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Report No: PAD4308

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT PAPER

ON A

PROPOSED GRANT FROM THE GLOBAL ENVIRONMENT FACILITY (GEF)

IN THE AMOUNT OF

US\$3,561,644

TO THE

REPUBLIC OF EL SALVADOR

FOR AN

EL SALVADOR INTEGRATED LANDSCAPE MANAGEMENT AND RESTORATION PROJECT

December 17, 2021

Environment, Natural Resources and Blue Economy Global Practice
Latin America And Caribbean Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective October 27, 2021)

Currency Unit = United States Dollar (US\$)

US\$1 = US\$1

FISCAL YEAR

January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

CBD	Convention on Biological Diversity
CENTA	National Agricultural and Forestry Technology Center (<i>Centro Nacional de Tecnología Agropecuaria y Forestal</i>)
CES	Compensation for Ecosystem Services
COAL	Local Advisor Committee for Conservation Areas (<i>Comité de Asesores Locales de las Áreas de Conservación</i>)
CONASAV	National Council of Environmental Sustainability and Vulnerability (<i>Consejo Nacional de Sustentabilidad Ambiental y Vulnerabilidad</i>)
CONSAA	Salvadoran Council of the Sugar Industry (<i>Consejo Salvadoreño de la Agroindustria Azucarera</i>)
COVID-19	Coronavirus Disease of 2019
CPF	Country Partnership Framework
DA	Designated Account
DFIL	Disbursement and Financial Information Letter
DGEB	General Directorate of Ecosystems and Biodiversity (<i>Dirección General de Ecosistemas y Biodiversidad</i>)
DGFCR	General Directorate of Forestry, Watersheds and Irrigation (<i>Dirección General de Ordenamiento Forestal, Cuencas y Riego</i>)
EIBSCA	El Imposible – Barra de Santiago Conservation Area
EN-REP	National REDD+ Mitigation Based Adaptation Strategy for Restoration of Ecosystems and Landscapes (<i>Estrategia Nacional REDD+ MbA - Restauración de Ecosistemas y Paisajes</i>)
ESCP	Environmental and Social Commitment Plan
ESMF	Environmental and Social Management Framework
ESRS	Environmental and Social Review Summary
EX-ACT	EX-Ante Carbon Balance Tool
FAO	Food and Agriculture Organization
FCPF	Forest Carbon Partnership Facility
FIAES	El Salvador Environmental Investment Fund (<i>Fondo de Inversión Ambiental de El Salvador</i>)
FM	Financial Management
FONAES	El Salvador Environmental Fund (<i>Fondo Ambiental de El Salvador</i>)
FUNDAZUCAR	Sugar Foundation (Fundación del Azúcar)
FUNDEMÁS	Corporate Foundation for Social Action (<i>Fundación Empresarial para la Acción Social</i>)
GAP	Gender Action Plan
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEB	Global Environmental Benefits
GEF	Global Environment Facility
GHG	Greenhouse Gases
GIZ	German Cooperation Agency (<i>Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH</i>)

GoES	Government of El Salvador
GRM	Grievance Redress Mechanism
GRS	Grievance Redress System
Ha	Hectare
IDB	Inter-American Development Bank
IKI	International Climate Initiative
IP	Indigenous people
IRR	Internal Rate of Return
ISR	Restoration Sustainability Index (<i>Índice de Sustentabilidad de la Restauración</i>)
IUCN	International Union for the Conservation of Nature
LDN	Land Degradation Neutrality
LMP	Labor Management Plan
MAG	Ministry of Agriculture and Livestock (<i>Ministerio de Agricultura y Ganadería</i>)
MARN	Ministry of Environment and Natural Resources (<i>Ministerio de Medio Ambiente y Recursos Naturales</i>)
MbA	Mitigation Based Adaptation
M&E	Monitoring and Evaluation
MRdR	Restoration Round Table (<i>Mesa redonda de restauración</i>)
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
NPV	Net Present Value
NTFP	Non-Timber Forestry Products
OIRS	Information, Complaints and Suggestions Office (<i>Oficina de Información, Reclamos, y Sugerencias</i>)
OP	Operational Policy
PANSAL	National Action Program to Combat Desertification and Drought (<i>Programa de Acción Nacional de Lucha contra la Desertificación y Sequía</i>)
PAR	Restoration Action Plan (<i>Plan de Acción de Restauración</i>)
PDLS	Local Sustainable Development Plan (<i>Plan Local de Desarrollo Sostenible</i>)
PDO	Project Development Objective
PF	Process Framework
PIU	Project Implementation Unit
PLAS	Sustainable Exploitation Plans (<i>Plan de Aprovechamiento Sustentable</i>)
PNODT	National Plan for Territorial Planning and Development (<i>Plan Nacional de Ordenamiento y Desarrollo Territorial</i>)
POM	Project Operational Manual
PPSD	Project Procurement Strategy for Development
PREP	National Ecosystem and Landscape Restoration Program (<i>Programa Nacional de Restauración de Ecosistemas y Paisajes</i>)
RECLIMA	Upscaling Climate Resilience Measures in the Dry Corridor Agroecosystems of El Salvador
REDD+	Reductions in Emissions from Deforestation and Forest Degradation
ResCA	Resilient Central America Program
ROAM	Restoration Opportunity Assessment Methodology
SAFI	Financial Administration System (<i>Sistema de Administración Financiera Integrado</i>)
SEP	Stakeholder Engagement Plan

SDG	Sustainable Development Goals
SLM	Sustainable Landscape Management
SPRP	Strategic Preparedness and Response Program
STEP	Systematic Tracking of Exchanges in Procurement
tCO2e	Tons of Carbon Dioxide Equivalent
ToR	Terms of Reference
UACI	Procurement and Contracts Unit (<i>Unidad de Adquisiciones y Contrataciones Institucionales</i>)
UFI	Institutional Finance Unit (<i>Unidad Financiera Institucional</i>)
UMA	Municipal Environmental Unit (<i>Unidad Ambiental Municipal</i>)
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank
WRI	World Resources Institute



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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
El Salvador	El Salvador Integrated Landscape Management and Restoration	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P170854	Investment Project Financing	Substantial
GEF Focal Area		
Multi-focal area		

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
17-Dec-2021	31-Aug-2026

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The proposed Project Development Objective (PDO) is to promote integrated landscape management and restoration in targeted areas of El Salvador.



Components

Component Name	Cost (US\$, millions)
Enabling conditions for integrated landscape management	0.84
Improved management and restoration of ecosystems and degraded land	2.37
Project monitoring and coordination	0.36

Organizations

Borrower: Republic of El Salvador
 Implementing Agency: Ministry of Environment and Natural Resources (MARN)

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	3.56
Total Financing	3.56
of which IBRD/IDA	0.00
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Trust Funds	3.56
Global Environment Facility (GEF)	3.56

INSTITUTIONAL DATA

Practice Area (Lead)

Environment, Natural Resources & the Blue Economy

Contributing Practice Areas

Agriculture and Food



SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Moderate
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Moderate
6. Fiduciary	● Moderate
7. Environment and Social	● Substantial
8. Stakeholders	● Substantial
9. Other	● Substantial
10. Overall	● Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any waivers of Bank policies?

Yes No



Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank’s due diligence assessment of the Project’s potential environmental and social risks and impacts, please refer to the Project’s Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description

Section 2.03 (a). Without limitation upon the provisions of paragraph 2.02 of the Grant Agreement, the Recipient, through MARN shall, no later than thirty (30) days after the Effective Date, establish, and thereafter operate and maintain at all times during Project implementation, a Project implementation unit (“PIU”) with professional staff in adequate numbers and with terms of reference, qualifications and functions acceptable to the Bank, to perform all Project related functions including, inter alia: a Project coordinator, financial management specialist, procurement specialist, an environmental and social safeguards specialist, and agricultural land degradation and restoration specialists.

Sections and Description

Section 2.03 (d), Not later than sixty (60) days after the Signature Date of this Agreement, the Recipient shall, through MARN, establish a Technical Monitoring Committee: (i) to be in charge of reviewing the Project’s implementation, including that of the ESMF; and (ii) to meet regularly to exchange experiences among Beneficiaries



while promoting and strengthening the collaboration between the ministries and relevant stakeholders.

Conditions

Type	Financing source	Description
Effectiveness		Article IV, 4.01a: The execution and delivery of this Agreement on behalf of the Recipient have been duly authorized or ratified by all necessary governmental action.
Effectiveness		Article IV, 4.01.b: The Operational Manual referred to in Section 2.03(b) of the Annex to the Letter Agreement has been adopted by the Recipient in a manner acceptable to the Bank.



I. STRATEGIC CONTEXT

A. Country Context

1. El Salvador, the smallest country in Central America and one of the most densely populated in the world, has registered persistent low levels of growth in the past decades. With a population of 6.4 million (in addition to 1.5 million Salvadorian living outside the country) and a total land area of 21,041 square kilometers, the country is one of the world's most densely populated.¹ The Gross Domestic Product (GDP) annual growth has reached 3 percent only twice since 2000, with an average of 2.3 percent in recent years. In 2019 the GDP grew 2.3 percent, fueled by remittances, robust domestic consumption, and investment². In 2020, it contracted by 7.9 percent due to the Coronavirus Disease of 2019 (COVID 2019) and has begun recovering in 2021 (projected growth of 8 percent)³. However, public debt remains high, up to 91.8 percent of GDP in 2020, and constitutes the main vulnerability of economic performance, whereas fiscal deficits have constrained the overall competitiveness. Persistent high levels of illegal activities and gang-related violence deter private investments and slow public investments. Facing limited employment opportunities and high exposure to crime and violence, many Salvadorians have migrated from the country. By early 2020, remittances from abroad accounted for nearly one-fifth of the country's GDP⁴. Poverty has declined since 2007 but remains high: in 2019, 23 percent of the population lived below the poverty line, and 1.5 percent in extreme poverty conditions.^{5,6}

2. El Salvador's high vulnerability to natural disasters and climate change negatively affects its economy. The country is among the most affected by weather-related events and other hazards, incurring annual losses of around 2.5 percent of GDP.⁷ It also ranks second highest for risk exposure to two or more hazards, and highest for the total population at a relatively high risk of mortality. It is estimated that over 90 percent of the population live in areas considered at risk of natural hazards such as earthquakes and volcanic eruptions and climate-related impacts such as floods, droughts, and storms.⁸ Projections for the 2040-2059 period indicate there will be an increase in annual maximum 5-days rainfall by 18.75 mm, as well as in mean annual temperature by 1.64°C. The annual precipitation, on the other hand, will decrease by -65.33mm, in the same period. The most frequent natural disasters are droughts, floods, storms, earthquakes, and volcanic activity. The occurrence of extreme rainfall events threatens the food and water security and livelihoods of people living on degraded hilly lands. Also, rising temperatures are predicted to reduce the country's yields of main crops by 30 percent by 2050, mainly through recurrent drought.⁹

3. Furthermore, the consequences of COVID-19 have significantly affected the economy and people's livelihoods. By December 2021, El Salvador confirmed 121,200 cases of COVID-19 and 3797 deaths¹⁰. Due to the pandemic, the poverty rate increased by 4.6 percentage points from 2019 and 2020¹¹. The Government responded with early quarantines, movement restrictions, and severe penalties for not respecting the confinement measures. An economic reopening plan

¹ El Salvador is located in the 83rd percentile in the world in terms of population density

² International Monetary Fund (IMF). (2019). El Salvador Country Report No. 19/143.

