and agroforestry practices will be promoted in NPA buffer zones of El Tamarindo, El Tecomatal and La Ermita primarily
Reduction in edge effects for ecosystems in NPA by improving forest and tree cover in buffer zones (implemented according Art. 19 of the Natural Protected Areas Law). In these zones, RECLIMA will only promote the integrated pest management for the control of pests and diseases that may affect the productive models to be implemented.						

Positive impacts	Rio Paz -Cara Sucia	Jiboa - Jaltepeque	Jiquilisco -Tecapán	Golfo de Fonseca - Jucuarán	Río Grande de San Miguel - Goascorán	Lempa
Reforestation and forest restoration as well as the promotion of agroforestry systems will supply a large proportion of wood, contributing to the conservation of forest ecosystems within the landscape and decreasing illegal logging pressure on NPA	Increase in firewood availability will reduce pressure in El Imposible, Barra de Santiago and other NPA in this landscape	Increase in firewood availability will reduce pressure in Complejo Jaltepeque and other NPA in this landscape.	Increase in firewood availability will reduce pressure in Bahía de Jiquilisco, Complejo El Jocotal and other NPA in this landscape.	Increase in firewood availability will reduce pressure in Laguna Olomega and other NPA in this landscape.	Increase in firewood availability will reduce pressure in Complejo cacahuatique and other NPA in this landscape.	Increase in firewood availability will reduce pressure in El Tamarindo, El Tecomatal, La Ermita and other NPA in this landscape.
Agroforestry and silvo-pastoral systems, conservation tillage and maintenance of soil cover and integrated soil fertility management practices implemented by RECLIMA will have a positive effect increasing soils biodiversity	Local positive impacts on soil biodiversity are expected at farm level	Local positive impacts on soil biodiversity are expected at farm level	Local positive impacts on soil biodiversity are expected at farm level	Local positive impacts on soil biodiversity are expected at farm level	Local positive impacts on soil biodiversity are expected at farm level	Local positive impacts on soil biodiversity are expected at farm level
Water supply improvement due to riverine forest restoration	Riverine forest restoration in Cara Sucia, Cuilapa, Cauta, San Pedro and Paz rivers, will improve water supply to coastal wetlands favoring coastal ecosystem functioning and aquatic life	Riverine forest restoration in Jiboa, Lempa, Acomunca, San Antoio and Comapa rivers, will improve water supply to coastal wetlands favoring coastal ecosystem functioning and aquatic life	Riverine forest restoration in Lempa and Grande de San Miguel rivers, will improve water supply to coastal wetlands	Riverine forest restoration in Grande de San Miguel and Managuara rivers, will improve water supply favoring coastal ecosystem functioning	Riverine forest restoration in Grande de San Miguel, San Diego and Goascorán rivers, will improve water supply favoring ecosystem functioning and productive systems	Riverine forest restoration in Jiotique, Tamarindo, La Joya and Torola rivers, will improve water supply favoring ecosystem functioning and productive systems
Decrease in the impact of forest fires due to the not burning practice in cultivate areas that will be promoted by RECLIMA	Landscape positive impacts are expected because of a reduction in burning practices at farm level	Landscape positive impacts are expected because of a reduction in burning practices at farm level	Landscape positive impacts are expected because of a reduction in burning practices at farm level	Landscape positive impacts are expected because of a reduction in burning practices at farm level	Landscape positive impacts are expected because of a reduction in burning practices at farm level	Landscape positive impacts are expected because of a reduction in burning practices at farm level

While negative impacts of the project on biodiversity are expected to be minimum, some of could result of project activities and have been identified for all landscapes in table 29. Once the specific intervention areas are identified, an assessment of potential negative impacts will be carried out and mitigation measures defined and included in biodiversity management plans during the inception phase of the project.

Table 29. Negative impacts and mitigation measures to be implemented at farm level

Negative impacts	Likelihood ²⁴	Impact	Risk level
Biodiversity loss, due to the use of pesticides in agricultural production	Possible	Moderate	Moderate
Biodiversity loss due to increase in soil and water contamination by chemical fertilization	Possible	Moderate	Moderate
Biodiversity loss due to expansion of cultivate areas in sites with natural ecosystems remnants	Rare	Serious	Moderate
Increase in species competition due to exotic species (tree species and staple grains seeds adapted to drought)	Possible	Minor	Low
Increase in impact of forest pest and disease due to increment in forest cover	Unlikely	Moderate	Low
Increase in risk of fires due to organic matter augmentation	Likely	Moderate	High

²⁴ Almost certain: expected to occur in project plan, Likely: probably will occur in project plan, Possible: might occur in some circumstances, Unlikely: may occur at some time, Rare: only in exceptional circumstances.

9. MONITORING AND REPORTING

9.1. Definition of Sub-Activities

By design, the project is expected to have far greater environmental benefits than adverse environmental impacts. The potential adverse environmental impacts from the project are likely to be small and limited. However, it is recognized that such impacts can accrue into larger impacts if they are not identified early during the planning cycle and their mitigation measures integrated into the project planning and implementation.

Considering the activities to be implemented in each implementing site will be very similar in nature and scale across the implementation area, it is proposed that screening for potential risks is undertaken at sub-activity level. Sub-activities constitute a valid tool to identify expected impacts and mitigation and monitoring measures.

In this context, sub-activities will be identified during the inception phase. For each sub-activity, implementing sites will be identified along with activities, including capacity building/training and stakeholder engagement information specific to each site.

9.2. Environmental and Social Risk Screening of Sub-Activities

FAO's environmental and social screening checklist (Annex 5) will determine if a sub-activity will require an Environmental and Social Management Plan (ESMP). While the nature, magnitude, reversibility, and location of impacts are main elements in the screening of sub-activities, expert judgment will be a main factor in deciding whether an ESMP is required for a sub-activity or not.

For a sub-activity that requires an ESMP, the proposal must include a set of mitigation measures with monitoring and institutional arrangements to be taken during the implementation phase to correctly manage any potential adverse environmental and social impacts that may have been identified.

FAO will undertake environmental and social screening following FAO's Environmental and Social Screening Checklist. Once the implementation sites and beneficiaries are determined, a screening checklist will be completed per sub-activity and signed off by the safeguards specialist at the Project Management Unit. The results of the screening checklists will be aggregated by the safeguards specialist. This document will be sent to ESM unit in FAO for endorsement.

The screening involves:

- check the activity is permissible (as per the legal and regulatory requirements of the project);
- determine the level of environmental assessment required based on the level of expected impacts.

The E&S screening checklist will result in the following screening outcomes:

- a) determine the category for further assessment; and
- b) determine which environmental assessment instrument to be applied.

Pre-implementation safeguards documents (one per sub activity) will be prepared by the environmental and social safeguards specialist prior to the implementation of activities and sent to ESM Unit for endorsement.

The documents will outline the following information relative to each sub-activity:

- i. description of the activities to be carried out in all sites
- ii. description of each implementing site:
 - a. geography and specificities in terms of activities
 - b. Beneficiaries and stakeholders
 - c. Map of the site

- iii. Description of the stakeholder engagement process that was carried out in the inception phase and the stakeholder engagement plan to be carried during implementation
- iv. Break down of information by site about the grievance mechanism and disclosure
- v. Aggregated results of the environmental and social screening checklists per sub-activity signed off by the Safeguards Specialist in the Management Unit.
- vi. Where applicable, Environmental and Social Management Plans identifying mitigation measures, indicators, responsibilities and timeframe. The ESMP will be added to the monitoring plan to ensure safeguards performance is regularly reported upon along with stakeholder engagement monitoring per site.

9.3. Environmental and Social Risk Management

Those sub-activities where potential environmental and social risks have been identified will develop environmental and social management plans that include information on the mitigation actions, the indicators and timeframe where the completion of such mitigation actions are expected.

While the nature, magnitude, reversibility, and location of impacts are main elements in the screening of sub-activities, expert judgment will be a main factor in deciding whether an ESMP is required for a sub-activity or not.

The ESMP should include:

- Mitigation Measures: Based on the environmental and social impacts identified from the checklist, the ESMP should describe with technical details each mitigation measure, together with designs, equipment descriptions and operating procedures as appropriate.
- Monitoring: Environmental and social monitoring during the implementation of the sub-activities, in order to measure the success of the mitigation measures. Specifically, the monitoring section of the ESMP provides:
 - A specific description and technical details of monitoring measures that include the parameters to be measured, the methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions.
 - Monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and to furnish information on the progress and results of mitigation, e.g. by annual audits and surveys to monitor overall effectiveness of this ESMF.
- Institutional Arrangements: The ESMP should also provide a specific description of institutional arrangements, i.e. who is responsible for carrying out the mitigating and monitoring measures (for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting and staff training). Additionally, the ESMP should include an estimate of the costs of the measures and activities recommended so that the necessary funds are included. The mitigation and monitoring measures recommended in the ESMP should be developed in consultation with all affected groups to incorporate their concerns and views in the design of the ESMP.

Once the pre-implementation documents with ESMPs are endorsed by ESM unit in FAO, the safeguards specialist will ensure ESMPs are included and reported upon, along with stakeholder engagement in the context of the monitoring plan.

In this context, field staff will be responsible for monitoring the progress as relevant in the monitoring plan, as well as to identify any potential risks that may emerge through the implementation phase.

This information will be compiled in progress reports and templates will include a section on E&S risk management, where the above information will be reported upon.

Information from progress reports will be received by the environmental and social safeguards specialist in the project management unit (PMU) who will compile the information received in the progress reports, as well as that related to grievances to feed in a semi-annual report on Environmental and Social Safeguards Performance to be endorsed by the ESM unit in FAO.

Component 1.

POTENTIAL IMPACT	MITIGATION MEASURE
• Depletion of the water availability for the different uses, as a result of the risk systems. • Soil and water pollution by the generation of solid waste generation coming from the transformation of agricultural and forest products. • Soil and water contamination by the increase of manure coming from husbandry activities. • There can be a social impact if inequalities are produced in the delivery of inputs and resources of the project, being able to discriminate vulnerable populations (women, youth, and indigenous population).	• Control on water supply for irrigation. • Drainage favors security and comfort in water displacements. • Promote a system of participation quotas of vulnerable groups to assure access to project resources. • Strengthen associative processes and leadership promotion among women, youth, and indigenous populations to achieve a quality representativeness in project activities.
• Loss of vegetable coverage by possible expansions towards the rehabilitation and conditioning of physical infrastructure in Technology Development Center. • Bad farm planning and production that impacts on ecosystems or environmental services. • Positive impacts on biodiversity and ecosystems are foreseen by the increase of restored surface of forests and agro-forestry systems. • This action will generate social positive impact, no negative impact is foreseen, forest areas will be increased, water filtration will increase, and greater availability of water and firewood resources.	• Compensation measures, re-vegetation, planting of species of interest. • Application of environmental criteria in the formulation of farm plans. • Guarantee maintenance and survival of species planted during a determined period. • See section 8 for more details about Biodiversity Management.
• Excessive use of improved and certified seeds, at the expense of native genetic material. • Possible negative social effects when implementing the new agricultural practices, due to planting areas reduction, and the adoption of new technologies, may represent a decrease in short term performance and generate minor profitability. • Social inequalities may be generated related to the distribution of trees species when not considering the specific needs of women, men, and indigenous population.	• Assure the participation of local seed producers associations, preferably formed by indigenous population. • Carry out social and economic evaluations of the different practices and agriculture models to be implemented by the project to assure the increase of income through the production of drought resistant varieties. • Develop community assemblies to define trees species that will be used in the communities and will respond to the specific needs of women, men, and indigenous populations.
• Chemical inputs used in agricultural production can generate undesired effects in the soil physical-chemical composition; and when it deals with slope land, its transportation to water bodies through superficial runoffs may be favored. • Risks associated to the inadequate use, storage, and application of pesticides, herbicides, or other chemical inputs.	• Training and technical assistance in the Integrated Pest Management. • Adequate equipment for the safe use of pesticides. • Use of appropriate pesticides and monitoring of the use and their application in farms.