<https://www.imf.org/en/Publications/CR/Issues/2019/05/23/El-Salvador-2019-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-46940>

³ World Bank (2021). <https://www.worldbank.org/en/country/elsalvador/overview#1>

⁴ The Heritage Foundation. (2019). 2019 Index of economic freedom. Retrieved from Heritage:

<https://www.heritage.org/index/country/elsalvador>

⁵ World Bank (2021). <https://www.worldbank.org/en/country/elsalvador/overview#1>

⁶ Extreme poverty measured as US\$1.9 a day.

⁷ MARN, 2017. Plan de Acción de Restauración 2018-2022.

⁸ World Bank (2021). Climate Change Knowledge Portal. <https://climateknowledgeportal.worldbank.org/country/el-salvador>

⁹ Vara Prasad (n.d.). Impact of Climate Change and Climate Variability on Productivity of Grain Crops.

¹⁰ WHO. (2020). El Salvador COVID-19 Statistics. Retrieved on December 15th, 2021 from:

<https://covid19.who.int/region/amro/country/sv>

¹¹ World Bank (2021). <https://thedocs.worldbank.org/en/doc/e408a7e21ba62d843bdd90dc37e61b57-0500032021/related/mpo-slv.pdf>



was issued on June 1, 2020, expecting to reactivate sectorial activity progressively. The World Bank (WB), among other international organizations, provided support to El Salvador through an Emergency Response Project under the COVID-19 Strategic Preparedness and Response Program (SPRP), with a loan of US\$20 million¹². Due to the pandemic's economic impacts, thousands of jobs have been lost, potentially promoting a rural migration in some areas as unemployed adults move to the country in search of sustenance opportunities.¹³

B. Sectoral and Institutional Context

4. El Salvador's rich and diverse natural capital is crucial to sustaining key sectors of the economy and support the livelihoods of the rural poor. Natural capital represents 10 percent of total per capita wealth, including from crop lands, pasture lands, and forests. These assets underpin important sectors of the economy, such as agriculture, forestry, and fishing, which together contributed to 16 percent of the GDP, in 2018. Agriculture alone contributed around 12 percent to the GDP, supporting the livelihoods of the rural poor through food security and employment.^{14,15,16} The forest sector, on the other hand, contributed 1.5 percent of the GDP, mainly from wood products (57 percent) and generated about 0.5 percent of the labor force, representing two percent of agriculture. The forest sector also produces goods and income for many small subsistence farmers from Non-Timber Forestry Products (NTFPs), and it is source of fuelwood for approximately 23 percent of the rural population and 3.5 percent of the urban one.¹⁷ Although not accounted in the GDP, the ecosystem services provided by forests are also critical for the viability of productive sectors and the rural livelihoods as they contribute to ensure water supply; reduce soil erosion, landslides, sedimentation, and risk of floods; enhance resilience to climate change; and conserve the habitats of some 33,871 species. Mangroves, for example, play a crucial role for coastal communities as are essential nursery habitat for fisheries and protect shorelines from storms and hurricane winds, waves, and floods.^{18,19}

5. Despite its importance, the country's natural capital is rapidly degrading due to unsustainable land use, which leads to high fragmentation of critical forest ecosystems. Currently, the country's rural landscape is composed of intricate mosaics that include forest patches, coffee farms, pasture, bushes, subsistence crops, and sugarcane, among others, while the remaining area of natural ecosystems is limited. Approximately 60 percent of the territory is used for agricultural production, and farms cover 80 percent of the land area in a diverse agriculture-forest-landscape²⁰. Although forests cover approximately 38.8 percent of the country's territory, they are young and fragmented secondary forests (58 percent) and shaded coffee (21 percent). Forests have been lost at an estimated average annual rate of 2.6 percent, equivalent to about 21,700 ha/year, which places the country as the second most deforested in Latin America; in the last five decades, the country lost 60 percent of its mangroves, passing from almost 100,000 ha to only 40,000 ha.²¹

6. Deforestation and forest degradation undermine ecosystem services, disturb local water systems, and cause severe land degradation, threatening agricultural productivity and exacerbating the country's vulnerability to climate change and food insecurity. Forest loss, underlain by rural poverty, rural land fragmentation, demographic growth, and

¹² WBG. (2020). El Salvador COVID-19 Emergency Response Project. ID: P173872.

¹³ See projects.worldbank.org/en/projects-operations/project-detail/P173872 and Annex 7 on *Impact of the COVID-19 pandemic and mitigation strategy*.

¹⁴ Calvo-Gonzalez, Oscar, and J. Humberto Lopez. 2015. *El Salvador: Building on Strengths for a New Generation*. Systematic Country Diagnostic. Washington, DC: The World Bank.

¹⁵ World Bank Group, 2018. *The Changing Wealth of Nations*. <https://openknowledge.worldbank.org/handle/10986/29001>

¹⁶ World Bank, 2021. <https://data.worldbank.org/country/el-salvador>

¹⁷ Szott, L. (2020). *El Salvador Country Forest Note*. Washington D.C. The World Bank.

¹⁸ Estrategia Nacional de Biodiversidad. <http://rcc.marn.gob.sv/xmlui/handle/123456789/47>

¹⁹ WWF. (n.d.). *Central America: El Salvador into Guatemala*. Retrieved from <https://www.worldwildlife.org/ecoregions/nt1425>

²⁰ A landscape is the aggregation of visible features of an area of land, its landforms, and how they integrate with natural or man-made features.

²¹ MARN. (2015). *Hacia la restauración y reforestación de ecosistemas y paisajes 2016-2017*.



the low opportunity cost of forests, has become a major concern since critical environmental thresholds have been reached, where the vulnerability of agricultural practices and food security are at historical limits.²² Approximately 15 percent of the country's territory is experiencing severe land degradation, a major source of vulnerability, climate-risk, and food and water insecurity. Half of the land area is considered unsuitable for food cultivation due to overuse of agrochemicals, leading to water and soil contamination as well as soil erosion; over 42 percent of landslide-prone areas and 64 percent of main water recharge areas lack tree cover; and more than half of the riparian forests associated to the main rivers have been lost.²³ Deforestation and land degradation also leads to habitat loss, the main threat to biodiversity conservation.

7. Improving the management of natural resources at the landscape level is important to enhance the country's resilience to weather-related events and for providing economic opportunities for rural economies. Healthy agriculture and forest landscapes can offset some of the impacts of climate-related disasters by enhancing the forest ecosystem's resilience to changing weather patterns, providing important safety nets for local communities to cope with climate shocks, enhancing the productivity of farming systems, and reducing damage from flooding and sea level rise, among others. In addition, forest landscapes provide key ecosystem services such as biodiversity habitat, water filtration and availability, increased food security, soil erosion control, and reduction of Greenhouse Gases (GHG) emissions. The unsustainable management of these natural assets negatively affect rural jobs and revenue generation, impacting economic growth and disproportionately affecting the rural poor and vulnerable communities. The COVID-19 pandemic precipitates deforestation and forest degradation associated to an increased internal demand for food, raw material, and commodities, often satisfied through unsustainable farming systems - by August 2020, global deforestation rates had increased 77 percent during the pandemic.

8. Sustainable natural resources management and land restoration is the joint responsibility of two ministries. The Ministry of Environment and Natural Resources (*Ministerio de Ambiente y Recursos Naturales*, MARN) is responsible for implementing the National Environmental Policy, which provides the framework for sustainable use of natural resource protection, conservation, and restoration of the environment. The Ministry of Agriculture and Livestock (*Ministerio de Agricultura y Ganadería*, MAG) administers the regulations for agriculture, irrigation, forestry, fisheries, and aquaculture. MAG implements national regulations and planning through the General Directorate of Forestry, Watersheds, and Irrigation (*Dirección General Ordenamiento Forestal, Cuencas, y Riego*, DGFCR) and provides extension and technology transfer through the National Agricultural and Forestry Technology Center (*Centro Nacional de Tecnología Agropecuaria y Forestal*, CENTA). Locally, municipalities and local governments implement projects in their territories according to Local Sustainable Development Plans (*Planes Locales de Desarrollo Sostenible*, PDLs). MARN and MAG coordinate with Non-Governmental Organizations (NGOs), international development agencies, and local stakeholders for the implementation of land restoration policies seeking to promote rural development and ecosystems' adaptation to the impacts of climate change.