POTENTIAL IMPACT	MITIGATION MEASURE
• Possible social adverse effects at the beginning of the project due to the intensive use of agro-chemicals that may affect the health of producers. • Potential gender discrimination that limits the participation of women in the training process for the good management of pesticides.	• Application of good practices in the use, storage, and application of agro-chemicals. • Must promote the participation of women, youth, in all educational processes for the good management of agro-chemicals.
• Potential of accidents due to cleaning activities, soil preparation, planting, pruning, thinning, and harvest of forest and non-forest products. • Child labor risk in farms. • There can be a risk of hiring personnel in the communities, breaching labor standards. • Potential risk that no women, youth, and indigenous people are hired during the development of project activities.	• Training on good forest management practices and technical assistance in time and shape adequate for small producers. • Training and monitoring of child labor in farms. • Prohibition of child labor use in project activities. Alternative activities for women heads of household. • Disclose the childhood protection laws to avoid the use of child labor on project activities. • Hiring without social security and without legal fringe benefits, will be forbidden. • It will be established as a project standard, the hiring of women, young, and indigenous population within the project.
• Potential gender inequality when women are not considered as right holders in all activities developed by the project.	• The project, while developing its 3 components, must consider women as right holders, guaranteeing access to all project resources to them. • The community organization for the distribution of project inputs and materials, must guarantee the participation of women and access to these resources. • A mechanism must be established for participative monitoring, input delivery and evaluation, with a wide participation of women organizations.
• A possible social risk is the lack of technical assistance in a culturally adequate manner to tend to the specific needs of indigenous populations.	• Provide technical support in time and shape, adequate to indigenous peoples

Component 2.

POTENTIAL IMPACT	MITIGATION MEASURE
• A substantial improvement is foreseen in the management of climate threats that affect water availability. • A potential risk are the social conflicts that may be caused in areas neighboring natural reserves and water catchment.	• Timely dissemination of information • Strengthen associative processes in the communities with a wide participation of women, youth, and indigenous population, to reach a good governance of the natural resources in the area.
• It is foreseen that the effects on ecosystems and biodiversity will be reduced as a result of a greater knowledge of climate threats. • A possible inequality of gender may be generated if women and men are not equally hired for the management of climate stations.	• Continuous training for project users. • Promotion of synergies with academia. • Establish mechanisms for egalitarian hiring of men and women.
• Greater availability of germplasm banks present in ecosystems that are affected by climate threats, mainly in natural protected areas, as in the case of forest fires. • A potential social risk is that an incorrect interpretation of agro-climate information is given, generating losses in crops and social vulnerabilities related to food security among the families.	• Fulfill processes of natural protected areas declarations. • Design and update of management plans in natural protected areas. • A program for technical capacity building focused on the proper management of agro-climate information will be developed, including broad participation by the vulnerable populations.
• Substantial improvements are foreseen in animal and vegetable yield and productivity due to a better management of climate threats. • A potential social risk is the incorrect interpretation of agro-climate information, generating losses in livestock and aquaculture systems, encouraging the loss of animals, and food insecurity among the families.	• Timely dissemination of information • A program for technical capacity building focused on the proper management of agro-climate information will be developed, including broad participation by the vulnerable populations.
• The improvement of farm yields may take to a lower use of agro-chemicals.	• Timely dissemination of information
• Better pest control stemming from climate threats knowledge that favor their proliferation.	• Timely dissemination of information
• Potential social risk as a result of not hiring women and youth.	• All personnel hiring in the climate stations will be respecting what has been established by the labor laws, working schedules, and fair salaries offering equal opportunities to women and men, mainly equal salary for same work.
• Potential gender inequalities are foreseen if women and men are not hired with equal opportunities for the training programs for the interpretation of climate information.	• Mechanisms regulating hiring will be established to foster access to women and youth in the training programs for interpretation of climate information.

Component 3.

POTENTIAL IMPACT	MITIGATION MEASURE
It is expected governance processes in biosphere reserves and Ramsar sites.	Technical and financial strengthening of local committees in Ramsar sites and Biosphere Reserve.
- Managerial capacities strengthening is foreseen in natural protected areas, together with the ecosystems that are generated there. - Possible social conflicts in communities neighboring protected areas and water catchment zones.	- Fulfill processes of natural protected areas declarations. - Design and update of management plans in natural protected areas. - Standards and policies proposed will define protection actions for these resources. - Establish improvement measures of livelihoods for the inhabitants of buffer zones in protected areas and water catchment zones.
- The application of legal frameworks may promote the conservation of threatened flora and fauna species, or those endangered species. - A possible negative social impact is that the legal frameworks and public policies for the implementation of sustainable practices, for the production of food, may not be assumed responsibly by the communities.	- Periodic monitoring of the flora and fauna, threatened and endangered species. - Update of flora and fauna inventories in strategic ecosystems. - Carry out an awareness and training program to disclose the existing standards and policies for the management and conservation of natural resources. - Establish a plan of action for the compliance and implementation of these standards, with a high participation of vulnerable groups.
- The implementation of public policies may redound in the increase of public budgets for strategic ecosystems management. - A possible negative social impact may be that the legal frameworks and public policies for the implementation of sustainable practices for agricultural and livestock productions, may not be assumed responsibly by the communities.	- Design of a National Plan of Biodiversity. - Carry out an awareness and training program to disclose existing standards and policies. - Establish a plan of action for the compliance and implementation of these standards, with a high participation of vulnerable groups.
- The legal framework may be favored for the use of native seeds and their supply by indigenous organized groups. - A possible social risk is that standards for the good management and use of pesticides not be assumed by the communities and may cause adverse effects on people.	- Assure the participation of local seed producers associations, preferably formed by indigenous population. - Develop an awareness and a training program for the good use and management of pesticides according to what the law establishes - Establish a plan of action for the compliance and implementation of these standards, with a high participation of vulnerable groups.
A possible negative social effect is the little compliance and applicability of laws, generating social and gender inequalities, not hiring pregnant women, youth, and people with disabilities.	Disclosure of standards related to the labor law, national policy on women, and standards for the elimination of discrimination and violence against women.

Annex 1 : ESMF Workplan

LFM	ACTIVITY	INDICATOR	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				COST US\$	RESPONSIBILITY
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
	CAPACITY BUILDING																							
3.1	1. Capacity Building of project staff on E&S Safeguards	Training of FAO/CENTA staff on E&S Safeguards																						ESM Unit FAO
	E&S SCREENING AND ASSESSMENT																							
1.1	1. Identification of sub-activities	List of Sub-Activities																						FAO/Safeguards Specialist/ESM Unit
1.1	2. Environmental and Social screening in sub-activities	E&S Screening Checklists																						FAO/CENTA Safeguards Specialist
1.3	3. E&S Assessment and drafting of safeguards related documentation for compliance per sub-activity	Pre-implementation documents per sub-activity																						Safeguards/IP/Gender and Biodiversity Specialists/ESM unit
	MONITORING AND REPORTING																							
1.3	1. Monitoring and reporting on Safeguards Performance and Stakeholder Engagement	Project Progress reports with a section on SE& ESMP																						FAO/CENTA Safeguards Specialist and selected IPs/women to ensure participatory monitoring
		Semi-annual Compilation of E&S safeguards performance																						Safeguards Specialist/ESM unit
	STAKEHOLDER ENGAGEMENT																							
	1. Stakeholder Consultation 2	Consultation Reports																						
1.1	1.1 Municipal Characterization and Consultation Process Planning																							FAO/CENTA/MAG
1.1	1.2 Municipality level Consultations																							FAO/CENTA/MAG
1.1	1.3 Local Level Consultations																							FAO/CENTA/MAG
1.1	1.3.1 Consultations with Indigenous Peoples																							FAO/CENTA IP Specialist
1.1	1.3.2. Consultations with women																							FAO/CENTA Gender Specialist
1.1	1.4 Consultation with CENTA																							FAO/CENTA/MAG
1.1	1.5 Validation of Information																							FAO/CENTA/MAG
	2. Stakeholder Consultation 3	Consultation Reports																						
1.1	2.1 Municipal Characterization and Consultation Process Planning																							FAO/CENTA/MAG
1.1	2.2 Municipality level Consultations																							FAO/CENTA/MAG
1.1	2.3 Local Level Consultations																							FAO/CENTA/MAG
1.1	2.3.1 Consultation with Indigenous Peoples																							FAO/CENTA IP Specialist
1.1	2.3.2. Consultations with women																							FAO/CENTA Gender Specialist
1.1	2.4 Consultation with CENTA																							FAO/CENTA/MAG
1.1	2.5 Validation of Information																							FAO/CENTA/MAG
	1. Stakeholder Consultation 4	Consultation Reports																						

1.1	3.1 Municipal Characterization and Consultation Process Planning																						FAO/CENTA/MAG
1.1	3.2 Municipality level Consultations																						FAO/CENTA/MAG
1.1	3.3 Local Level Consultations																						FAO/CENTA/MAG
1.1	3.3.1 Consultation with Indigenous Peoples																						FAO/CENTA IP Specialist
1.1	3.3.2. Consultations with women																						FAO/CENTA Gender Specialist
1.1	3.4.Consultation with CENTA																						FAO/CENTA/MAG
1.1	3.5 Validation of Information																						FAO/CENTA/MAG
	TENURE																						
3.2	1. Survey to determine the type of access to land for farmers	Survey Results																					FAO/CENTA Tenure Specialist
3.2	2. Land tenure legal framework review to identify gaps to promote sustainable agricultural practices and adaptation to climate change	Review Report																					Tenure Specialist
3.2	3. Establish land tenure task force to recommend tenure solutions for sustainable agricultural practices and adaptation to climate change	Report																					FAO/ Tenure Specialist
	INDIGENOUS PEOPLES FRAMEWORK																						
1,1	1 Participatory development of a workplan with IPs	IP Workplan implemented																					Gender Specialist
1,1	2. Development of “Planes de finca” specifically with IPs HHs that include their ancestral knowledge	4,555 Planes de finca with IP HHs																					CENTA/MAG, Gender Specialist
1,1	3 Development of Farmer Field Schools with IPs focused on the rescue of ancestral knowledge on food production through the milpa system.	95 IPs Farmer Field Schools established and 2500 IPs participants																					CENTA/MAG, Gender Specialist
1,1	4. Development of resilience measures that recover indigenous practices	4,555 IPs families apply at least 2 native resilience practices																					CENTA/MAG, Gender Specialist
1,2	5. Implementation of practices for rainwater harvesting in IPs HHs	91 IPs HHs have rainwater collection systems installed and functioning																					CENTA/MAG, Gender Specialist
1,2		91 IPs HHs have access to 9 litres per household per day during dry period.																					CENTA/MAG, Gender Specialist
1,3	6. Development of a capacity building plan for extension agents on ancestral knowledge practices	130 CENTA extension agents trained in issues relevant to IPs (5% of the extension agents are IPs)																					CENTA/MAG, Gender Specialist
3,1	7. Support IPs governance in local planning and governance structures in support of adaptation and restoration	5% Indigenous people organizations participate effectively in planning and governance in support																					CENTA/MAG, Gender Specialist

		of adaptation and restoration.																						
3,3	8. Information exchange on formulation and medium-term planning of adaptation measures with Institutions, CSO and IP Organizations.	4 meetings carried out																						
1.1	9. Engagement process with IPs (linked to activities 1.3.1, 2.3.1 and 3.3.1 under stakeholder engagement above).	3 consultations with IPs																						
1.1	10. Awareness raising campaigns at local level	Awareness raising campaign (Brochures, local radios, etc)																						
1.1	11. Capacity building plan with IPs on relevant topics in the context of RECLIMA capacity building plan	Capacity building plan																						
1.1	12. Development of a participatory monitoring system with IPs for the monitoring of the implementation of the ESMPs and Stakeholder Engagement Activities (including FPIC commitments)	3 progress reports																						
1.1	13. Systematization of processes and results relevant to ancestral knowledge and work with IPs	Conclusions report																						
	BIODIVERSITY MANAGEMENT																							
1.1	1. Consultations to identify specific practices and activities on biodiversity	6 consultation reports																						
1.1	2. Participatory definition of priority areas with biodiversity importance	Report																						
1.1	3. Assessment for biodiversity characterization and definition of conservation and production practices	Report																						
1.1	4. Review plan de finca on buffer zones and/or fragile ecosystems to ensure practices are consistency with NPA Management plans	Relevant planes de Finca reviewed																						
2.1	5. Develop biodiversity indicators for RECLIMA	Biodiversity indicators																						
3.1	6. Development of a capacity building plan for extension agents on biodiversity and conservation practices to be implemented in the context of RECLIMA capacity building programme.	CENTA extension Workers trained																						
1.1	7 Capacity building in the selection of native seeds and establishment of nurseries	CENTA extension Workers trained																						
1.1	8. Support the establishment of 6 nurseries with native species	6 nurseries established																						

Annex 2: Exclusion List

The following list describes the activities that will not be supported by the project:

- Land management practices that may result in the degradation (biological or physical) of soils and water.
- Development of a large irrigation schemes.
- Activities that may increase GHG emissions significantly.
- Activities that may result in any changes to existing tenure rights.
- The project will not decrease the biodiversity, or alter the ecosystem functionality or use alien species.
- The project will not:
 - introduce crops and varieties previously not grown.
 - involve the importing or transfer of seeds.
 - supply or use modern biotechnologies or their products in crop production.
- The project will not result in the direct supply or use of pesticides that may cause of adverse effects to health and/or environment, and result in an increased use of pesticides; or result in violations of the Code of Conduct of pesticides.
 - Pesticides will not be used in buffer areas or in fragile ecosystems
- The project will never (permanently or temporarily) remove people from their homes or means of production/livelihood or restrict their access to their means of livelihood.
- The activities related with this project will not risk overlooking existing gender inequalities in terms of men's and women's participation in decision making and/or their differential access to productive resources, services and markets.
- Project activities will not affect the territories, livelihoods, knowledge, social fabric, traditions, governance systems, and culture or heritage (physical and non-physical or intangible) inside and/or outside the project area, of indigenous people.
- Project activities will not be located in an areas where cultural resources exist.

Annex 3: Consultations with Stakeholders

In the framework of the program for "Restoration of degraded land through comprehensive landscape management to build climate change resilience in municipalities within the dry corridor in El Salvador", a process for stakeholder consultation was designed to gather inputs for the project.

Primary and secondary information was collected from 78 of the 114 priority municipalities, which provided a socio-economic, productive, environmental and livelihoods profile for families living in the municipalities where the intervention will be undertaken. This process included a phase of consultations and workshops with local stakeholders, non-governmental organizations, municipal or community commonwealths, departmental governor's offices, the National Center for Agriculture and Forest Technology (CENTA), and producers cooperatives and associations who aided in designing the proposal based on local needs.

Objectives

- Obtain primary and secondary information to develop a socio-economic, productive, environmental and livelihoods profile for households in the 114 priority municipalities.
- Identify and characterize the different stakeholders present in the territory and their local-level interconnections.

Stages

The consultation process was structured in five (5) stages. The general approach for each of the stages is described below.

- **Stage 1:** Community Characterization and Consultation Planning. This stage included a characterization profile of the municipalities, according to the objectives for program design and based on identified priority criteria. The criteria include: drought hazards, critical ecosystems for restoration, productive potential, land use/conflict, water catchment, Scenario A2 by 2100 (projected mean annual temperature increase), poverty, malnutrition, and hunger. This information was used to build the Consultation Plan, which included primary and secondary information sources, locations, schedules, representatives, and participants for the consultations.
- **Stage 2:** Direct visits to municipal governments to update information and gather documents for analysis and support for the proposal.
- **Stage 3:** Workshops with local stakeholders, including the actors present in the territories as municipal or community commonwealth representatives, NGOs, government and non-governmental institutions, churches, community groups, water administration boards, community development associations, cooperatives, producers' associations, and women's groups and youth groups.
- **Stage 4:** Workshops with the National Center for Agriculture and Forest Technology (CENTA) to identify the institutional approach with regard to technology transfer toward producers, and to identify the needs for institutional strengthening.
- **Stage 5:** Dissemination of results and validation of the components. This was performed with authorities designated by the Ministry of Agriculture and Livestock (MAG), Ministry of the Environment and Natural Resources (MARN), CENTA, and the Ministry of Foreign Affairs, all of whom are members of the Technical Steering Committee.

Establishment of the lead process team

According to the information requirements to design the program and its components, a team was formed with specialists in: territorial management, sustainable land and water management, institutional strengthening, disaster risk management, social and gender issues, production systems,

livelihoods, production chains, agricultural economics, landscape restoration, agricultural production, and monitoring and evaluation. For the workshops, the specialists formulated a hypothesis along with discussion questions for participants, with the objective of producing elements to underpin the proposal with information from primary sources. The consultation process defined two levels: a) authorities from the institutions noted above, and b) local level.

Presentation to authorities

The first activity was the presentation to the Ministry of the Interior and Territorial Development, which included the Vice-Minister of the Interior, 10 departmental governors and two vice-governors. The proposed program was presented at this meeting, and a formal request was made for support from the departmental governors to aid in convening officials and authorities for the consultation processes. A second activity included direct meetings with governors, mayors, association managers, community commonwealths, and representatives from Community Development Councils (ADESCOs), officials from governmental and non-governmental institutions, producers, and organizations implementing projects in the intervention areas, all of whom helped to identify stakeholders that should be invited to the consultation workshops.

Consultation workshop with local stakeholders

Four workshops were held: one each in Morazán, San Miguel, and Usulután, convened by the departmental governors with support from FAO, through its Territorial Management Specialist. The stakeholders (or their representatives) requested in each municipality include:

- Mayors
- Environmental Units
- Gender Units
- Social Outreach Units
- National Center for Agriculture and Forest Technology (CENTA)
- Ministry of Education (MINED)
- Ministry of Health (MINSAL)
- Salvadoran Institute for the Development of Women (Instituto Salvadoreño de Desarrollo de la Mujer, ISDEMU)
- Ciudad Mujer
- Donor organizations
- Non-governmental organizations (NGOs)
- Civil Protection
- Agricultural Promotion Bank (Banco de Fomento Agropecuario, BFA)
- Salvadoran Institute for Agrarian Transformation (ISTA)
- Ministry of the Environment and Natural Resources
- Salvadoran Institute for Municipal Development (ISDEM)
- Local Government Associations
- Producers' Association
- Municipal/community commonwealths
- Representatives from Community Development Councils (ADESCOs) and other relevant stakeholders participating in development projects

The workshops were facilitated by FAO specialists, each from their area of interest according to the program components.

Consultation workshops with CENTA

CENTA is a strategic national and institutional partner for project implementation. CENTA is responsible for generating and validating technologies, as well as fostering technology transfer and extension nationally. To gather information from CENTA, four workshops held according to their territorial and geographic distribution. A specific didactic guideline was drafted for these workshops,

to assess the territorial intervention strategies, understand the methodology for technology transfer, identify needs for strengthening, and determine intention to support program participation.

The workshops were held at the facilities of CENTA in San Andrés (Region II), San Miguel (Region IV), San Vicente (Region III), and Ahuachapán (Region I). The workshop methodology consisted of establishing topic-based working groups to consult with Regional Supervisors, Agency Heads, Technicians, Gender Unit Officers, and producers served by CENTA.

To ensure the required profile for each topic participants in each workshop were distributed across differing working groups: Table 1 - Technology Transfer; Table 2 - Gender and Social Issues; Table 3 - Needs for Strengthening; Table 4 - Livelihoods.

Bilateral meetings

To identify needs for institutional support, confirm information and assess opportunities for joint action, the specialists held bilateral meetings with officials from:

- Ministry of Agriculture and Livestock (MAG) and its branch units on Climate Change, Agribusiness, Forestry, and Watersheds and Irrigation.
- Ministry of the Environment and Natural Resources (MARN) and its Environmental Observatory, Meteorology, and Citizen Management divisions.
- National Center for Agriculture and Forest Technology (CENTA), and its departments for Research, Transfer, Planning, and Gender.
- General Civil Protection Department

Direct visits to local governments

On the level of municipal governments, routes were planned with five Field Technicians to make direct contact with each of the mayor's offices in the 114 municipalities. On these visits an introductory note was delivered requesting information from the mayor in each municipality. The note had two objectives, to introduce the official, and later to request information from the municipality to feed into a database. The survey requested information regarding the existence of Environmental, Women's or Food Security Units, as well as any documentation such as Strategic Plans, Disaster Risk Management Plans, other types of documents, and information on the participation of the municipal government in plans and projects with other stakeholders.

Consultation process results

• with authorities

- Greater awareness on the impact of climate change in the dry corridor in El Salvador.
- Greater knowledge on the importance of improving resilience.
- Commitment to support and facilitate processes for program implementation (if approved)

• with local governments

- Updating contacts and information from 78 municipal governments
- Establishing direct contacts with:
 - Six Departmental Councils of Mayors
 - Three associations of municipal governments: Inter-Municipal Association of Jiquilisco Bay (Asociación Intermunicipal de la Bahía de Jiquilisco, ASIBAHIA), Inter-Municipal Association of the Tecapa Chinameca Range (Asociación Intermunicipal Sierra Tecapa Chinameca, ASITECHI), and the Gulf of Fonseca Watersheds Association (Asociación de Cuencas del Golfo de Fonseca, ACUGOLFO).
 - Two micro-regions: The Manantiales del Norte de San Miguel Micro-Region (MANORSAN) and the Cacahuatique Sur Micro-Region (Mic Sur).

- Ninety-two (92) documents (physical and digital) from the municipal governments visited and other institutions identified in the field visits. The most relevant documents include:
 - Strategic plans
 - Municipal territorial development plans
 - Rainy season plans
 - Municipal ordinances
 - Indigenous ordinances
 - Civil protection plans
 - Community Development Council (ADESCO) lists
 - Municipal description
 - Water security plan
 - Yearly Operations Plan (YOP)
 - Risk management plans
 - Sanitation emergency plan
 - Municipal environmental policy
 - Municipal women's policy
 - Participatory Rural Assessment
 - Participatory Strategic Plan (PSP)
 - Projects in alliance with institutions
 - Food security and nutrition unit
 - Manantiales de Norte Strategic Plan (MANORSAM)
 - Plan for the Prevention of Violence against Women, 2017
 - Ordinance on solid waste management
 - Gender-based violence situational assessment
 - List of community associations and water administration boards
 - Ordinance on food security and nutrition
 - Municipal youth policy
 - Regulatory ordinance for Community Development Associations
 - Policy manuals, plans, and training programs, 2012
 - Operations plans for municipal environmental units
 - Intervention project in the San Miguel Rio Grande River Basin, MAG-KOIKA. Yearly Work Plan for the local municipal committee on the rights of children and adolescents, 2017

- **From departmental participatory workshops and with CENTA**

- **Participatory workshop in Morazán**

The workshop was held on April 4, 2017 at the Governor's Office in San Francisco Gotera.

Authorities, mayors and municipal representatives	Other institutions present in the municipality	Total participants
– Departmental Governor – El Rosario – Yamabal – San Carlos – Jocoro – Gualococti – Jocoaitique – San Francisco Gotera – Sensembra – San Simón – Delicias de Concepción	– CENTA San Francisco Gotera – General Civil Protection Department (DGPC) – Integrated Basic Health System (SIBASI) – Salvadoran Association for Health Promotion (Asociación Salvadoreña Promotora de la Salud, ASPSP)	– 36 men >24 years old – 12 women >24 years old – One young man < 24 years old

– San Carlos – Chilanga – Guatajiagua – San Isidro – Women's Units from Meanguera, Guatajiagua, Sensembra and Osicala	– Local Development Association (Asociación de Desarrollo Local de Morazán, ADEL) – Agricultural Promotion Bank (Banco de Fomento Agropecuario, BFA) – Ministry of the Interior and Territorial Development (MINGOBT) – Ciudad Mujer – Segundo Montes Foundation	
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○ **Participatory workshop in Usulután**

The workshop was held on April 5, 2017 at the Governor's Office in Usulután

Authorities, mayors and municipal representatives	Other institutions present in the municipality	Total participants
– Departmental Governor and Vice-Governor – Santiago de María – Estanzuelas – Santa Elena – Puerto Parada – Usulután	– CENTA Usulután, Jiquilisco and Santa Elena – Salvadoran Institute for the Development of Women (Instituto Salvadoreño de Desarrollo de la Mujer, ISDEMU) – MINGOBT – Asociación MANGLE – Save the Children – Departmental Council of Mayors (CDA) of Usulután	– 9 men >24 years old – 12 women >24 years old – One young woman < 24 years old

○ **Participatory workshop in La Unión**

The workshop was held on April 20, 2017 at the Governor's Office of La Unión.

Authorities, mayors and municipal representatives	Other institutions present in the municipality	Total participants
– Departmental Governor – Jucuayquin – La Unión – Poloros – Conchagua – Concepción de Oriente – Lislique – El Carmen – Anamorós – San Alejo – Nueva Esparta	– CENTA – Cooperative Association of Producers (Asociación Cooperativa de Productores, ACOPASO-AGES) – Cooperative Association of Young Producers of Conchagua (Asociación Cooperativa de Jóvenes Productores Conchagua, ACOPROJOVENES Conchagua)	– 22 men >24 years old – 10 women >24 years old – Three young men < 24 years old – Two young women < 24 years old

	– ACOPROJOVENES La Unión – DGPC – ISDEMU La Unión – Ministry of Education (MINED) La Unión – BFA – PROMESA (community development NGO)	
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○ **Participatory workshop in San Miguel**

The workshop was held on April 21, 2017, at the Governor's Office in San Miguel

Authorities, mayors and municipal representatives	Other institutions present in the municipality	Total participants
– Departmental Governor and Vice-Governor – Uluazapa – Ciudad Barrios – Chirilagua – Sesori – San Rafael Oriente – San Miguel – Chapeltique – Chinameca	– ISDEMU San Miguel – Salvadoran Institute for Agrarian Transformation (ISTA) – Chinameca Producers' Group (Grupo de Productores de Chinameca, GATCHA) – SIBASI San Miguel – DGFCR/MAG/San Miguel – DGPC Moncagua – ISDEM – DGPC – MINED San Miguel – BFA San Miguel – DGPC Chapeltique – Ciudad Mujer	– 24 men >24 years old – 18 women >24 years old – One young man < 24 years old – One young woman < 24 years old

○ **Participatory workshop with CENTA, Region II**

The workshop was held on April 27, 2017, at CENTA "San Andrés".