9. In its efforts to address forest loss and environmental degradation, El Salvador has established an enabling a national regulatory framework to implement integrated forest landscape restoration. Various policies, plans, and programs established in El Salvador during the past two decades have identified the consolidation of forest management, conservation, and restoration as a key priority for reducing the country's vulnerability to climate change and extreme climate events. MARN and MAG coordinate implementation of (i) the 2003 National Action Program to Combat Desertification and Drought (*Programa de Acción Nacional de Lucha contra la Desertificación y Sequía*, PANSAL²⁴); (ii) the 2004 National Plan for Territorial Planning and Development (*Plan Nacional de Ordenamiento y Desarrollo Territorial*,

²² Szott, L. 2020. El Salvador Forest Country Note. The World Bank.

²³ MARN-IUCN. (2017). Strengthening the National Restoration Strategy. MARN.

²⁴ https://knowledge.unccd.int/sites/default/files/naps/el_salvador-spa2003.pdf



PNODT²⁵); (iii) the 2012 National Ecosystem and Landscape Restoration Program (*Programa Nacional de Restauración de Ecosistemas y Paisajes*, PREP²⁶) with its correspondent Restoration Action Plans (*Planes de Acción para la Restauración*, PAR)²⁷; and (iv) the 2013 National Biodiversity Strategy²⁸. PREP has provided the framework to counter land degradation and served as the basis for developing other key policy instruments such as (v) the 2015 Environmental Strategy for Adaptation and Mitigation to Climate Change in the Agriculture, Forest, Fisheries, and Aquaculture Sector (*Estrategia Ambiental de Adaptación y Mitigación al Cambio Climático del Sector Agropecuario, Forestal, Pesquero y Acuícola*²⁹); (vi) the 2017 National REDD+ Mitigation Based Adaptation Strategy for Restoration of Ecosystems and Landscapes³⁰ (*Estrategia Nacional REDD+ MbA - Restauración de Ecosistemas y Paisajes*, EN-REP^{31,32}); (vii) the 2018-2023 El Salvador Strategy for Ecosystem and Landscape Restoration³³, (viii) the 2018 Sustainable El Salvador Plan (*Plan El Salvador Sustentable*), developed by the National Council of Environmental Sustainability and Vulnerability (CONASAV)³⁴; and the 2021 National Plan to Combat Deforestation, Erosion, and Desertification³⁵. These policy instruments have been designed to contribute to achieving international commitments such as: the Convention on Biological Diversity (CBD's) Aichi Targets³⁶; the United Nations Framework Convention on Climate Change (UNFCCC's) Nationally Determined Contribution (NDC) under the Paris Agreement; and the United Nations Convention to Combat Desertification (UNCCD's) Land Degradation Neutrality (LDN) and its Action Plan.

10. The Government of El Salvador (GoES) is advancing implementation of existing policy instruments, while exploring opportunities to design fiscal policy reforms for a green economy. Implementation builds on extensive experience gained since more than two decades ago through projects supported by the Global Environment Facility (GEF) on environmental management and strategic planning; capacity building on biodiversity conservation and protected areas management; promotion of biodiversity conservation in coffee landscapes and markets for biodiversity; adaptation to climate change; and testing models for integrated management of protected areas, among others. Furthermore, in the 2014-2020 period, El Salvador implemented restoration actions in 241,662 hectares (ha) of degraded lands.³⁷ Most recent actions have been informed by in-depth participatory analysis such as (i) a comprehensive assessment of historic trends and causes of deforestation and forest degradation, carried out in preparation for the EN-REP design with support from the Forest Carbon Partnership Facility (FCPF) REDD+ Readiness Preparation Project (P124935); (ii) application of the Restoration Opportunity Assessment Methodology (ROAM³⁸) methodology to identify cost-effective options for land restoration at national scale, with support from the International Union for Conservation of Nature (IUCN) and other

²⁵ <http://extwprlegs1.fao.org/docs/pdf/els146576.pdf>

²⁶ <http://rcc.marn.gob.sv/bitstream/handle/123456789/42/Documento%20conceptual%20PREP.pdf>

²⁷ PAR are four-year roadmaps that provides technical guidance for the design of land restoration projects:

<https://cidoc.marn.gob.sv/documentos/estrategia-ambiental-de-adaptacion-y-mitigacion-al-cambio-climatico-del-sector-agropecuario-forestal-y-acuicola/>

²⁸ <http://rcc.marn.gob.sv/xmlui/handle/123456789/47>

²⁹ <https://www.transparencia.gob.sv/instituciones/mag/documents/101414/download>

³⁰ REDD+ stands for Reduction of Emissions from Deforestation and forest Degradation, the role of sustainable forest management, forest conservation, and enhancement of forest carbon stocks.

³¹ <https://cidoc.marn.gob.sv/documentos/estrategia-nacional-redd-mba-restauracion-de-ecosistemas-y-paisajes/>

³² MbA stands, in the official title in Spanish, for Mitigation Based Adaptation (in English).

³³ https://infoflr.org/sites/default/files/2020-04/ecosystems_and_landscape_restoration_strategy_-_el_salvador.pdf

³⁴ CONASAV. (2018). Plan El Salvador Sustentable. Retrieved from: <https://www.ndcs.undp.org/content/dam/LECB/docs/pubs-reports/undp-ndcsp-completa-plan-el-salvador-sustentable-2018.pdf?download>

³⁵ <https://cidoc.marn.gob.sv/documentos/plan-nacional-de-lucha-contra-la-deforestacion-erosion-y-desertificacion/>

³⁶ The Strategic Plan for Biodiversity 2011-2020 is a ten-year framework for action by all countries and stakeholders to save biodiversity and enhance its benefits for people and is comprised of a shared vision, a mission, strategic goals and 20 ambitious yet achievable targets, collectively known as the Aichi Targets.

³⁷ IUCN, 2020. Proyecto Barómetro de Bonn: Actualización 2018-2020.

³⁸ <https://www.iucn.org/es/content/analisis-economico-de-acciones-para-la-restauracion-de-paisajes-productivos-en-el-salvador>



development agencies; and (iii) the development and testing of the Restoration Sustainability index (*Indice de Sustentabilidad de la Restauración, ISR*), with support from the World Resources Institute (WRI). Currently, the GoES is preparing the €0.8 million Project “Fiscal policy reform for a Green Economy and NDC implementation: Restoration and Sustainable Landscape management in El Salvador”, with financial support from the International Climate Initiative (IKI³⁹).

11. Under this context, El Salvador aims to implement the ecosystems and landscape restoration approach at the Conservations Areas scale, the administrative regions for natural resource management created under the PNOTD. The El Imposible y Barra de Santiago Conservation Area (EIBSCA) has been prioritized in the National Plan Against Deforestation, Soil Erosion, and Desertification due to prominent levels of poverty, particularly in six municipalities of the Ahuachapán department within the Corredor Seco, and considerable environmental pressures from agriculture. EIBSCA provides essential environmental services, including from El Imposible National Park, the Barra de Santiago Ramsar site, and Los Cóbano Important Bird Area; it is habitat for twenty-three vulnerable species, ten endangered, and five critically endangered under IUCN’s Red List of Endangered Species. EIBSCA is highly vulnerable to land degradation as it contains steep (more than 35 percent) slopes and is especially prone to droughts; it contains an entire water basin, which connects the practices of subsistence basic grain producers with sugarcane producers. However, unplanned expansion of sugar cane and basic grain crops coupled with unsustainable production practices are degrading land and biodiversity in ecosystems across EIBSCA, including mangroves and riparian forests, and soil within farms, reducing their productivity and environmental sustainability. Sugar cane plantations increased from 60,000 to 80,000 ha in the 2006-2015 period leading to loss of mangrove forests, and the displacement of traditional crops to higher mountain areas, which are consequently degraded and affect the provision of hydrological services for the overall country’s economy, and particularly for sugarcane crops themselves. The use of unsustainable practices and continued deforestation to produce basic grains for subsistence has aggravated erosion in the high areas of the region. The pressure of recent droughts and extreme weather events that lead to landslides combined with these factors exacerbate land degradation.

12. Several initiatives are contributing to revert land degradation in the EIBSCA region. These include local governance platforms such as groups of water boards and agricultural associations; the Ramsar committee; and Local Advisor Committees (*Comités Asesores Locales, COAL*), among others. Also, ongoing projects in the region or in neighboring areas are implementing some dimensions of landscape restoration in specific areas and providing valuable lessons. For example, the project Upscaling Climate Resilience Measures in the Dry Corridor Agroecosystems of El Salvador (known as RECLIMA), co-financed by the Green Climate Fund (GCF)⁴⁰, which has a national scope but targets some highly vulnerable municipalities of EIBSCA. Other programs and projects include the Resilient Central America (ResCA⁴¹) Program; the Ecosystems Restoration in Degraded Areas in EIBSCA project⁴²; the Strengthening the Climatic Resilience of Rural Communities and Ecosystems in Ahuachapán-Sur⁴³; the Enabling Concerted Management from the Source to the Ocean in the Rio Paz Watershed GEF project; and the GEF Project Climate Change Adaptation to Reduce Land Degradation in Fragile Micro Watersheds Located in the Municipalities of Texistepeque and Candelaria de la Frontera, among others. Projects currently undergoing preparation seek to address new areas such as developing an incentive program to promote

³⁹ https://www.international-climate-initiative.com/en/details/project/fiscal-policy-reform-for-a-green-economy-and-ndc-implementation-restoration-and-sustainable-landscape-management-in-el-salvador-18_III_089-3033

⁴⁰ RECLIMA (US\$127.7 million) is jointly implemented by the GOES, with support from the Initiative for the Americas Fund (*Fondo de Inversión Ambiental de El Salvador, FIAES*) and the Food and Agriculture Organization (FAO) of the United Nations.

⁴¹ The ResCA Program is supported by The Nature Conservancy (TNC). ResCA has two projects in El Salvador: (i) El Salvador Raíces, which seeks to enhance resilience to climate change by promoting sustainable management systems in coffee landscapes; and (ii) El Salvador FUNDEMÁS, which seeks to implement a sustainability and productivity strategy for sugar cane and livestock.