Authorities representing CENTA	Producers	Total participants
– Regional supervisor – 10 technicians and one agency head from: – Quezaltepeque – San Martín – San Juan Opico – Chalatenango – Zapotitán – La Libertad – Nueva Concepción – Puerto de la Libertad – Gender Unit	– Puerto de la Libertad – Chiltiupán – San Juan Opico – Tepecoyo – Zapotitán – Associations and cooperatives: Asociación Apopa, Cooperativa Santa Fe	– 26 men >24 years old – 8 women >24 years old – One young man < 24 years old

○ **Participatory workshop with CENTA, Region IV**

The workshop was held on May 03, 2017, at CENTA "San Miguel".

Authorities representing CENTA	Producers	Total participants
– Regional supervisor - Seven technicians, eight agency heads: – Sesori – Nueva Esparta – La Cañada – San Miguel – San Francisco Gotera – Nueva Guadalupe – One gender representative	Producers from the areas of: – Sesori – Nueva Esparta – El Triunfo – San Miguel: Casa Mota, Cantora, Caserío El Consuelo, La Finquita, – San Buenaventura – Chinameca	– 15 men >24 years old – 8 women >24 years old – One young man < 24 years old

○ **Participatory workshop with CENTA, Region III**

The workshop was held on May 04, 2017, at CENTA "San Vicente".

Authorities representing CENTA	Producers	Total participants
– Regional supervisor - Seven technicians, eight agency heads: 15 technicians and three agency heads from: – San Vicente – Cojutepeque – San Luis Talpa – Tecoluca – San Cruz Porrillo – San Pedro Nonualco – Verapaz – Gualococti	Producers from the areas of: – Candelaria – San Esteban Catarina: Llano la Hacienda San Isidro – San Pedro Masahuat – El Carmen – Tecoluca: Llano Grande – San Pedro Nonualco – Verapaz – San Vicente: Agua Zarca – Tejutepeque – Apastepeque: Cantón El Guayabo. – Environmental Committee of Cabañas (Comité Ambiental Cabañas)	– 27 men >24 years old – 11 women >24 years old

○ **Participatory workshop with CENTA, Region I**

The workshop was held on May 05, 2017, at CENTA "San Ahuachapán".

Authorities representing CENTA	Producers	Total participants
– Regional supervisor 16 technicians and three agency heads from: – Atiquizaya	Producers from the areas of: – Atiquizaya: San Lorenzo – Santa Ana: Candelaria de la Frontera	– 30 men >24 years old – 6 women >24 years old

– Texistepeque – Tacuba – Metapán – Cara Sucia: El Peñón – Ahuachapán – Sonsonate – Candelaria de la Frontera – Chalchuapa	– Ahuachapán – Sonsonate – Texistepeque – Tacuba	
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○ **Specialists team**

Primary information to complement/confirm the secondary information that produced:

- Social, economic, productive, environmental, and livelihoods assessments from the 114 priority municipalities
- Maps on land use, soils, water, poverty, and CENTA extension agencies
- Identification of territorial structures and their interrelations
- Identification of partners for implementation
- Identification of opportunities for improvement to support the technical and financial feasibility of the proposal
- Definition of institutional strengthening programs
- Demands for program goods and services

Proposals for program implementation in four components:

- Component 1: Sustainable land management, ecosystem and landscape restoration, and sustainable agriculture practices to build household resilience to climate change.
- Component 2: Improved generation and use of climate information for decision-making by producers, extensionists, municipalities and other stakeholders/local development agents.
- Component 3: Development and harmonization of policies, plans, and programs for sustainable land and landscape management
- Component 4: Knowledge management, monitoring and evaluation of program results.

Final Considerations

The participatory workshops are a mechanism to allow for participation by key stakeholders who will be benefited by the implementation of the program, and improve knowledge on the programs and services that the national government promotes through its different territorial institutions, in order to contribute to improving the standard of living for the most vulnerable populations affected by the impacts of climate variability.

As a result of the consultation phase, suggestions have been received from local government representatives, branch authorities, government institutions, non-governmental organizations, associations of municipalities, producers' associations and other extra-local actors. One of the main suggestions heard from all sectors is their interest in being involved directly in program management and implementation. All of the suggestions were analyzed and incorporated in some way into the final program drafting.

The information collected, provided by these stakeholder groups, is essential in establishing a constructive and pluralistic dialogue with all those involved, and generating synergy and greater opportunities for all. Some key points of the importance of these sessions/workshops include:

- Promotion of greater knowledge on public policy on climate change promoted by the Government of El Salvador.

- Presentation of a series of relevant aspects on local needs to the participants in order to gain feedback on key elements.
- Contribution to empowerment and program ownership among local actors in favor of the most vulnerable participants.
- Contribution to coordinating efforts among diverse government agencies, non-governmental groups, donors, agents for development, and beneficiary families.
- Exchange of opinions among the different stakeholder groups.
- Information on the actions to be implemented by the program, the participation of the population selected and improved participation and knowledge of accountability and transparency mechanisms.

Content of workshops with local stakeholders

TOPIC	RESPONSIBLE PARTY	CONTENT
Registration	Field team and Ministry of Interior staff	- Signing participant attendance lists
Opening remarks and workshop presentation	Governor	- Opening Remarks
Introduction to the workshop	FAO Consultant	- Brief explanation of the program to be submitted to the Green Climate Fund - Brief explanation of workshop logistics - Workshop objectives - Conceptual explanation on: 1. Sustainable land management (livelihoods, ecosystem and landscape restoration, and agro-food systems) 2. Socio-economic and gender activities 3. Institutional and organizational capacities 4. Financing mechanism and incentives 5. Environmental monitoring and information generation
Snack	Governor's assistant	- Snack
Working groups	FAO Moderator (working group coordinators)	- The format is introduced and participants divided into six working groups on separate topics: 1. Sustainable land management (livelihoods, ecosystem and landscape restoration, and agro-food systems) 2. Socio-economic and gender activities 3. Institutional and organizational capacities Legal framework, planning, etc. 4. Financing mechanism and incentives 5. Environmental monitoring and information generation
Event closure	Governor and FAO Consultant	- Closing remarks
Lunch	Provider	- Lunch is served - Event closes

Workshop methodology

Topic-based consultation groups with key informants distributed according to the program components

WORKING GROUP OBJECTIVE	WORKSHOP WITH CENTA	WORKSHOP WITH MINISTRIES, MUNICIPALITIES, NGOs
1. Sustainable land management (livelihoods, ecosystem and landscape restoration, and agro-food systems) Inquire with regard to the work of producers in the area to counteract the effects of climate change	– What? How? When? Where? Over the course of the production chain. – What is produced, where is it sold, what is sold? – Technologies used in the area for climate change adaptation. – What methodologies are used to serve beneficiaries? – What are the main needs of the institution to work in the field? – How is this linked to other initiatives? – What importance do you assign to the effects of climate change, and how do you address them? – How do you plan your activities in the field? – What is your target population? How do you engage? – Identification of intervention areas.	– Who are the main stakeholders working in the areas and what activities to they perform. – What is their perspective of work in the area for municipal development? – Knowledge of the main agro-ecosystems. – What support actions government institutions and NGOs provide to market dynamics. – Identification of the main problems produced by climate change.

WORKING GROUP OBJECTIVE	WORKSHOP WITH CENTA	WORKSHOP WITH MINISTRIES, MUNICIPALITIES, NGOs
2. Socio-economic and gender activities. Identification of socio-economic and gender problems in the municipalities in the dry corridor.	– Identify the problems – Technical assistance – Technology – Access to incentives for resources – Response capacity to adapt to climate change – Seasonal food shortages in the area: Who are the most affected? Women/men? – Access to markets: Compliance with standards. Infrastructure needs. Technical assistance needs (links: production, processing, marketing. Participation of women and men in the chain.)	– Identify the main socio-economic and gender problems. – How women and men are affected by these problems. – What actions are being undertaken by participating institutions with regard to these problems? – What are the results of the learning process (positive and negative)? – Challenges in each area. – What is the operative vision to address these challenges? – Type of organizations existing in the municipality. Who participates: women, men, youth. – What is the scope of the organizations: municipal, community commonwealths, or micro-regions? – What are the control mechanisms for these organizations? (Normative framework regulations, other). – What type of alliances are produced among organizations to respond to extreme events (drought, flooding, etc.) – Presence of indigenous population in the municipalities. – Presence of health clinics and schools. State Centers for Disaster Response. – Nutritional levels in the area. – Remittances flowing into the municipality.

WORKING GROUP OBJECTIVE	WORKSHOP WITH CENTA	WORKSHOP WITH MINISTRIES, MUNICIPALITIES, NGOs
3. Institutional and organizational capacities Needs for Strengthening – Reviewing current institutional and organizational capacities to understand their dynamics. – Identifying institutional needs to prepare a training plan.	– Identifying average academic attainment of the local extensionists through a survey. – Topics of interest for extensionist capacity-building. – Learning mechanisms or ideal methodologies (suggest institutions). Who has access to these opportunities? Men, women. – Coordination mechanisms – Knowledge sources and frequency: Where does the knowledge come from?	– What has been done? – How was this done? – Who has done it? – Identify relationships and institutional linkages. What is the strongest organization (leadership, empowerment...) in the municipality? – Identify problems in institutional relations. – Identify needs for institutional strengthening. – Visioning institutional work in the future. – Lessons learned.
4. Compensation Mechanisms for Ecosystem Services (Water, Carbon Storage, Biodiversity Conservation) Identify the principal compensation and incentive mechanisms to design a proposal for payment for environmental services.	– What has been done? When? – How was this done? – Who has done it? – Opportunities for improvement. Who should participate? – Participant satisfaction.	– Identifying existing experiences. – Lessons learned. Positive and negative aspects in implementation. – Opportunities for improvement. Challenges for the future. – Prioritizing identified elements.
5. Environmental monitoring and information generation. Investigate environmental monitoring and information generation capacities in municipalities in the dry corridor.	– What has been done? When? – What has been done (legal framework regulations, methodologies, external support, etc?) – Who has done it? – Opportunities for improvement. Who should participate?	– What has been done? When? – What has been done (legal framework regulations, methodologies, external support, etc?) – Who has done it? – Opportunities for improvement. Who should participate?

Didactic guide for CENTA workshops

General objective: Identify opportunities and limitations to enable a comprehensive approach to addressing the effects of climate change, enhancing research, technology transfer and agricultural extension to improve the resilience of households in the dry corridor.

Specific objectives

- Identify actions by local stakeholders to mitigate and/or adapt to the effects of climate change.
- Identify the main livelihoods of rural families, and strategies to maintain and improve them.
- Identify potential in the implementation areas for an income-generation strategy for local families through involvement in value chains.
- Identify strategies and methodologies to mainstream social and gender aspects in research and technology transfer.
- Identify institutional needs in preparing a capacity-building plan for extension and technology transfer processes.
- Collect input for the construction of a proposed program to address climate change.

Date, place, participants

The workshops will be held from 8 am to 1:30 pm at the dates and places below, with an estimated 32 participants per workshop. It will be delivered to 20 CENTA officials and 12 representatives from producers' groups (including 8 women and 4 men representing the producers supported by CENTA – Working Group #3):

DATE	PLACE	PARTICIPANTS
Monday, April 24	San Vicente	CENTA Region III: Regional Supervisor, Agency Heads and Extensionists
Tuesday, April 25	San Miguel	CENTA Region IV: Regional Supervisor, Agency Heads and Extensionists From MARN: Eastern regional representative
Wednesday, April 26	Ahuachapán	CENTA Region I: Regional Supervisor, Agency Heads and Extensionists From MARN: Western regional representative
Thursday, April 27	San Andres Branch	CENTA Region II: Regional Supervisor, Agency Heads and Extensionists From MARN: Para-central regional representative
Friday, April 28	San Andres Branch	CENTA Research Department representatives

Agenda

TOPIC	RESPONSIBLE PARTY	CONTENT
Registration	FAO Team	Signing participant attendance lists
Welcome	CENTA representative	Opening Remarks
Introduction to the workshop	FAO Team	Brief explanation of the program to be submitted to the Green Climate Fund Brief explanation of workshop logistics Workshop objectives
Snack	Provider	Snack

TOPIC	RESPONSIBLE PARTY	CONTENT
Working groups	FAO Team	The format is introduced and participants divided into four working groups on separate topics: 1. Technology transfer 2. Social/gender activities 3. Institutional strengthening needs 4. Livelihoods
Event closure	CENTA representative FAO Team	Closing remarks
<i>Lunch</i>	<i>Provider</i>	<i>Lunch</i> <i>Event closes</i>

Methodology

Data collection will be performed using the methodology of consultation working groups with:

- CENTA representatives: Regional Supervisors, Agency Heads and Extensionists;
- MARN regional office representatives, according to each particular topic.

The participants for each workshop will be distributed into the following working groups.

WORKING GROUPS	RESPONSIBLE PARTY
Working Group 1: Technology Transfer - Selection criteria for intervention areas Selection criteria for participating families - Main problems for operations - Transfer methodologies used - Production practices - Successful experiences to address CC	Specialist in Sustainable Land and Water Management
Working Group 2: Gender and Social Issues - Strategies and methodologies to mainstream gender aspects in research, technology transfer, and extension processes - Lessons learned - Construction of the proposal to address CC NOTE: Participation from 8 female and 4 male community leaders or producers' group representatives will be requested for this working group, along with the gender focal point for the region.	Specialist in gender and social aspects
Working Groups 3: Needs for strengthening Existence of extensionist training programs - Topics of interest for extensionist capacity-building. - Suggested learning mechanisms - Knowledge sources	Institutional Strengthening Specialist
Working Group 4: Livelihoods - Identification of main primary and secondary livelihoods - Methodological process used by CENTA to strengthen principal livelihoods - How business opportunities are identified in principal livelihoods - What CENTA does to lead these producers to the market? - Needs of actors supporting their livelihoods, and their respective roles. - Needs and difficulties for families to connect to markets.	Sustainable Livelihoods Specialist

List of Municipalities

DEPARTMENTS	MUNICIPALITIES	
Ahuachapán	Ahuachapán	San Francisco Menéndez
	Atiquizaya	San Lorenzo
	El Refugio	Tacuba
	Guaymango	Turín
	Jujutla	
Sonsonate	Acajutla	
La Paz	El Rosario	San Pedro Masahuat
	Paraíso de Osorio	San Pedro Nonualco
	San Antonio Masahuat	San Rafael Obrajuelo
	San Emigdio	Santa Maria Ostuma
	San Juan Nonualco	Santiago Nonualco
	San Juan Tepezontes	Tapalhuaca
	San Luis Talpa	Zacatecoluca
	San Miguel Tepezontes	San Luis La Herradura
San Vicente	Tecoluca	
Usulután	Alegría	San Agustín
	Berlín	San Dionisio
	California	San Francisco Javier
	Concepción Batres	Santiago de Maria
	El Triunfo	Tecapán
	Ereguayquin	Usulután
	Estanzuelas	Juacapa
	Jiquilisco	Juacuarán
	Mercedes Umaña	San Buena Ventura
	Nueva Granada	Santa Elena
	Ozatlán	
	Puerto el Triunfo	
San Miguel	Ciudad Barrios	Lolotique
	San Luis de la Reina	Moncagua
	San Gerardo	Nueva Guadalupe
	Nuevo Edén de San Juan	Quelepa
	Sesori	San Jorge
	Carolina	San Miguel
	San Antonio el Mosco	San Rafael Oriente
	Chapeltique	Uluazapa
	Chinameca	Chirilagua
	El Transito	Comacaran
La Unión	Jucuarán	Yucuaiquin
	Bolivar	San Alejo
	Conchagua	Lislique
	El Carmen	Nueva Esparta
	Intipucá	Anamorós
	La Unión	Polorós
	Meanguera del Golfo	El Sauce
	Santa Rosa de Lima	Concepción de Oriente
	Yayantique	Pasaquina
Morazán	Arambala	Meanguera

	Cacaoopera	Osicala
	Chilanga	Perquín
	Corinto	San Carlos
	Delicias de Concepción	San Fernando
	El Divisadero	San Francisco Gotera
	El Rosario	San Isidro
	Gualococti	San Simón
	Guatajiagua	Sensembra
	Joateca	Sociedad
	Jocoaitique	Torola
	Jocoro	Yamabal
	Lolotiquillo	Yoloaiquin

Model survey for local governments
LOCAL STAKEHOLDER DATA COLLECTION FORMAT

Date: _____

General Information

Institution name: _____

Representative name: _____

Position: _____ ID # (DUI): _____

Department: _____ Municipality: _____

Cantón: _____ Caserío: _____

Telephone (landline and mobile): _____

E-mail: _____

Alternate contact: _____

Position: _____

Telephone (landline and mobile): _____

E-mail: _____

Organizational fabric

Is there an existing organizational fabric in the region/municipality or community? Yes ☐ No ☐

What type of fabric?

Committees ☐

Associations ☐

Fora ☐

Technical roundtables ☐

Water administration boards ☐

Other ☐

If the answer is "others", name the three most active: _____

Gender

Departmental plans exist.....Yes ☐ No ☐

Municipal development policies.....Yes ☐ No ☐

Municipal gender policies.....Yes ☐ No ☐

Municipal ordinance to prevent gender-based violence.....Yes ☐ No ☐

Municipal ordinance to protect the environment and natural resources.....Yes ☐ No ☐

Existence of indigenous population in the community.....Yes ☐ No ☐

Existence of women's organizations in the communityYes ☐ No ☐

Existence of a gender unit at in the municipal government.....Yes ☐ No ☐

Institutions present in the community that support women's or youth groups...Yes ☐ No ☐

Awareness of indigenous groups.....Yes ☐ No ☐

Production organizations

Are you aware of any producers' organizations active in the area?.....Yes ☐ No ☐

Sectors:

Livestock ☐ Basic grains ☐ Vegetables ☐
Fruit ☐ Coffee ☐ Aquaculture/fisheries ☐

List the most active organizations and their sectors:

Environment

Have you receive any incentives for environmental protection?..... Yes ☐ No ☐

If yes, from whom?

- Municipal government ☐
- Non-governmental organization ☐
- Government ☐

What type of incentive? _____

Available documentation

List of documentation to be collected in the field

1. Short-term municipal development plan
2. Long-term municipal development plan
3. Risk management plans
4. Municipal/community assessments
5. Projects supported and underway with different institutions
6. Business plans or micro-entrepreneurial initiatives
7. NGO business plans
8. Organizational strengthening plans
9. Municipal ordinances for food security
10. Other

Observations

Respondent signature: _____

Field technician signature: _____

Photographs of regional workshops





Annex 4: FAO Guidance Document for Pest and Pesticide Management in Field Projects

This guidance document has been prepared by the FAO Plant Production and Protection Division (AGPM) and replaces a Field Programme Circular from 8/92 on Pesticides Selection and Use in Field Projects.

It provides guidance on pest management and the selection and use of pesticides in FAO projects. Its objective is to reduce reliance on pesticides through promotion of Pest Management (PM) and to avoid that pesticides procured by FAO, or on the advice of FAO, cause harm to people, animals, plants or the environment. As such, it also serves to limit reputational risk and liabilities for FAO.

The outlined rules and procedures apply to all pesticide procurement, and advice on pesticide procurement, within the framework of FAO field projects, including emergency assistance and activities implemented by subcontractors. It involves an established procedure for mandatory clearance of such projects and activities by the Deputy Director AGP, as specified below.

Background

Pesticides require special attention because they are toxic and their distribution and use should always involve managing the risks to human health and the environment. Furthermore, inappropriate use of pesticides may reduce agricultural productivity and result in pesticide residue levels that become a constraint to marketability of crops both on domestic and export markets.

Although most countries have pesticide legislation, many may still lack capacity to ensure appropriate selection, management, use and disposal of pesticides. Circumstances in developing countries often make it difficult for farmers to follow recommended practices regarding personal protection, use and cleaning of application equipment, storage of pesticides, and disposal of obsolete pesticides and empty containers.

In many cases, use of pesticides is still unnecessarily high, uneconomic and unsustainable. Available non-chemical techniques and PM approaches often can help reduce pesticide use.

The overall framework for sound pest and pesticide management is provided by the FAO/WHO International Code of Conduct on Pesticide Management²⁵ and its accompanying technical guidelines.

Pest management

The protection of plants from pests is an integral part of agriculture. The presence of pests does not automatically require control measures, as pest populations are usually under some form of natural control and actual economic damage may be insignificant. When plant protection measures are deemed necessary, available non-chemical pest management techniques should be considered with preference before a decision is taken to use pesticides, even if the cost is higher or specialist inputs are required that make use of non-chemical options more complex.

Proper comparison of pest management strategies requires a full assessment of costs that takes into account additional private costs (e.g. personal protection, storage, health effects on users) and public costs (negative effects on public health and the environment).

Where possible, pest management strategies should be based on an PM approach. Pesticides should only be supplied following a detailed assessment of the actual field situation, the nature and the impact of the pest, and an evaluation of available pest management options.

Selection and procurement of pesticides

If pesticides are deemed to be the best or only available option, then careful and informed consideration should be given to the selection of pesticide products. Factors to be taken into account

²⁵ AGPM Website: FAO/WHO International Code of Conduct on Pesticide Management (2014):
<http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/code/en/>

include efficacy and likelihood of development or presence of resistance by the target organism. Overriding importance should be given to reducing negative effects on human health and the environment.

FAO does not maintain a list of permitted or non-permitted pesticides. However, in line with the provisions of the FAO/WHO International Code of Conduct on Pesticide Management and relevant multilateral environmental agreements that include pesticides, the following list of criteria will need to be met in order for a pesticide to be considered for use in an FAO project:

1. The product should not be subject to the Stockholm Convention on Persistent Organic Pollutants. The list of pesticides concerned can be found at: <http://chm.pops.int>.
2. The product should be registered in the country of use. If specified in the registration decision, the product should be permitted for the crop-pest combination concerned.
3. Users should be able to manage the product within margins of acceptable risk. This means that FAO will not supply pesticides that fall in WHO Hazard Class 1 or GHS Class 1 and 2. Pesticides that fall in WHO Hazard Class 2 or GHS Class 3 can only be provided if less hazardous alternatives are not available and it can be demonstrated that users adhere to the necessary precautionary measures²⁶.
4. Preference should be given to products that are less hazardous, more selective and less persistent, and to application methods that are less hazardous, better targeted and requiring less pesticides. Products listed in Annex 3 of the Rotterdam Convention should for instance be avoided.

Any international procurement of pesticides must abide with the provisions of the Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. Pesticides listed in Annex III of the Convention and subject to the PIC procedure, and requirements of the Convention, can be found at the website of the Secretariat of the Rotterdam Convention:

<http://www.pic.int/Implementation/Pesticides/tabid/1359/language/en-US/Default.aspx>

Pesticide management

The following requirements apply to all pesticides that are being supplied directly by FAO and to pesticides supplied by others within the framework of FAO projects.

1. Procurement of pesticides should be preceded by a thorough risk assessment, which should lead to adequate measures to reduce health and environmental risks to acceptable levels.
2. Quantities to be provided should be based on an accurate assessment of actual needs in order to avoid over-use or accumulation of stockpiles that may become obsolete. Pesticides should not be provided as fixed components of input packages of projects, credit schemes or emergency assistance.

²⁶ The hazard classification concerns the formulated product. Formulations with a low concentration of active ingredient are less hazardous than formulations with a high concentration of the same active ingredient. The WHO Recommended Classification of Pesticides by Hazard and Guidelines to Classification (http://www.who.int/ipcs/publications/pesticides_hazard/en/) classifies technical products based on acute oral and dermal toxicity. It includes a conversion table that allows determination of the hazard class for the pesticide formulation under consideration. Towards 2008, this list will be replaced by the Globally Harmonized System of Classification and Labelling of Chemicals, which in addition to acute toxicity also takes into consideration chronic health risks and environmental risks (http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html). The term "pesticide formulation" means the combination of various ingredients designed to render the product useful and effective for the purpose claimed; the form of pesticide as purchased by users. The term "active ingredient" means the biologically active part of the pesticide.

3. Appropriate application equipment and protective gear should be provided in adequate quantities along with the pesticides, unless it is explicitly confirmed that the recommended equipment and gear is already sufficiently available.
4. Training of users may be required to ensure they are capable of handling the supplied pesticides in a proper and responsible manner.
5. Proper storage of pesticides in accordance with FAO guidelines should be ensured for all supplies.