<https://www.resilientcentralamerica.org/>

⁴² Supported by the Green Development Fund for the Central América’s Integration System (*Fondo para el Desarrollo Verde del Sistema de Integración Centroamericana*) <https://fondodesarrolloverde.org/resultados-de-asistencia-tecnica-en-el-salvador/>

⁴³ Supported by the Adaptation Fund through the United Nations Development Programme (UNDP)



land restoration and sustainable management; scale-up private investment; protect environmental services in shaded-coffee plantations; and promote best practices in sugar cane plantations.

13. The sugar cane industry is also progressively incorporating environmental criteria to enhance its sustainability and resilience to the impact of climate change. In 2017, the Sugar Foundation (*Fundación del Azúcar*, FUNDAZUCAR) and the Salvadoran Association of the Sugar Industry developed the sugar cane sustainability strategy and a manual of good practices that incorporate environmental criteria applicable throughout the value chain.^{44,45} These developments were mostly driven by the need to respond to national regulation (i) against the contamination and the harmful effects on the ecosystems caused by burning practices and use of agrochemicals; (ii) to manage water use; and to (iii) address the impact of sugar cane on deforestation considering that sugar cane was responsible for around 50,000 ha of deforestation in the 2000-2010 period.⁴⁶ To support regulation enforcement MARN, MAG, the Salvadoran Association of the Sugar Industry, and the Salvadorian Council of the Sugar Industry (*Consejo Salvadoreño de la Agroindustria Azucarera*, CONSAA) joined efforts to promote the adoption of green harvesting practices by developing specific technical guidelines aligned with the broader technical guidelines for land restoration in El Salvador.⁴⁷ More recently, motivated by international trends, one of the six sugar mills encompassing the Salvadoran Association of the Sugar Industry achieved the BONSUCRO certification in 6,660 ha (See Box 1), which represents 8.25 percent of the country's total sugar cane area.

Box 1. BONSUCRO International Standard (version 4.2)

BONSUCRO is a global multi-stakeholder non-profit organization that promotes sustainable sugarcane production, processing, and trade around the world. BONSUCRO provides a definition for sustainable sugarcane and all sugarcane derived products through a multi-stakeholder approach. The BONSUCRO Production Standard⁴⁸ defines a set of principles, criteria, and indicators against the three pillars of sustainability. As an example, below is a subset of principles, criteria, and indicators relevant to this Project.

Principle 4: Actively Manage Biodiversity and Ecosystem Services

Criterion 4.1: To assess impact of sugarcane enterprises on biodiversity and ecosystem services.

Indicator 4.1.2 Percentage of areas defined internationally or nationally as legally protected or classified as a High Conservation Value planted to sugarcane after the cut-off date of Jan. 1, 2008.

Indicator 4.1.3: The key environmental issues are covered by an appropriate and implemented environmental impact and management plan.

14. Despite these efforts, there is still much to be done to implement integrated landscape management and restoration in EIBSCA. Past and existing projects have produced positive impacts in certain areas of EIBSCA, but they are unaligned with the aim of ecosystem services provision at the conservation area level. Projects are often scattered in specific protected areas, communities, watersheds, or coastal zones, aiming at achieving land restoration for different purposes such as biodiversity protection, water sources conservation, soil retention, or climate change adaptation and resilience. However, landscape management and restoration in EIBSCA entails addressing in an integral manner the following barriers: (i) high vulnerability to climate change and extreme weather; (ii) limited incentives for sustainable agriculture practices; (iii) a lack of human and financial resources to promote sustainable production; (iv) perverse

⁴⁴ <http://fundazucarelsalvador.com/wp-content/uploads/2018/03/PRODUCTO-3A-27FEB.pdf>

⁴⁵ These efforts were financially supported by the German Cooperation Agency (GIZ) and the Inter-American Development Bank (IDB) and implemented by the Business Foundation for Social Action (*Fundación Empresarial para la Acción Social*, FUNDEMÁS).

⁴⁶ MARN, Fifth Biodiversity Report to the United Nations Convention on Biodiversity. This report presents the country's progress on implementation of the 2011-2020 Strategic Plan for Biodiversity. <https://www.cbd.int/doc/world/sv/sv-nr-05-es.pdf>

⁴⁷ Nello, T., et al. 2018. Guía Técnica para la Restauración en El Salvador: Zafra Verde en Caña de Azúcar.

⁴⁸ <https://www.bonsucro.com/tools-and-resources/>



incentives to generate short-term profits at the expense of forests and its ecosystem functions; and (v) reduced opportunities for off-farm employment. The proposed project seeks to contribute to remove some of these barriers by strategically investing financial resources in establishing land-restoration technologies and in promoting adequate management and monitoring approaches. The proposed project seeks to involve public and private stakeholders in strategic planning, create knowledge and awareness on the value of ecosystem services, strengthening stakeholder's capacity, and providing resources to remove financial barriers to implement Sustainable Landscape Management (SLM) measures in critical areas to ensure the flow of essential ecosystem services across EIBSCA.

C. Higher Level Objectives to Which Project Contributes

15. The proposed Project contributes directly to the GEF objectives in the focal areas of Biodiversity and Land Degradation. The Project advances the GEF-7 Biodiversity Focal Area (BD1-1) by mainstreaming biodiversity across sectors and supporting informed decision-making that considers biodiversity and ecosystem values. It will particularly contribute to achieving the following country's Aichi targets⁴⁹: Target #2 incorporating biodiversity considerations into land-use planning; Target #5 reducing the loss of natural habitats; Target #7 sustainable management of agriculture and forest areas; Target #14 rehabilitation of ecosystem services; and Target #15 restoration of at least 15 percent of degraded lands. The Project will also contribute to the main objectives of the Land Degradation Focal Area (LD-1-1 & 3, LD-2-5) by creating an enabling environment for PANSAL implementation and the country's development of the voluntary LDN targets.

16. The proposed Project aligns with the World Bank Group's corporate goals, Climate Change Action Plan, Forest Action Plan, and Country Partnership Framework (CPF) FY15-19 for El Salvador (Report # 95383) discussed by the Executive Directors on June 23, 2015. Specifically, the Project directly addresses issues related to the Bank's overarching Twin Goals (eradicating extreme poverty and promoting shared prosperity). This is achieved by promoting sustainable agricultural productivity that supports jobs and food security and enhancing the sustainability of small-scale farm producers in one of the most vulnerable regions of El Salvador. The Project is also consistent with the El Salvador CPF's Objective (b) Build Capacity to Manage Disasters and Environmental Degradation, under Strategic Pillar II Fostering Sustainability. Similarly, the Project contributes to compliance with the Climate Change Action Plan 2016-2020⁵⁰, particularly on Priority III Scale Up Climate Action by promoting climate-smart land-use including elements of SLM, land restoration, ecosystem-based adaptation, and coastal area management, as well as Climate Change Action Plan 2021-2025⁵¹ under the *Agriculture, Food, Water, and Land* heading, which emphasizes *Nature-Based Solutions*. Also, the proposed project advances the Forest Action Plan FY16-FY20⁵², particularly on Focus Area 2: Forest Smart Interventions in Other Economic Sectors, and by addressing cross cutting themes such as climate change and resilience; participation and rights; and institutions and governance. The Project builds on the FCPF REDD+ Readiness Preparation Project (P124935) and the 2020 Country Forest Note: A Green Deal for El Salvador: Forest-based Green Infrastructure for Income and Services⁵³.

17. The proposed Project would also contribute to El Salvador's national priorities and commitments on land degradation, climate change, and biodiversity conservation. The Project would contribute to implementing Axis1 of the overarching Sustainable El Salvador Plan "Integral Management of Risk to Disasters Reduction and Climate Change" by restoring, rehabilitating, and reforesting priority vulnerable areas under the PREP. The Project would also contribute to

⁴⁹ <https://www.cbd.int/doc/nr/nr-06/sv-nr-06-es.pdf>

⁵⁰ <https://openknowledge.worldbank.org/handle/10986/24451>

⁵¹ <https://openknowledge.worldbank.org/bitstream/handle/10986/35799/CCAP-2021-25.pdf?sequence=2&isAllowed=y>

⁵² <https://openknowledge.worldbank.org/bitstream/handle/10986/24026/K8864.pdf?sequence=6&isAllowed=y>

⁵³ <http://documents1.worldbank.org/curated/en/425961608699657816/pdf/A-Green-Deal-for-El-Salvador-Forest-Based-Green-Infrastructure-for-Income-and-Services.pdf>



implementing some components the EN-REP, specifically on governance, land restoration practices, financial mechanisms, and monitoring. The Project would help advance preparation of the National Biodiversity Strategy and contribute to implement the 2021 National Plan to Combat Deforestation, Erosion, and Desertification, particularly activities under Component 1 such as implementation of the environmental zoning, promotion of agroforestry systems, as well as restoration of critical ecosystems and natural habitats for biodiversity. Moreover, the Project contributes to the United Nations' Sustainable Development Goals (SDG), particularly goal 15: *Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss*⁵⁴. As El Salvador is among the countries participating in the UNCCD Program on LDN Targets Setting, this project is aligned with this engagement. Finally, the Project is well-positioned to contribute to advancing the country's NDC which identifies agriculture and water among the priority areas for climate action to promote climate change adaptation, while setting GHG mitigation targets across sectors through improved forest cover. The nature-based solutions promoted by the proposed Project would also contribute to enhance ecosystems resilience to the impacts of climate change by enhancing local governance for land restoration, forest-ecosystems services protection, and implementation of SLM practices.

II. PROJECT DEVELOPMENT OBJECTIVE

A. Project Development Objective (PDO)

PDO Statement

18. The proposed PDO is to promote integrated landscape management and restoration in targeted areas of El Salvador.

B. Project Beneficiaries

19. **The Project's primary beneficiaries are EIBSCA region rural dwellers, especially those within the selected critical areas and basins.** This includes small subsistence farms (<3 ha), family farms, and communities that mainly produce basic grains in slopes and near relevant ecosystems. At least 1040 producers will receive support for restoration practices and conserving key ecosystems. These will be selected from the municipalities in the Ahuachapán Department, including San Pedro Puxtla, Guaymango, Jujutla, San Francisco Menéndez y Ataco, prioritizing vulnerable populations such as women, young and indigenous communities. Approximately 250 sugar cane producers, medium and smallholders located in the municipalities of Acajutla, San Francisco Menéndez, and Jujutla will benefit from technical assistance for restoration activities and SLM implementation. Additionally, local governance bodies will be strengthened, especially water boards, COAL, and Ramsar committees, providing them with technical capacity and promoting collaborative arrangements. Hence, approximately 575 more people will benefit directly from the support to the local planning processes (PLAS) under Component 1. The total number of direct beneficiaries is therefore expected to reach 1,865.

20. **Indirect beneficiaries include the population in the entire landscape, especially those in the selected basins.** The 198,556 inhabitants of the region, especially the rural population, will benefit from improved ecosystem services (mainly hydrological), reduced erosion, disaster risks, and water contamination. This includes Indigenous Peoples (IPs), vulnerable small farmers, and the communities associated with the basins' ecosystem services at the landscape scale. Simultaneously, biodiversity in the area will benefit from improved habitat conditions, as well as ecosystem connectivity and health.

21. **Private sector engagement and linkages.** The private sector would be involved in several of the Project's interventions. Hence, the private sector will participate in the development of the governance structure that will be

⁵⁴ The project could also further SDG 8 of promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.



promoted under Component 1, alongside government agencies and civil society representatives (see below in paragraph 24). In Component 2, small and large producers will receive training on improved productive practices, and their participation will be essential for validating SLM practices and disseminating results (see paragraph 27). As stakeholders, private producers of basic grains, sugarcane, coffee, and cocoa have a vested interest in reducing production costs and increasing profitability. Under Subcomponent 2.2, sugarcane industries will support project activities to help producers implement improved and more sustainable production practices.

22. The Project will also benefit public agencies that are involved in integrated landscape management. Specifically, the Project will enhance the technical capacities of MARN, MAG, CENTA, DGFCR, seven municipalities, NGOs, and public foundations El Salvador Environmental Investment Fund (*Fondo de Inversión Ambiental de El Salvador*, FIAES) and the El Salvador Environmental Fund (*Fondo Ambiental de El Salvador*, FONAES), to address landscape-scale restoration and integrated landscape management efforts. It will also promote improved coordination and collaboration among MARN and other national-level agencies, local governments, participative governance instances and the Ahuachapán Coordination Roundtable.

C. PDO Level Indicators

- (i) *Land area under sustainable landscape management practices (ha)*. This World Bank Core Indicator is aligned with GEF Core Indicator 4 (*Area of landscapes under improved practices*). It is disaggregated along:
 - a. *Area of landscapes under improved management to benefit biodiversity* (GEF Core Indicator 4.1)
 - b. *Area of landscapes under sustainable land management in production systems* (GEF Core Indicator 4.3)
- (ii) *Restored land area*, disaggregated by:
 - a. *degraded agricultural land,*
 - b. *forest and forest land, and*
 - c. *wetlands.*

This indicator aligns with GEF Core Indicator 3 (Restored land area).
- (iii) *Share of targeted community members with rating ‘Satisfied’ or above on project interventions, disaggregated by gender (Percentage)*.

III. PROJECT DESCRIPTION

A. Project Components

(a) Component 1. Enabling conditions for integrated landscape management (GEF US\$835,122).

23. This component aims to create conditions to manage the targeted landscape in an integrated and sustainable manner, considering interactions between agricultural production and ecosystem services. It would be implemented across the entire Project area. It will directly contribute to the national EN-REP and its PAR spell out by strengthening capacity and collaboration arrangements for public institutions in the Project area. The approach will support the engagement of local communities and municipalities in water boards, with support from the municipalities.

24. Subcomponent 1. Support to create conditions to manage the targeted landscape in an integrated and sustainable manner (GEF US\$243,403). The proposed activities include: (i) strengthening public sector coordination by assisting MARN in developing and implementing collaboration agreements and plans between the MAG, MARN,



municipalities, and specialized local committees such as the Ramsar committee and water boards; (ii) providing direct technical assistance to MARN for developing and implementing environmental protection plans at the local scale through water boards and community management; (iii) financing and promoting the participation of small and medium-scale farmers in local governance institutions and supporting the implementation of a multi-stakeholder Restoration Round Table (MRdR) and a private sector forum that would integrate the farmers and sugarcane industry. The MRdR, which would be established under the COAL, would be responsible for updating the PDLS of EIBSCA and will support the Ramsar Committee in updating the Ramsar Management Plan. The MRdR would liaise with the existing Ahuachapán Coordination Roundtable, which integrates donor partners and implementing agencies of relevant projects in the region.

25. Subcomponent 2. Promotion of Awareness on the Importance of Ecosystem Services (GEF US\$374,359). In addition, this component will build awareness about the importance of ecosystem services in the landscape and environmental degradation by: (i) conducting an assessment of the value of ecosystem services within EIBSCA through a technical consultancy; (ii) disseminating the results of this study and improved management practices through the design and implementation of an environmental education plan (using local and regional media towards the general public and especially the agricultural producers) and three PLAS, including information on restoration, land tenure security, and gender equity issues; and (iii) providing training and equipment to enhance the existing technical capacity to curate and implement the ISR as a key monitoring tool (see paragraph 10). The component will support the process to update the ISR 2016 version to incorporate new biodiversity and degradation considerations. The process updated would provide a perspective of the changes in the landscape and the effectiveness of restoration projects, while enhancing MARN's monitoring and evaluation capacity to implement it. The ISR will be applied across the EIBSCA landscape, which covers 67,655 ha (this area represents the total project area).

26. Subcomponent 3. Development of proposed mechanisms to promote private financial resource mobilization (GEF US\$117,360). Finally, to create sustainable conditions for maintaining the Project's conservation and restoration results, this component will provide technical assistance to promote pilot private financial resource mobilization through pilot Compensation for Ecosystem Services ("CES") to be granted to Eligible Beneficiaries. The Project will provide technical assistance to negotiate pilot agreements between sugarcane producers and upstream farmers as CES, through which upstream small-scale farmers are expected to receive compensation for maintaining riparian forests and protecting water recharge areas and water quality, which benefit downstream sugarcane producers. The agreements will be coordinated through the MRdR in alignment with the Ahuachapán Coordination Roundtable.

(b) Component 2. Improved management and restoration of ecosystems and degraded land (GEF US\$2,366,920).

27. This component aims to restore degraded ecosystems and pilot improved SLM practices in selected areas of the targeted landscape as a means of sustaining agriculture-driven livelihoods in the long-term, enhancing the flow of ecosystem services, and conserving biodiversity. The component is structured into two sub-components, focusing on investing in the restoration of key degraded areas in vulnerable upstream rural land, and promoting sustainable farming practices in the sugarcane industry. Technical guidance will be obtained from existing long-term strategic planning such as the EN-REP and PAR regarding restoration, IUCN's restoration guidelines for Salvadorian land uses, and the BONSUCRO standard for the sustainable production of sugar cane⁵⁵.

(i) Subcomponent 1. Restoration of ecosystems and agriculturally degraded land (GEF US\$2,193,940). Accounting for over half of the Project's budget, this subcomponent aims to pilot restoration and improved practices in vulnerable upstream rural areas. The beneficiaries will be selected based on the ROAM analysis, coupled with information

⁵⁵ The BONSUCRO Standard is a set of sugarcane production guidelines developed to obtain the BONSUCRO Production Certification. It works with farmers and mills to reduce key environmental and social impacts, while promoting increased efficiency, lower energy use, and reduced waste. For more detailed information see <http://www.bonsucro.com/production-standard/>



gathered during the consultation process, vulnerability (based on gender or cultural backgrounds), and demonstrated interest in similar cooperative instances. The Project Operational Manual (POM) will include a full list of selection and exclusion criteria. The activities will include: (i) capacity building to enhance the extension services that will support the restoration activities; (ii) establishing 40 ha of demonstration plots for training and dissemination purposes, which will contribute to the Environmental Education Plan under Component 1 and help train beneficiaries; and (iii) restoration of degraded land in 1,000 ha of small and medium-scale farms, at an average of 1 ha per farmer. The restoration activities will reach at least 140 ha of cocoa agroforestry, 520 ha of basic grains agroforestry, 200 ha of agro-silvo-pastoral lands, 100 ha of gallery forests, and 40 ha of mangroves. This subcomponent will provide up to 70 percent of the financial resources required for the restoration activities and the maintenance of restored ecosystems for three years, including technical assistance from extension services. The beneficiaries will complement 30 percent of the cost with labor and in-kind assistance. All three activities for this component will be implemented through local NGOs with work experience in the project area.

(ii) Subcomponent 2. Support for improved agricultural practices in the production of sugar cane (GEF US\$172,980).

The objective is to promote sustainable farming practices in the sugarcane industry. The activities under this subcomponent will target the municipalities of San Francisco Menéndez, Jujutla, and Acajutla, where most of the sugarcane production is concentrated in EIBSCA. Demonstration activities will target key farms that are next to the Ramsar site. Specifically, the subcomponent will provide technical support and capacity strengthening to promote the adoption of sustainable practices and biodiversity criteria, towards achieving the BONSUCRO standard certification particularly with regards to its "Manage biodiversity and ecosystems" principle. Although some sugarcane producers have implemented BONSUCRO up to standard 4.1, progress has been slow and especially difficult for smaller-scale farmers. The Project would accelerate and spread out the BONSUCRO standard implementation. The activities to be financed include (i) strengthening technical capacity for 250 sugarcane producers with the support of FUNDAZUCAR and the Corporate Foundation for Social Action (*Fundación Empresarial para la Acción Social*, FUNDEMAS); and (ii) the restoration and implementation of improved practices⁵⁶ on 20 selected pilot farms (one ha/farm) in critical ecosystems with degraded lands, especially in farms located close to fragile ecosystems such as mangroves, and in important areas for ecosystem connectivity. These will serve as demonstrative plots to disseminate and prove the effectiveness of implementing sustainable productive practices, to further expand their uptake beyond the Project.

(c) Component 3. Project monitoring and coordination (GEF US\$359,602, including project management costs).