Clearance

The following documents and activities require clearance from the respective FAO Sub- and/or Regional Coordinator and Plant Protection Officer. Review and clearance of pesticide purchase requests including treated seeds and treatment of stored agricultural products will be carried out in close collaboration with FAO HQ based Pest and Pesticide Management Group (AGPMC) (c/o Senior Officer Pesticide Risk Reduction Group (AGPMC)):

- All orders for pesticides to be procured by FAO, regardless of whether bought through Headquarters order, field project order or local purchase.
- Project documents that envisage procurement of pesticides.
- Terminal reports for projects that involved pesticide supply.

Requests for clearance should be submitted to the respective FAO Sub-/Regional Coordinator and Plant Protection Officer (focal point for pesticides and crop protection). Requests for procurement of pesticides must include a completed Request for Procurement of Pesticides (Annex I: Pesticide check list) for each pesticide.

In addition, clearance must be obtained from the respective FAO Sub-/Regional Coordinator and Plant Protection Officer for any contemplated collaboration with a pesticide company or other entity of the pesticide industry (e.g.: in designing or implementing training). This in addition to the established general procedure for OPC approval of collaboration with the private sector as described in DGB 2014/14.

Conditions to be met for purchase and use of pesticides

For the purchase and use of any pesticide product, it must be assured, that the following conditions are met:

- The product must be registered in the *target country* by the respective national authority;
- The company providing the pesticide has to declare that they are observing the **FAO/WHO International Code of Conduct on Pesticide Management**, especially its provisions on labelling ²⁷, as well as packaging and transport of pesticides;
- Individuals involved in applying the pesticide will be trained in the use of protective equipment, use of the pesticide application equipment and protection of health and the environment from exposure to pesticides;
- The protective equipment supplied to applicators complies with EC, US or appropriate internationally accepted standards;
- Suitable application equipment that permits pesticide applicators to apply the pesticide in the correct dose without causing human and environmental exposure, will be used or provided if it is not available;

²⁷ Reference to Guideline on Good labelling practice for pesticides:
<http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/label.pdf>

- All empty pesticide containers will be triple rinsed and punctured in accordance with FAO guidelines ²⁸

If pesticides are to be purchased for seed treatment (seed storage chemical or seed treatment), the following conditions must be met:

At the seed treatment facility:

- Each pesticide seed treatment product must be cleared by AGP and must be registered in *Countries concerned (importing/exporting country)* by the relevant national authority/authorities.
- The company providing the pesticide has to declare that they are observing the **FAO/WHO International Code of Conduct on Pesticide Management**, especially its provisions on labelling, as well as packaging and transport of pesticides or pesticide-treated seeds.
- Users of seeds treated with pesticides must adhere to the necessary precautionary measures described on the product labels (e.g. wearing a protective mask, goggles and gloves).
- The treatment of seeds must be done in an appropriately equipped facility that ensures full containment of the pesticides.
- Users of seed treatment equipment should be provided with suitable application equipment and instructed on calibration, use and cleaning of the equipment.
- Treated seeds must be dyed using an unusual and unpalatable color to discourage consumption.
- All packages containing treated seeds must be clearly marked "*Not for human or animal consumption*" and with the skull and crossbones symbol for poison.

At the point of use of the treated seeds:

- Those handling treated seeds should be informed that the seeds are treated with pesticides which can have toxic effects on their health, the health of others and on the environment.
- Handlers should be advised to wear clothes that fully cover their body (long sleeves, long trousers/skirt and closed shoes), and -if not available- be provided with gloves and dust masks and instructed on their use and advised to wash themselves and their clothes after handling the seed.
- Packaging from treated seeds should not be reused for any purpose.

Further guidance

Further guidance on all aspects of pesticide distribution, handling and use, is provided by the International Code of Conduct on Pesticide Management, and the Technical Guidelines that have been produced in support of the Code itself (Copies are available from the AGPMC website: <http://www.fao.org/agriculture/crops/core-themes/theme/pests/en/>).

The Plant Production and Protection Department (AGPM) and Pest and Pesticide management group/Pesticide Risk Reduction team (AGPMC) and Sub-, Regional Plant Protection Officers will be available to provide further clarification.

²⁸ Reference to Guideline on Management options of empty pesticide containers :
http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/Containers08.pdf

Annex 5. FAO Environmental and Social Screening Checklist

1: Trigger questions

	Question	YES
1	Could this project: • result in the degradation (biological or physical) of soils or undermine sustainable land management practices; or • include the development of a large irrigation scheme, dam construction, use of waste water or affect the quality of water; or • reduce the adaptive capacity to climate change or increase GHG emissions significantly; or • result in any changes to existing legitimate tenure rights²⁹ (formal, informal and customary³⁰) of individuals, communities or others to land, fishery and forest resources?	
2	Would this project be executed in or around protected areas or natural habitats, decrease the biodiversity or alter the ecosystem functionality, use alien species, or use genetic resources?	
3	Could this project: • introduce crops and varieties previously not grown, and/or; • provide seeds/planting material for cultivation, and/or; • involve the importing or transfer of seeds and or planting material for cultivation <u>or</u> research and development; • supply or use modern biotechnologies or their products in crop production, and/or • establish or manage planted forests?	
4	Would this project introduce non-native or non-locally adapted species, breeds, genotypes or other genetic material to an area or production system, or modify in any way the surrounding habitat or production system used by existing genetic resources?	
5	Could this project: • result in the direct or indirect procurement, supply or use of pesticides³¹: – on crops, livestock, aquaculture, forestry, household; or – as seed/crop treatment in field or storage; or	

²⁹ Tenure rights are rights to own, use or benefit from natural resources such as land, water bodies or forests

³⁰ Socially or traditionally recognized tenure rights that are not defined in law may still be considered to be 'legitimate tenure rights'.

³¹ Pesticide means any substance, or mixture of substances of chemical or biological ingredients intended for repelling, destroying or controlling any pest, or regulating plant growth.

	– through input supply programmes including voucher schemes; or – for small demonstration and research purposes; or – for strategic stocks (locust) and emergencies; or – causing adverse effects to health and/or environment; or • result in an increased use of pesticides in the project area as a result of production intensification; or • result in the management or disposal of pesticide waste and pesticide contaminated materials; or • result in violations of the Code of Conduct?	
6	Could this project permanently or temporarily remove people from their homes or means of production/livelihood or restrict their access to their means of livelihood?	
7	Could this project affect the working conditions or job prospects of project beneficiaries or others who may be impacted by it, or will the project directly or indirectly employ hired labour?	
8	Could this project risk overlooking existing gender discrimination or inequalities in terms of men's and women's participation in decision making and/or their differential access to productive resources, services and markets?	
9	Would this project: • have <i>indigenous peoples</i>³² living <i>outside the project area</i>³³ where activities will take place; or • have indigenous peoples living in the project area where activities will take place; or • adversely or seriously affect on indigenous peoples' rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, governance systems, and culture or heritage (<i>physical</i>³⁴ and <i>non-physical or intangible</i>³⁵) inside and/or outside the project area; or • be located in an area where cultural resources exist?	

³² FAO considers the following criteria to identify indigenous peoples: priority in time with respect to occupation and use of a specific territory; the voluntary perpetuation of cultural distinctiveness (e.g. languages, laws and institutions); self-identification; an experience of subjugation, marginalization, dispossession, exclusion or discrimination (whether or not these conditions persist).

³³ The phrase "outside the project area" should be read taking into consideration the likelihood of project activities to influence the livelihoods, land access and/or rights of Indigenous Peoples' irrespective of *physical* distance. In example: If an indigenous community is living 100 km away from a project area where fishing activities will affect the river yield which is also accessed by this community, then the user should answer "YES" to the question.

³⁴ Physical defined as movable or immovable objects, sites, structures, group of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic or other cultural significance located in urban or rural settings, ground, underground or underwater.

³⁵ Non-physical or intangible defined as "the practices, representations, expressions, knowledge and skills as well as the instruments, objects, artifacts and cultural spaces associated therewith that communities, groups, and in some cases individuals, recognize as part of their spiritual and/or cultural heritage"

Second Level Questions

SAFEGUARD 1 NATURAL RESOURCES MANAGEMENT

Question	Management of soil and land resources	No	Yes
1.1	Could this project result in the degradation (biological or physical) of soils?	LOW RISK	MODERATE RISK Demonstrate how the project applies and adheres to the principles of the World Soil Charter
1.2	Could this project undermine sustainable land management practices?	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.

	Management of water resources and small dams	No	Yes
1.3	Would this project develop an irrigation scheme that is more than 20 hectares or withdraws more than 1000 m3/day of water?	LOW RISK	MODERATE RISK Specify the following information: a) implementation of appropriate efficiency principles and options to enhance productivity, b) technically feasible water conservation measures, c) alternative water supplies, d) resource contamination mitigation or/and avoidance, e) potential impact on water users downstream, f) water use offsets and demand management options to maintain total

			demand for water resources within the available supply. g) The ICID-checklist will be included, as well as appropriate action within the project to mitigate identified potential negative impacts. h) Projects aiming at improving water efficiency <u>will carry out thorough water accounting</u> in order to avoid possible negative impacts such as waterlogging, salinity or reduction of water availability downstream.
1.4	Would this project develop an irrigation scheme that is more than 100 hectares or withdraws more than 5000 m3/day of water?	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.
1.5	Would this project aim at improving an existing irrigation scheme (without expansion)?	LOW RISK	MODERATE RISK The ICID-checklist will be included, as well as appropriate action within the project to mitigate identified potential negative impacts. Projects aiming at improving water efficiency <u>will carry out thorough water accounting</u> in order to avoid possible negative impacts such as waterlogging, salinity or reduction of water availability downstream.

1.6	Could this project affect the quality of water either by the release of pollutants or by its use, thus affecting its characteristics (such as temperature, pH, DO, TSS or any other?)	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.
1.7	Would this project include the usage of wastewater?	LOW RISK	MODERATE RISK Demonstrate how the project applies and adheres to applicable national guidelines or, if not available, the WHO/FAO/UNEP Guidelines on Safe Usage of Waste Water in Agriculture
1.8	Would this project involve the construction or financing of a dam that is more than 15 m. in height?	LOW RISK	CANNOT PROCEED Please contact the ESM unit for further guidance.
1.9	Would this project involve the construction or financing of a dam that is more than 5 m. in height?	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.

	Tenure	No	Yes
1.10	Could this project result in a negative change to existing legitimate tenure rights?	MODERATE RISK Demonstrate how the project applies and adheres to the principles/framework of the Voluntary Guidelines on the Responsible	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.

		Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)	
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	Climate		No	Yes
1.11	Could this project result in a reduction of the adaptive capacity to climate change for any stakeholders in the project area?		LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.
1.12	Could this project result in a reduction of resilience against extreme weather events?		LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.
1.13	Could this project result in a net increase of GHG emissions beyond those expected from increased production?		LOW RISK	PROCEED TO NEXT Q
	1.13.1	Is the expected increase below the level specified by FAO guidance or national policy/law (whichever is more stringent)?	HIGH RISK A full environmental and social impact assessment is required.	LOW RISK

			Please contact the ESM unit for further guidance.	
	1.13.2	Is the expected increase above the level specified by FAO guidance or national policy/law (whichever is more stringent)?	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.

SAFEGUARD 2 BIODIVERSITY, ECOSYSTEMS AND NATURAL HABITATS

	Protected areas, buffer zones or natural habitats	No	Yes
2.1	Would this project be implemented within a legally designated protected area or its buffer zone?	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.

	Biodiversity Conservation	No	Yes
2.2	Would this project change a natural ecosystem to an agricultural/aquacultural/forestry production unit with a reduced diversity of flora and fauna?	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.
2.3	Could this project increase the current impact on the surrounding environment for example by using more water, chemicals or machinery than previously?	LOW RISK	MODERATE RISK Demonstrate in the project document what measures will be taken to minimize adverse impacts on the environment and ensure that

			implementation of these measures is reported in the risk log during progress reports.
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	Use of alien species	No	Yes
2.4	Would this project use an alien species which has exhibited an <i>invasive</i> ³⁶ behavior in the country or in other parts of the world or a species with unknown behavior?	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.

	Access and benefit sharing for genetic resources	No	Yes
2.5	Would this project involve access to genetic resources for their utilization and/or access to traditional knowledge associated with genetic resources that is held by indigenous, local communities and/or farmers?	LOW RISK	MODERATE RISK Ensure that the following issues are considered and appropriate action is taken. The issues identified and the action taken to address them must be included in the project document and reported on in progress reports. For plant genetic resources for food and agriculture (PGRFA) falling under the Multilateral System of Access and Benefit-sharing (MLS) of the International Treaty on Plant Genetic Resources for Food and Agriculture (Treaty), ensure that Standard Material Transfer Agreement (SMTA) has been signed and comply with SMTA provisions.