28. This component will facilitate the implementation of the Project through efficient management and monitoring.

(i) Subcomponent 1. Monitoring and Evaluation (GEF US\$190,000). The objective of this subcomponent is to allow for the monitoring and evaluation of the Project. It will finance (i) the implementation of project monitoring and evaluation to inform the adaptive implementation of the Project, in alignment with national and international policies and standards; and (ii) the mid-term and final evaluations and the communications plan for sharing the experiences, hence contributing to Knowledge Management objectives.

(ii) Subcomponent 2. Project Management (GEF US\$169,602)⁵⁷. This subcomponent aims to facilitate project management and coordination among the various institutions and partners involved in implementing components 1 and 2, across national and regional levels. It will finance a Project Implementation Unit (PIU) in MARN, primary

⁵⁶ Fonseca, Francisco; Nello, Tony; Raes, Leander; Sanchún, Andrés; Saborío, Javier; Chacón, Óscar, (2018) *Zafra verde en caña de azúcar. Guía técnica para la restauración en El Salvador*, 1. San José, Costa Rica: UICN-ORMACC. xii, 12 p.

⁵⁷ This subcomponent is covered by the Project Management Cost under the GEF grant.



personnel required for project management, and external project audits.

B. Project Cost and Financing

Project Components	Project cost	Trust Funds	Counterpart Funding
Component 1. Enabling conditions for Integrated landscape management	835,122	835,122	0
Component 2. Improved management and restoration of ecosystems and degraded land	2,366,920	2,366,920	0
Component 3. Project monitoring and coordination	359,602	359,602	0
Total Project Costs	3,561,644	3,561,644	0
Total Financing Required	3,561,644	3,561,644	0

C. Lessons learned and reflected in the project design.

29. Concrete knowledge produced by previous projects includes the use of IUCN’s ROAM Analysis for prioritizing land for restoration, and the use and strengthening of the ISR for monitoring the sustainability of actions in the area. Similarly, a baseline for identifying agroforestry opportunities and governance gaps were obtained from the WB’s forestry and climate change efforts, such as the Country Forest Note and the FCPF REDD+ Readiness Preparation Project. The technical guidance for improved practices and restoration activities will draw from IUCN’s guidelines and the experience of FIAES and FONAES in working with the local communities of the area. The Project incorporates learnings from these and other projects for the participatory processes and design, especially regarding the framing of the activities, resource allocations and budgeting, technical assistance, and active gender inclusion, which will help reduce social, political, and technical risks. Lessons from other countries in the region like Guatemala have also informed the Project including on CES and multi-sector approaches: Integrated landscape operations benefit from the support of a national approach that addresses key bottlenecks in the forest sector governance and establishes inter-institutional coordination and financial mechanisms to incentivize the participation of multiple stakeholders in the integrated generation of timber, NTFPs, and ecosystem and environmental services obtained from sustainable land use, land-use change, and forestry.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

30. **MARN is the recipient of the grant and will oversee project coordination.** MARN has successfully executed projects focused on addressing environmental degradation and restoration combining mitigation and adaptation objectives and financed by multilateral organizations including the WB. This is exemplified in the development of the EN-REP and safeguard instruments that met the WB’s Operational Policies (OP) under the FCPF REDD+ Readiness Preparation Project (P124935). The ministry will guide territorial and inter-institutional intervention, oversee monitoring and evaluation through the General Directorate of Ecosystems and Biodiversity (DGEB), and review annual plans and budgets.

31. **A Technical Monitoring Committee, composed of representatives from MARN, MAG (including CENTA and DGFCR), and project beneficiaries, will guide implementation** (not a decision-making body). This committee will meet four times per year to review project implementation, especially regarding the beneficiaries and environmental and social risk management. It will also serve as an instance to share experiences among the beneficiaries while promoting and



strengthening the collaboration between the ministries and relevant stakeholders.

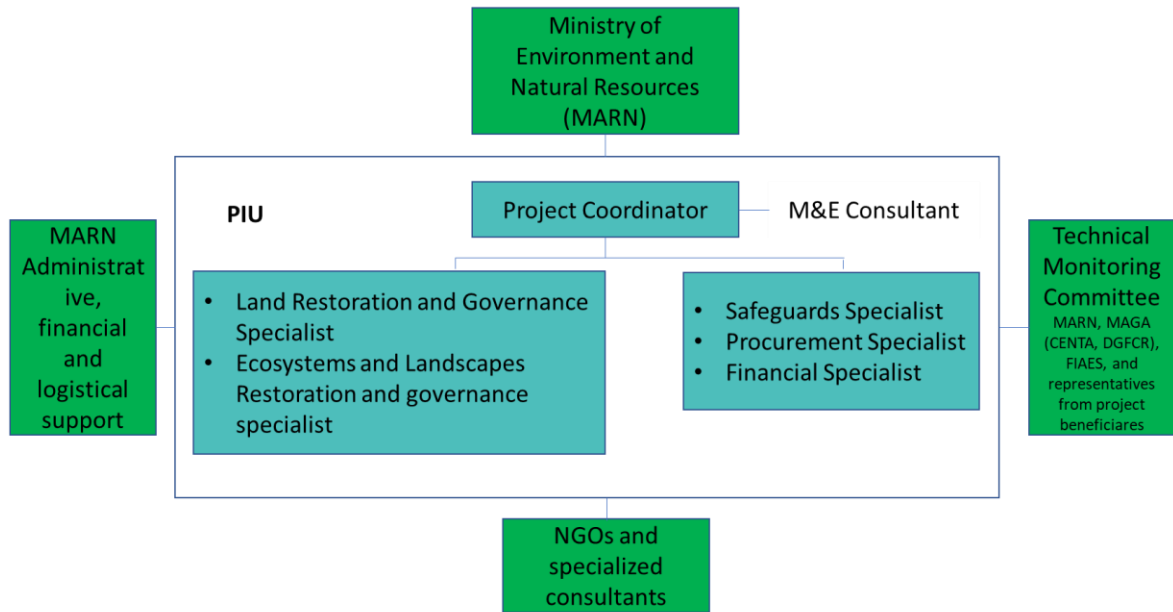
32. The PIU will be staffed by a dedicated team based at MARN, which will implement the activities, administrative processes, and monitoring and evaluation activities. Based at MARN's central office, the Project coordinator oversees the entire operation of the PIU and is in direct contact with MARN's professionals. In addition, the PIU will be staffed with five full time specialists, including a financial specialist and a procurement specialist with qualifications and experience acceptable to the WB. A social specialist will oversee the implementation of the Environmental and Social Framework and policies. A land restoration specialist and an ecosystem management and governance specialist will implement Components 1 and 2 on the ground, and support, as needed, the social specialist on environmental standards. A consultant will prepare and roll-out monitoring and evaluation (M&E) activities during key stages of the Project. The coordinator will contribute to the monitoring activities with support from the DGEB and the technical specialists. The PIU will have access to dedicated office facilities at MARN and will have technical support by specific units such as DGEB, the Institutional Finance Unit (*Unidad Financiera Institucional*, UFI), and the Procurement and Contracts Unit (*Unidad de Adquisiciones y Contrataciones Institucional*, UACI).

33. The PIU will be responsible for the Financial Management (FM) of the Project: This includes (i) budget formulation and monitoring; (ii) cash-flow management (including processing payments and submitting loan withdrawal applications to the Bank); (iii) maintenance of accounting records, including the maintenance of an inventory of fixed assets for the Project; (iv) administration of underlying information systems; (v) preparation of in-year and year-end financial reports; and (vi) arranging for the execution of the external audit. Personnel from UFI will provide technical support to the PIU on FM. (See Figure 1)

34. Complaints will be received through various channels: The Information, Complaints and Suggestions Office (*Oficina de Información, Reclamos, y Sugerencias*, OIRS) from the participating Municipalities, MAG, and MARN will use existing methods to receive complaints through their local or central offices, as well as via phone or through their webpages. The PIU will also make available local and central mailboxes through existing infrastructure and procedures from MARN's Directorate of Civil and Institutional Participation. All complaints will be received and processed by the PIU through the Project coordinator in collaboration with MARN's DGEB, with the support of the relevant organization implementing the activities on the ground. The Project's Grievance Redress Mechanism (GRM) is fully described in the Project's Stakeholder Engagement Plan (SEP).



Figure 1: Institutional arrangements at MARN



35. Public institutions, consultants, and local NGOs will support specific activities as follows:

- (i) CENTA will provide technical assistance to support restoration activities and develop an extension service under Component 2.
- (ii) Local NGOs will be hired to support the implementation of activities as part of Component 2, as outlined in the POM. This includes reaching out to beneficiaries, implementing the restoration activities, and providing technical support for the Project's duration. Other NGOs will be hired to train beneficiaries. NGOs will be selected based on technical criteria defined in the POM, such as local presence in the targeted landscape and previous experience. Several NGOs have been identified already and will be invited to apply.
- (iii) FUNDAZUCAR and the local sugar industries will support the technical assistance to sugarcane producers.
- (iv) FONAES will provide technical support for the CES agreements under Component 1.
- (v) FIAES will provide technical support for all activities due to their vast experience implementing restoration projects in the area.
- (vi) Local governments and NGOs will support the Project's participation and awareness activities through existing and new governance arrangements.
- (vii) Consultants will be mobilized on the value of ecosystem services and the benefits of restoration projects in the landscape, an Environmental Education Plan, the communications strategy, and technical training for the project beneficiaries.

36. Restoration activities under Component 2 will be supervised by MARN and implemented via subgrants through local NGOs. The NGOs will be selected based on technical and fiduciary criteria and will receive project funds through MARN based on subsidiary agreements. Payments to NGOs will be split into fixed management fees and subproject funds. The latest will be transferred as per a quarterly disbursement plan (only after 80 percent of the previous transfer is documented as disbursed). Before and after support is provided, each beneficiary will be requested to formally commit themselves to the activities and provide confirmation of implementation. NGOs will implement projects in plots previously identified by MARN, providing technical assistance and goods, but not transfer any funds to the beneficiaries. The POM will include an NGO selection guideline, project implementation guidelines following Bank fiduciary procedures, and NGO



selection templates (See **Figure** in Annex 2).