³⁶ An invasive alien species is defined by the Convention on Biological Diversity as “an alien species whose introduction and/or spread threaten biological diversity” See <https://www.cbd.int/invasive/terms.shtml>

			For genetic resources, other than PGRFA falling under the MLS of the Treaty: 1. Ensure that, subject to domestic access and benefit-sharing legislation or other regulatory requirements, prior informed consent has been granted by the country providing the genetic resources that is the country of origin of the resources or that has acquired the resources in accordance with the Convention on Biological Diversity, unless otherwise determined by that country; and 2. Ensure that benefits arising from the utilization of the genetic resources as well as subsequent applications and commercialization are shared in a fair and equitable way with the country providing the genetic resources that is the country of origin of the resources or that has acquired the resources in accordance with the Convention on Biological Diversity; and 3. Ensure that, in accordance with domestic law, prior informed consent or approval and involvements of indigenous and local communities is obtained for access to genetic resources where the indigenous and local communities have the established right to grant such resources; and 4. Ensure that, in accordance with domestic legislation regarding the established rights of these indigenous and local communities over the genetic resources, are shared in a fair and equitable way with the
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			communities concerned, based on mutually agreed terms. For traditional knowledge associated with genetic resources that is held by indigenous and local communities: 1. Ensure, in accordance with applicable domestic law, that knowledge is accessed with the prior and informed consent or approval and involvement of these indigenous and local communities, and that mutually agreed terms have been established; and 2. Ensure that, in accordance with domestic law, benefits arising from the utilization of traditional knowledge associated with genetic resources are shared, upon mutually agreed terms, in a fair and equitable way with indigenous and local communities holding such knowledge. Ensure that the project is aligned with the Elements to Facilitate Domestic Implementation of Access and Benefit Sharing for Different Subsectors of Genetic Resources for Food and Agriculture when it is the case
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SAFEGUARD 3 PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

	Introduce new crops and varieties	No	Yes
3.1	Would this project Introduce crops and varieties previously not grown?	LOW RISK	MODERATE RISK • Follow appropriate phytosanitary protocols in accordance with IPPC • Take measures to ensure that displaced varieties and/or crops, if any, are included in

			the national or international <i>ex situ</i> conservation programmes
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	Provision of seeds and planting materials		No	Yes
3.2	Would this project provide seeds/planting material for cultivation?		LOW RISK	PROCEED TO NEXT Q
	3.2.1	Would this project involve the importing or transfer of seeds and/or planting materials for cultivation?	LOW RISK	MODERATE RISK • Avoid undermining local seed & planting material production and supply systems through the use of seed voucher schemes, for instance • Ensure that the seeds and planting materials are from locally adapted crops and varieties that are accepted by farmers and consumers • Ensure that the seeds and planting materials are free from pests and diseases according to agreed norms, especially the IPPC • Internal clearance from AGPMG is required for all procurement of seeds and planting materials. Clearance from AGPMC is required for chemical treatment of seeds and planting materials • Clarify that the seed or planting material can be legally used in the country to which it is being imported • Clarify whether seed saving is permitted under the country's existing laws and/or

				regulations and advise the counterparts accordingly. • Ensure, according to applicable national laws and/or regulations, that farmers' rights to PGRFA and over associated traditional knowledge are respected in the access to PGRFA and the sharing of the benefits accruing from their use. Refer to ESS9: Indigenous peoples and cultural heritage.
	3.2.2	Would this project involve the importing or transfer of seeds and/or planting materials for research and development?	LOW RISK	MODERATE RISK Ensure compliance with Access and Benefit Sharing norms as stipulated in the International Treaty on Plant Genetic Resources for Food and Agriculture and the Nagoya Protocol of the Convention on Biodiversity as may be applicable. Refer also to ESS2: Biodiversity, Ecosystems and Natural Habitats.

	Modern biotechnologies and the deployment of their products in crop production	No	Yes
3.3	Would this project supply or use modern plant biotechnologies and their products?	LOW RISK	MODERATE RISK • Adhere to the Cartagena Protocol on Biosafety of the Convention on Biological Diversity to ensure the safe handling, transport and use of Living Modified Organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health.

			• Adhere to biosafety requirements in the handling of Genetically Modified Organisms (GMOs) or Living Modified Organisms (LMOs) according to national legislation³⁷ • Take measures to prevent gene flow from the introduced varieties to existing ones and/or wild relatives
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	Planted forests	No	Yes
3.4	Would this project establish or manage planted forests?	LOW RISK	MODERATE RISK • Adhere to existing national forest policies, forest programmes or equivalent strategies. • The observance of principles 9, 10, 11 and 12 of the Voluntary Guidelines on Planted Forests suffice for indigenous forests but must be read in full compliance with ESS 9- Indigenous People and Cultural Heritage. • Planners and managers must incorporate conservation of biological diversity as fundamental in their planning, management, utilization and monitoring of planted forest resources. • In order to reduce the environmental risk, incidence and impact of abiotic and biotic damaging agents and to maintain and improve planted forest health and productivity, FAO will work together with

³⁷ Food and Agriculture Organization of the United Nations. 2011. Biosafety Resource Book. Rome, <http://www.fao.org/docrep/014/i1905e/i1905e00.htm>

			stakeholders to develop and derive appropriate and efficient response options in planted forest management.
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SAFEGUARD 4 ANIMAL (LIVESTOCK AND AQUATIC) GENETIC RESOURCES FOR FOOD AND AGRICULTURE

	Introduce new species/breeds and change in the production system of locally adapted breeds		No	Yes
4.1	Would this project introduce non-native or non-locally adapted species, breeds, genotypes or other genetic material to an area or production system?		LOW RISK	PROCEED TO NEXT Q
	4.1.1	Would this project foresee an increase in production by at least 30% (due to the introduction) relative to currently available locally adapted breeds and can monitor production performance?	CANNOT PROCEED Please contact the ESM unit for further guidance.	LOW RISK
	4.1.2	Would this project introduce genetically altered organisms, e.g. through selective breeding, chromosome set manipulation, hybridization, genome editing or gene transfer and/or introduce or use experimental genetic technologies, e.g. genetic engineering and gene transfer, or the products of those technologies?	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.
4.2	Would this project introduce a non-native or non-locally adapted species or breed for the first time into a country or production system?		LOW RISK	MODERATE RISK A genetic impact assessment should be conducted prior to granting permission to import (cover the animal identification, performance recording and capacity development that allow monitoring of the

			introduced species/ breeds' productivity, health and economic sustainability over several production cycles) • http://www.fao.org/docrep/012/i0970e/i0970e00.htm • ftp://ftp.fao.org/docrep/fao/012/i0970e/i0970e03.pdf
4.3	Would this project introduce a non-native or non-locally adapted species or breed, independent whether it already exists in the country?	LOW RISK	MODERATE RISK • If the project imports or promotes species/breeds with higher performance than locally adapted ones, ensure: feed resources, health management, farm management capacity, input supply and farmer organization to allow the new species/breeds to express their genetic potential • Follow the OIE terrestrial or aquatic code to ensure the introduced species/breed does not carry different diseases than the local ones • Include a health risk assessment and farmer/veterinary capacity development in the project to ensure the introduced species/breed do not have different susceptibility to local diseases including ecto-and endo-parasites than the locally adapted/native species/breeds.
4.4	Could this project ensure there is no spread of the introduced genetic material into other production systems (i.e. indiscriminate crossbreeding with locally adapted species/breeds)?	MODERATE RISK Introduce a) animal identification and recording mechanism in the project and b) develop new or amend existing livestock policy	LOW RISK

		and National Strategy and Action Plan for AnGR	
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	Collection of wild genetic resources for farming systems	No	Yes
4.5	Would this project collect living material from the wild, e.g. for breeding, or juveniles and eggs for on-growing?	LOW RISK	MODERATE RISK An assessment of the impacts of the collection on the existing wild population must be undertaken. (Please contact the ESM unit for further guidance.) Prior to initiating the collection activities, the implementing agency for the project must have obtained clearance from the national authorities (e.g. Ministry of the Environment) as well as any permits or licenses that are required for such an undertaken. Prior to collection, a plan must be developed to prevent collected animals and their offspring from escaping back into the wild and the housing and handling facilities to ensure isolation from wild populations must be already constructed and fully operational.

	Modification of habitats	No	Yes
4.6	Could this project modify the surrounding habitat or production system used by existing genetic resources?	LOW RISK	MODERATE RISK A brief environmental impact assessment is required (Please contact the ESM unit for further guidance.) Section C of FAO Guidelines on Breeding Strategies for Sustainable Management of Animal Genetic Resources www.fao.org/docrep/012/i1103e/i1103e.pdf) should be consulted in determining the choice of animal genetic resources to be utilized.

4.7	Would this project be located in or near an internationally recognized conservation area e.g. Ramsar or World Heritage Site, or other nationally important habitat, e.g. national park or high nature value farmland?		LOW RISK	MODERATE RISK A brief environmental impact assessment is required (Please contact the ESM unit for further guidance.)
4.8	AQGR	Could this project block or create migration routes for aquatic species?	LOW RISK	MODERATE RISK An assessment is required. (Please contact the ESM unit for further guidance)
4.9		Could this project change the water quality and quantity in the project area or areas connected to it?	LOW RISK	MODERATE RISK An assessment is required. (Please contact the ESM unit for further guidance)
4.10	Could this project cause major habitat / production system changes that promote new or unknown chances for geneflow, e.g. connecting geographically distinct ecosystems or water bodies; or would it disrupt habitats or migration routes and the genetic structure of valuable or locally adapted species/stocks/breeds?		LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.
4.11	Would this project involve the intensification of production systems that leads to land- use changes (e.g. deforestation), higher nutrient inputs leading to soil or water pollution, changes of water regimes (drainage, irrigation)?		LOW RISK	MODERATE RISK A brief environmental impact assessment is required (Please contact the ESM unit for further guidance.)

SAFEGUARD 5 PEST AND PESTICIDES MANAGEMENT

Supply of pesticides by FAO		No	Yes
5.1	Would this project procure, supply and/or result in the use of pesticides on crops, livestock, aquaculture or forestry?	LOW RISK	MODERATE RISK • Preference must always be given to sustainable pest management approaches such as Integrated Pest Management (IPM), the use of ecological pest management approaches and the use of mechanical/cultural/physical or biological pest control tools in favour of synthetic chemicals; and preventive measures and monitoring, • When no viable alternative to the use of chemical pesticides exists, the selection and procurement of pesticides is subject to an internal clearance procedure http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/E_SS5_pesticide_checklist.pdf • The criteria specified in FAO's ESM Guidelines under ESS5 must be adhered to and should be included or referenced in the project document. • If large volumes (above 1,000 litres or kg) of pesticides will be supplied or used throughout the duration of the project, a Pest Management Plan must be prepared to demonstrate how IPM will be promoted to reduce reliance on pesticides, and what measures will be taken to minimize risks of pesticide use. • It must be clarified, which person(s) within (executing) involved institution/s, will be responsible and liable for the proper storage, transport, distribution and use of the products concerned in compliance with the requirements.

5.2	Would this project provide seeds or other materials treated with pesticides (in the field and/or in storage)?	LOW RISK	MODERATE RISK The use of chemical pesticides for seed treatment or storage of harvested produce is subject to an internal clearance procedure [http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/E_SS5_pesticide_checklist.pdf]. The criteria specified in FAO's ESM Guidelines under ESS5 for both pesticide supply and seed treatment must be adhered to and should be included or referenced in the project document.
5.3	Would this project provide inputs to farmers directly or through voucher schemes?	LOW RISK	MODERATE RISK • FAO projects must not be responsible for exposing people or the environment to risks from pesticides. The types and quantities of pesticides and the associated application and protective equipment that users of a voucher scheme are provided with must always comply with the conditions laid out in ESS5 and be subject to the internal clearance procedure [link]. These must be included or referenced in the project document. • Preference must always be given to sustainable pest management approaches such as Integrated Pest Management (IPM), the use of ecological pest management approaches and the use of mechanical or biological pest control tools in favour of synthetic chemicals
5.4	Could this project lead to increased use of pesticides through intensification or expansion of production?	LOW RISK	MODERATE RISK Encourage stakeholders to develop a Pest Management Plan to demonstrate how IPM will be promoted to reduce reliance on pesticides, and what measures will be taken to minimize

			risks of pesticide use. This should be part of the sustainability plan for the project to prevent or mitigate other adverse environmental and social impacts resulting from production intensification.
5.5	Would this project manage or dispose of waste pesticides, obsolete pesticides or pesticide contaminated waste materials?	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.

SAFEGUARD 6 INVOLUNTARY RESETTLEMENT AND DISPLACEMENT

		No	Yes
6.1	Would this <i>removal</i> ³⁸ be voluntary?	CANNOT PROCEED Please contact the ESM unit for further guidance.	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.

SAFEGUARD 7 DECENT WORK

		No	Yes
7.1	Could this project displace jobs? (e.g. because of sectoral restructuring or occupational shifts)	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.
7.2	Would this project operate in sectors or value chains that are dominated by subsistence producers and other vulnerable informal	LOW RISK	MODERATE RISK

³⁸ Temporary or permanent removal of people from their homes or means of production/livelihood or restrict their access to their means of livelihoods

	agricultural workers, and more generally characterized by high levels “working poverty”?		Take action to anticipate the likely risk of perpetuating poverty and inequality in socially unsustainable agriculture and food systems. Decent work and productive employment should appear among the priorities of the project or, alternatively, the project should establish synergies with specific employment and social protection programmes e.g. favouring access to some social protection scheme or form of social insurance. Specific measures and mechanisms should be introduced to empower in particular the most vulnerable /disadvantaged categories of rural workers such as small-scale producers, contributing family workers, subsistence farmers, agricultural informal wage workers, with a special attention to women and youth who are predominantly found in these employment statuses. An age- and gender-sensitive social value chain analysis or livelihoods/employment assessment is needed for large-scale projects.
7.3	Would this project operate in situations where youth work mostly as unpaid contributing family workers, lack access to decent jobs and are increasingly abandoning agriculture and rural areas?	LOW RISK	MODERATE RISK Take action to anticipate likely risk of unsustainably ageing agriculture and food systems by integrating specific measures to support youth empowerment and employment in agriculture. A youth livelihoods/employment assessment is needed. Complementary measures should be included aiming at training youth, engaging them and their associations in the value chain, facilitating their access to productive resources, credit and markets, and stimulating youth-friendly business development services.
7.4	Would this project operate in situations where major gender inequality in the labour market	LOW RISK	MODERATE RISK

	prevails? (e.g. where women tend to work predominantly as unpaid contributing family members or subsistence farmers, have lower skills and qualifications, lower productivity and wages, less representation and voice in producers' and workers' organizations, more precarious contracts and higher informality rates, etc.)		Take action to anticipate likely risk of socially unsustainable agriculture and food systems by integrating specific measures to reduce gender inequalities and promote rural women's social and economic empowerment. A specific social value chain analysis or livelihoods/employment assessment is needed for large-scale projects. Facilitation should be provided for women of all ages to access productive resources (including land), credit, markets and marketing channels, education and TVET, technology, collective action or mentorship. Provisions for maternity protection, including child care facilities, should be foreseen to favour women participation and anticipate potential negative effects on child labour, increased workloads for women, and health related risks for pregnant and breastfeeding women.
7.5	Would this project operate in areas or value chains with presence of labour migrants or that could potentially attract labour migrants?	LOW RISK	MODERATE RISK Take action to anticipate potential discrimination against migrant workers, and to ensure their rights are adequately protected, with specific attention to different groups like youth, women and men.

		No	Yes
7.6	Would this project directly employ workers?	LOW RISK	MODERATE RISK FAO projects will supposedly guarantee employees' rights as per UN/FAO standards as regards information on workers' rights, regularity of payments, etc. Decisions relating to the recruitment of project workers are supposed to follow standard UN practices and therefore

			not be made on the basis of personal characteristics unrelated to inherent job requirements. The employment of project workers will be based on the principle of equal opportunity and fair treatment, and there will be no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, etc.
7.7	Would this project involve sub-contracting?	LOW RISK	MODERATE RISK Take action to anticipate likely risk of perpetuating inequality and labour rights violations by introducing complementary measures. FAO projects involving sub-contracting should promote, to the extent possible, subcontracting to local entrepreneurs – particularly to rural women and youth – to maximize employment creation under decent working conditions. Also, FAO should monitor and eventually support contractors to fulfil the standards of performance and quality, taking into account national and international social and labour standards.

		No	Yes
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7.8	Would this project operate in a sector, area or value chain where producers and other agricultural workers are typically exposed to significant <i>occupational and safety risks</i> ³⁹ ?	LOW RISK	MODERATE RISK Take action to anticipate likely OSH risks by introducing complementary provisions on OSH within the project. Project should ensure all workers' safety and health by adopting minimum OSH measures and contributing to improve capacities and mechanisms in place for OSH in informal agriculture and related occupations. For example, by undertaking a simple health and safety risk assessment, and supporting implementation of the identified risk control measures. Awareness raising and capacity development activities on the needed gender-responsive OSH measures should be included in project design to ensure workers' safety and health, including for informal workers. Complementary measures can include measures to reduce risks and protect workers, as well as children working or playing on the farm, such as alternatives to pesticides, improved handling and storage of pesticides, etc. Specific provisions for OSH for pregnant and breastfeeding women should be introduced. FAO will undertake periodic inspections and a multistakeholder mechanism for monitoring should be put in place.
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³⁹ Major OSH risks in agriculture include: dangerous machinery and tools; hazardous chemicals; toxic or allergenic agents; carcinogenic substances or agents; parasitic diseases; transmissible animal diseases; confined spaces; ergonomic hazards; extreme temperatures; and contact with dangerous and poisonous animals, reptiles and insects.

7.9	Would this project provide or promote technologies or practices that pose occupational safety and health (OSH) risks for farmers, other rural workers or rural populations in general?	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.
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7.10	Would this project foresee that children <u>below</u> the nationally-defined minimum employment age (usually 14 or 15 years old) will be involved in project-supported activities?	LOW RISK	CANNOT PROCEED Please contact the ESM unit for further guidance.
7.11	Would this project foresee that children <u>above</u> the nationally-defined minimum employment age (usually 14 or 15 years old), but under the age of 18 will be involved in project-supported activities?	LOW RISK	MODERATE RISK Take action to anticipate likely risk of engaging young people aged 14-17 in <i>child labour</i> ⁴⁰ by changing design or introducing complementary measures. For children of 14 to 17 years, the possibility to complement education with skills-training and work is certainly important for facilitating their integration in the rural labour market. Yet, children under the age of 18 should not be engaged in work-related activities in connection with the project in a manner that is likely to be hazardous or interfere with their compulsory child's education or be harmful to the child's

⁴⁰ Child labour is defined as work that is inappropriate for a child's age, affects children's education, or is likely to harm their health, safety or morals. Child labour refers to working children below the nationally-defined minimum employment age, or children of any age engaging in hazardous work. Hazardous work is work that is likely to harm the health, safety or morals of a child. This work is dangerous or occurs under unhealthy conditions that could result in a child being killed, or injured and/or made ill as a consequence of poor health and safety standards and working arrangements. Some injuries or ill health may result in permanent disability. Countries that have ratified ILO Convention No.182 are obligated to develop National lists of hazardous child labour under Article 4.

			health, safety or morals. Where children under the age of 18 may be engaged in work-related activities in connection with the project, an appropriate risk assessment will be conducted, together with regular monitoring of health, working conditions and hours of work, in addition to the other requirement of this ESS. Specific protection measures should be undertaken to prevent any form of sexual harassment or exploitation at work place (including on the way to and from), particularly those more vulnerable, i.e. girls.
7.12	Would this project operate in a value chain where there have been reports of child labour?	LOW RISK	HIGH RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.

		No	Yes
7.13	Would this project operate in a value chain or sector where there have been reports of <i>forced labour</i> ⁴¹ ?	LOW RISK	HIGH RISK A full environmental and social impact assessment is required.

⁴¹ Forced labour is employed, consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty. It includes men, women and children in situations of debt bondage, suffering slavery-like conditions or who have been trafficked. "In many countries, agricultural work is largely informal, and legal protection of workers is weak. In South Asia, there is still evidence of bonded labour in agriculture, resulting in labour arrangements where landless workers are trapped into exploitative and coercive working conditions in exchange for a loan. The low wages associated with high interest rates make it quite difficult for whole families to escape this vicious circle. In Africa, the traditional forms of "vestiges of slavery" are still prevalent in some countries, leading to situations where whole families (adults and children, men and women) are forced to work the fields of landowners in exchange for food and housing. In Latin America, the case of workers recruited in poor areas

			Please contact the ESM unit for further guidance.
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SAFEGUARD 8 GENDER EQUALITY

		No	Yes
8.1	Could this project risk reinforcing existing gender-based discrimination, by not taking into account the specific needs and priorities of women and girls?	LOW RISK	MODERATE RISK Take action to anticipate likely risk of perpetuating or reinforcing discrimination by identifying specific needs and constraints of women and girls, and by designing measures to avoid doing harm and promote their empowerment.
8.2	Could this project risk not providing men and women with equal opportunities to: • participate in decision making, or • access to productive resources, services and markets?	LOW RISK	MODERATE RISK Take action to anticipate likely risk of unequal and socially unsustainable interventions, by identifying the constraints women and men face to participate in decision-making and to access productive resources, services and markets, and designing measures to ensure equal opportunities and benefits.

and sent to work on plantations or in logging camps has been widely documented by national inspection services and other actors.” (ILO, Profits and poverty: the economics of forced labour / International Labour Office. - Geneva: ILO, 2014)

SAFEGUARD 9 INDIGENOUS PEOPLES AND CULTURAL HERITAGE

		No	Yes
9.1	Would this project be implemented in an area where there are <i>Indigenous Peoples</i> ⁴² living <i>outside the project area</i> ⁴³ where activities will take place?	LOW RISK	PROCEED TO NEXT Q
	9.1.1 Could project activities influence Indigenous Peoples living outside the project area?	LOW RISK	MODERATE RISK A Free, Prior and Informed Consent Process is required Project activities should outline actions to address and mitigate any potential impact
9.2	Are there indigenous communities living in the project area where project activities will take place?	LOW RISK	PROCEED TO NEXT Q
	9.2.1 Is the project for Indigenous Peoples; or both, Indigenous and non-Indigenous Peoples?	LOW RISK	MODERATE RISK The Free Prior and Informed Consent process and an Indigenous Peoples' Plan is required. Please contact the OPCA unit for further guidance.
	9.2.2 Do project activities compromise Indigenous Peoples living within the project area?	LOW RISK	MODERATE RISK The Free Prior and Informed Consent process is required. Project activities should outline actions to address and mitigate any potential impact

⁴² FAO considers the following criteria to identify indigenous peoples: priority in time with respect to occupation and use of a specific territory; the voluntary perpetuation of cultural distinctiveness (e.g. languages, laws and institutions); self-identification; an experience of subjugation, marginalization, dispossession, exclusion or discrimination (whether or not these conditions persist).

⁴³ The phrase "Outside the project area" should be read taking into consideration the likelihood of project activities to influence the livelihoods, land access and/or rights of Indigenous Peoples' irrespective of *physical* distance. In example: If an indigenous community is living 300 km away from the project area and their trade will be improved as a result of that project implementation, then the user should answer "YES" to the question.

9.3	Could this project adversely or seriously affect Indigenous Peoples' rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, governance systems, and culture or heritage (<i>physical</i> ⁴⁴ and <i>non physical or intangible</i> ⁴⁵) inside or outside the project area?	LOW RISK	HIGH RISK A full environmental and social impact assessment containing the Free Prior and Informed Consent process and an Indigenous Peoples Plan is required. Please contact the ESM/OPCA unit for further guidance.
9.4	Would this project be located in an area where cultural resources exist?	LOW RISK	MODERATE RISK To preserve cultural resources (when existing in the project area) and to avoid their destruction or damage, due diligence must be undertaken to: a) verify that provisions of the normative framework, which is usually under the oversight of a national institution responsible for protection of historical and archaeological sites/intangible cultural heritage; and b) through collaboration and communication with indigenous peoples' own governance institutions/leadership, verifying the probability of the existence of sites/ intangible cultural heritage that are significant to indigenous peoples. In cases where there is a high chance of encountering physical cultural resources, the bidding documents and contract for any civil works must refer to the need to include recovery of "chance findings" in line with national procedures and rules.

⁴⁴ Physical defined as movable or immovable objects, sites, structures, group of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic or other cultural significance located in urban or rural settings, ground, underground or underwater.

⁴⁵ Non-physical or intangible defined as "the practices, representations, expressions, knowledge and skills as well as the instruments, objects, artifacts and cultural spaces associated therewith that communities, groups, and in some cases individuals, recognize as part of their spiritual and/or cultural heritage"