B. Results Monitoring and Evaluation

37. MARN will be responsible for the overall M&E of the Project. It will be carried out following the GEF tracking tools under Component 3. An M&E consultant will prepare the detailed guidelines and documentation based on the POM for the process and the required documentation. The consultant will implement M&E activities during the first year of the Project. Then, they will be implemented by the Project coordinator until the end of the Project. Data for M&E project outcomes will be derived from various sources that feed national processes such as the PANSAL. The results will be followed up in midterm and final reviews to assess the project activities' outcomes.

C. Global Environmental Benefits (GEB) and GEF Incremental Analysis

38. The Project will contribute to reducing pressures on local biodiversity, including endangered species, advance compliance with LDN and climate change mitigation through the restoration and improved management of a Conservation Area, EIBSCA, identified by MARN as a critical area for biodiversity conservation. The outcomes of the practices promoted by the Project as well as the restoration of critical land will contribute to reducing pressures, increasing connectivity for globally important biodiversity and ecosystems. Importantly, the EIBSCA is one of the sites with the highest species richness and the occurrence of restricted species in the country. It includes protected areas and globally relevant areas, while hosting important biodiversity (see Section I.B.).

39. The Project is aligned with four GEF focal areas: BD-1-1, LD-1-1, LD-1-3, and LD-2-5. The Project would help integrate biodiversity and improve the flow of services in agroecosystems in EIBSCA, by promoting improved management and restoration of degraded land, by piloting improved practices involving cocoa, agro-silvo-pastoral systems, as well as agroforestry systems and basic grains. The Project will also help maintain and enhance the flow of ecosystem services through the restoration of gallery forests and mangroves, as well as by strengthening governance at the landscape level and promoting private compensation for ecosystem services agreements. Finally, the Project would help reduce the pressure on fragile forest ecosystems from sugar cane by supporting the adoption of improved agriculture practices, which will help enhance the resilience of the wider landscape. The Project will apply the ISR, which contains indicators to monitor progress on biodiversity, governance, water quality, vulnerability reduction, climate change mitigation, and livelihoods enhancement.

40. GHG analysis. An estimate of the Project's GHG mitigation potential was prepared using the Ex-Ante carbon balance tool (EX-ACT) from the Food and Agriculture Organization (FAO). See Annex 5 for details. The preliminary analysis compares the current land uses and productive practices prior to the project implementation ("business as usual") and the improved system, considering the restored land and better production practices promoted by the Project. The analysis was performed over 20 years, estimating that the Project is a carbon sink of 444,851 tons of Carbon Dioxide equivalent (tCO₂-eq). Subcomponent 2.1 on implementation of restoration activities contributes the greatest to reducing emissions.

41. Areas of land restored. The proposed project seeks to restore the functions of critical ecosystems in EIBSCA through assisting the recovery of land in 1,040 ha carefully selected using multiple environmental criteria. The Project will restore agriculture land that have been degraded to the extent that it cannot fulfill its ecological functions and delivery of environmental services. The Project will make investments to promote restoration practices rigorously designed through applying the ROAM methodology, which integrate results from a participatory process and from technical and cost-benefit analysis. The selected practices will be established in critical sites to ensure they contribute to enhanced water conservation, groundwater recharge, and improved vegetative cover. The practices include basic grains, cocoa, agro-silvo-pastoral systems, and agroforestry systems. The Project would also help apply best practices of ecological restoration in 100 ha of gallery forests and in 40 ha of mangroves. The impacts of these interventions on water quality and biodiversity



enhancement across the landscape and specific ecosystems will be captured through the ISR and the project results framework.

42. Areas of landscapes under Improved practices (excluding protected areas). The proposed project seeks to promote the adoption of new and/or improved SLM practices in 52,014 ha of land. Adoption refers to change of practice or change in the use of a technology promoted or introduced by the Project. SLM practices refers to a combination of technologies and approaches to increase land quality and restore degraded lands. Out of the total areas, the Project would promote land management approaches that benefit biodiversity in 51,294 ha. The Project would also intervene on landscape area currently under unsustainable sugar cane production, by promoting adoption of the BONSUCRO standard, which seek to prevent the cultivation of sugarcane on areas of critical conservation value or areas legally protected. The BONSUCRO standard also seek ensure sugarcane plantations address environmental issues such as biodiversity, ecosystem services, soil, water, climate change, among others following an appropriate environmental impact and management plan. The BONSUCRO standard also certifies adequate implementation and progress monitored of the Environmental impact and management plan.

43. GEF Incremental Analysis. Assuming the GEF project was not implemented (“Business as usual”), current practices would continue to increase land, water, and biodiversity degradation. Other small-scale interventions in the landscape are scattered without the Project and lack a strategic framework for coordinating efforts. Moreover, without the Project, the GoES does not have the resources to promote, coordinate the objectives, or adequately monitor and evaluate integrated land management and restoration activities. Consequently, the natural resources will continue to be used without consideration for sustaining the provision of ecosystem services critical for the local communities and biodiversity. Deforestation of 1.3 percent annually is expected to continue or be exacerbated by the effects of the current economic crisis, and soil degradation will further expose the landscape to climate change related hazards such as landslides. Similarly, habitats and downstream water quality would be lost, making future restoration efforts more challenging and complex. The sustainability of agricultural production in the landscape would be at risk in the mid-term due to increased vulnerability and reduced productivity.

44. Investments with GEF support will enable the GoES to address the management of the EIBSCA by promoting sustainable practices at a landscape scale, improving coordination through existing and new institutions, and financing demonstration plots with improved management practices and restoration activities in critical farms. A considerable gap between downstream sugarcane producers and the ecosystem services originating from upstream small-scale farms, cannot be effectively addressed in the baseline scenario. Through the PAR, the local governments have prioritized sugarcane and basic-grain farms connected by waterways across the EIBSCA region. However, they fail to connect medium or large-scale sugarcane farmers in the lowlands with small-scale farmers in the high areas to achieve integrated landscape management. The Project will target resources based on existing IUCN and WRI analyses and thorough consultation processes to guide land and beneficiaries’ prioritization. GEF funding will primarily finance improved practices and restoration activities in collaboration with current projects from FIAES and other organizations and prepare farmers to understand the benefits and promote these practices beyond the Project. The proposed approach will improve collaborative governance structures, support farmers with initial investments, train them to implement and maintain improved practices, and then promote these practices while building up the capacities of extension services to implement further actions towards integrated landscape management of the EIBSCA.

45. The Project investments will generate synergies with projects supported by GCF, FAO, and UNDP in the region and more broadly across El Salvador. Through the Ahuachapán’s Roundtable, coordinated by MARN, a series of parallel interventions have been identified as relevant for generating synergies. The Project will be implemented in collaboration and constant dialogue with these through the mentioned Roundtable, aggregating positive impacts in the landscape and accelerating the transition to an integrated landscape management that is beneficial for biodiversity and climate action. Specifically, RECLIMA, to be implemented across El Salvador including the EIBSCA, will contribute to climate resilience and



mitigation within agricultural systems; UNDP's project to strengthen the climate resilience of rural communities and ecosystems in part the EIBSCA (US\$8 million) will also support improved governance, management, and planning; and a collaborative project in the EIBSCA is complementing the restoration of over 4,000 ha (US\$2 million). The Project will also build on other projects led by MARN, with support from GIZ, to integrate valuable lessons on monitoring of restoration activities.

D. Sustainability

46. A combination of investment support to leverage high upfront costs, capacity building, and demonstrative projects will help secure the long-term adoption of new sustainable practices. These efforts will be aligned with parallel financing from a series of projects currently under development and to be implemented in the future from the GCF, FAO, UNDP, German Cooperation Agency (*Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH*, GIZ) and others, which will be aligned through the MARN and Ahuachapán's Coordination Roundtable, further augmenting the impacts of the Project and helping secure their sustainability. A series of reciprocal CES agreements will complement these developments to finance restoration from private and target natural water management and secure ecosystem services. The arrangements will provide long term financial resources from sugarcane producers for ongoing operations and maintenance of restoration and conservation activities to upstream farmers. They are expected to prompt other similar agreements in the area. They will also increase recognition and highlight ecosystems' role in water management and the importance of their protection.

47. The Project seeks to strengthening the technical capacity of public institutions, local NGOs, and participatory governance platforms, securing support for restoration and sustainable practices. Component 1 will finance PLAS and a new restoration roundtable (i.e., MRdR), which will guide long-term restoration and sustainable and local natural resource management. Simultaneously, an environmental education plan will be developed to disseminate the benefits of ecosystem services in support of various project activities. This plan will first produce knowledge about previous similar interventions' success and then increase the population's knowledge base, thus increasing support for current and future restoration projects. Under Component 2, sustainable farming practices will be institutionalized through extension support schemes, facilitating long-term financial resources. Implementing the BONSUCRO standard for sugarcane producers in the selected locations will secure sustainable practices in the long-term and promote the transition to SLM in other areas. These practices will be supported in farms that have already integrated some elements of the BONSUCRO standard in their management plans for several years, demonstrating their interest in adopting the standard's practices.

48. Knowledge management. The PIU will be responsible for knowledge management and dissemination. The information produced through the implementation of, and improvements to the ISR will be made available through MARN's and MAG's public platforms, reporting key indicators associated with the sustainability of the landscape and restoration activities. These elements will also be included in PAR and EN-REP reports. Through the environmental education plan, the Project will disseminate the knowledge generated in the Project and other previous projects in the area, contributing to improving the information baseline for planners, technicians, and stakeholders involved in managing the landscape. The M&E system will also generate other knowledge products and services that will be disseminated among project beneficiaries through a range of communication channels, using user-friendly communication tools. During project implementation, MARN will ensure continued learning exchanges among existing projects through the Ahuachapán roundtable, which brings together all the landscape initiatives in the region. Besides the project knowledge management strategy and the communications plan, MARN will disseminate project information in the World Overview of Conservation Approaches and Technologies (WOCAT)⁵⁸.

⁵⁸ <https://www.wocat.net/en/>



49. Innovation and replication potential. The proposed project seeks to foster a transformation of the EIBSCA landscape by bringing together individuals, communities, businesses, NGOs, and government institutions to participate in a governance platform at the level of the Conservation Area. The Project addresses interinstitutional coordination barriers for landscape transformation at such a scale. It seeks to enhance participatory territorial planning involving public and private stakeholders and promotes private sector engagement on environmental services agreements, SLM implementation, and certification (i.e., through BONSUCRO). The Project is innovative in applying the ISR for progress monitoring at scale; it also represents a test to implement in an integrated manner the GoES international commitments acquired under UNFCCC, UNCCD, and CBD, following the 2021 National Plan to Combat Deforestation, Erosion, and Desertification. The Project is the first of its kind in El Salvador to implement landscape management and restoration at the conservation area level, in line with the ambition established in the PREP. The lessons learned from implementing this project would be used to progressively replicate the experience in the remaining 15 conservation areas.

V. APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

50. The technical analysis has been based on the guidelines prepared for PANSAL and EN-REP, the baseline from the ROAM analysis by IUCN, and the sector diagnosis set in the Bank's 2020 Country Forest Note⁵⁹. The project design has also drawn from the project experience of FIAES and FUNDEMAS and the ground experience from FUNDAZUCAR regarding BONSUCRO standard. The technical formulation also received the Bank team's support during a series of in-country and virtual preparation support missions in 2020 and 2021.

51. The economic analysis presents the economic benefits generated by the Project (see Annex 6). Three benefit streams have been measured: (i) ecosystem services and biodiversity benefits provided by Integrated Landscape Management, (ii) carbon storage and sequestration by sustainable practices and restoration, and (iii) mangrove restoration and activities at the producer level, enabling them to transit to sustainable management activities that have positive social and private returns.

52. For the economic and financial analysis, the "business-as-usual" baseline case assumes that future development trends follow those of the past and no changes in policies and practices will take place. A 20-year period has been assumed to assess the economic feasibility of the Project. While the project costs are only assumed to emerge for the five years of project implementation, the benefits (from the increased area under improved landscape management and sustainable practices) and opportunity costs are assumed to be generated beyond the five-year implementation period.

53. The incremental economic analysis shows that the net present value (NPV) is projected to reach US\$5.2 million (lower bound), and US\$6 million (upper bound) in the baseline scenario (20 years, carbon social price of US\$60, and 6 percent discount rate). The investments evaluated for the economic and financial assessment will generate a Benefit-Cost ratio between 2.36 and 2.52; and an internal rate of return (IRR) between 23 and 25 percent. Thus, the economic and financial analysis shows that, if project implementation is effective and efficient, project-supported investments will bring substantial financial and economic benefits to agriculture and livestock producers in the project area and to Salvadoran society in general. The results of the quantitative simulations are robust in terms of sensitivity analyses. Increasing the discount rate from six to nine percent, reducing the carbon social price by 33 percent (from US\$60 to

⁵⁹ World Bank. 2020. A Green Deal for El Salvador : Forest-Based Green Infrastructure for Income and Services. Country Forest Note. <https://openknowledge.worldbank.org/handle/10986/34984>



US\$40), adopting the value of voluntary carbon market (US\$3.01), and using more conservative estimates regarding the value of ecosystem services provided, do not affect the conclusions.

54. Shown estimates correspond to a lower bound as they represent the benefit streams derived from the Project applying a very conservative approach. The Project's economic value is likely to be higher since the analysis did not include other non-economic global and local benefits such as resulting improvements in food security.

B. Fiduciary

(i) Financial Management

55. **The PIU will handle FM tasks with the support from UFI.** Based on a simplified assessment of the FM arrangements, the Bank concluded that the controls and systems that MARN has in place are adequate to administer financial aspects of the proposed Project. MARN has relevant experience implementing WB-financed projects with satisfactory FM performance and the FM staff are qualified. In addition, the PIU will be staffed with a well-seasoned financial specialist hired under Terms of Reference (ToR) agreed with the WB. Like in a recent operation (FCPF REDD+ Readiness Preparation Project P124935), MARN will use the Financial Administration System (*Sistema de Administración Financiera Integrado*, SAFI) to record financial transactions; and will maintain a set of subsidiary ledgers in excel spreadsheets to prepare financial statements required by the Bank. The PIU will produce semi-annual interim unaudited financial reports containing at least: (i) a statement of sources and uses of funds (with expenditures classified by component and subcomponent) and cash balances; (ii) a statement of budget execution per component and subcomponent; (iii) a reconciliation of the designated account (DA); and (iv) a simplified subproject statement. Annual financial statements will be audited by a private firm under terms and conditions acceptable to the Bank. The audit work will be financed with grant proceeds. According to the Bank policy on Access to Information, audited financial statements will be made public.

56. **Project funds will be disbursed through advances to the DA, Direct Payments, and Reimbursement.** A DA will be opened at a commercial bank acceptable to the Bank, to be used exclusively for deposits and withdrawals of grant proceeds for eligible expenditures. Funds deposited into the DA will follow Bank's disbursement policies and procedures, as described in the Disbursement and Financial Information Letter (DFIL). NGOs selected to implement activities under Component 2 will be required to open and maintain a segregated account in a commercial bank to receive funds disbursed by MARN for activities related to restorations and from which payments will be made. Specific procedures, including flow of funds arrangements, documentation requirements and simplified format for the beneficiaries to reports on the use of the funds, as well as supervision from MARN will be included in a simplified guidance. Finally, FM supervision will include periodic review of unaudited Interim Financial Reports (IFRs), review of the Project's audits, and biannual supervision missions.

(ii) Procurement

57. **Procurement arrangements.** The Recipient will carry out procurement under the Project in accordance with the WB's "Procurement Regulations for IPF Borrowers" (Procurement Regulations) dated July 2016 and November 2020⁶⁰, and with the provisions stipulated in the procurement plan and in the POM. Procurement activities will be carried out by the PIU with the support of UACI. An initial assessment on the procurement capacity of the PIU was carried out and it is concluded that the PIU will have the adequate capacity to carry out the Project. Among the fiduciary arrangements, the PIU will include a procurement specialist in charge of the procurement processes and contract management. A simplified Project Procurement Strategy for Development (PPSD) will be prepared to better define the appropriate procurement

⁶⁰ <http://pubdocs.worldbank.org/en/178331533065871195/Procurement-Regulations.pdf>



arrangements, appropriate selection methods, market analysis approach, and type of review to be conducted by the Bank. A procurement plan covering the initial 18 months of the Project has been prepared in accordance with the identified needs to achieve the fulfillment of the objectives in accordance with the Procurement Plan and made available through the Systematic Tracking of Exchanges in Procurement (STEP). Mandatory Procurement Prior Review Thresholds detailed in Annex I of the Bank’s Procurement Policies will be followed. The main procurement activities will be centred around consulting services and noncomplex goods. With regards to the Component 2, once the beneficiary subprojects are selected as defined in the POM, such subprojects will follow the Procurement Regulations, if the project execution includes the procurement of goods or services. Simplified procedures and standardized procurement documents for such procurement activities will be agreed between the PIU and the Bank and attached to the POM.

58. Fiduciary Risk. The fiduciary risk for this project has been assessed at moderate. The main risk is that 46 percent of grant proceeds are expected to be executed through local NGOs which will implement activities related to technical assistance for ecosystem restoration including procure and payment for agricultural inputs to be provided to farmers. The mitigation measures included in the Project to ensure satisfactory performance of fiduciary functions include (i) an FM section of the POM to ensure adequate contract management and monitoring mechanisms over project funds; (ii) a simplified FM assessment of NGOs that are proposed to receive advances will be carried out by the Bank if the amount of the grant exceeds US\$200,000, and by the PIU for lower amounts; a template for the desk review should be included in the POM; (iii) a simplified guidance for the NGO’s implementation of restoration activities under Component 2 should be prepared and should be part of the NGO sub-grant agreements, including procedures for the flow of funds between PIU and the NGO, internal controls, NGOs documentation of expenditures, etc.; and (iv) qualified fiduciary staff hired for the PIU under ToR acceptable to the Bank.

C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

D. Environmental and Social

59. The following environmental and social standards (ESS) apply to the Project: ESS1. Assessment and Management of Environmental and Social Risks and Impacts, ESS2. Labor and Working Conditions, ESS3. Resource Efficiency and Pollution Prevention and Management, ESS4. Community Health and Safety, ESS5. Land Acquisition, Restrictions on Land Use and Involuntary Resettlement, ESS6. Biodiversity Conservation and Sustainable Management of Living Natural Resources, ESS7. Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, ESS8. Cultural Heritage, and ESS10. Stakeholder Engagement and Information Disclosure.

60. The overall environmental and social risk is considered substantial. The environmental risk is considered moderate. Overall, the Project is expected to promote the adoption of more sustainable and resilient land-use practices to contribute to the conservation of local and globally important ecosystems and biodiversity, reduce forest and soil degradation, improve biodiversity conservation of gallery forest and mangroves, and adopt sustainable agricultural practices in the sugarcane industry (including the reduction of agrochemical and pesticide use, improve water use, and promote overall sustainable practices and technologies). Identified environmental risks and impacts include: (i) loss or conversion of natural and semi-natural vegetated land to other types of land cover classes (if good practices in land



restoration are not applied correctly); (ii) water overuse for seedling production; (iii) introduction of invasive species through reforestation and/or agroforestry activities; (iv) potential contamination due to the use of agrochemicals and pesticides in sugar cane production, agroforestry and agro-silvo-pastoral systems; and (v) occupational health and safety hazards for the workforce due to the careless use of machinery and equipment. Possible negative impacts are expected to be site-specific, short-term, and reversible.

61. The social risk is considered substantial. While the overall social benefits are expected to be positive, identified social risks and impacts include: i) project workers exposure to the COVID-19 virus and transmission to local communities; ii) transmission of the virus within local communities and beneficiaries, especially during workshops; iii) economic displacement due to access restrictions as part of Component 2 that could impact vulnerable and resource dependent groups; iv) conflicts over competing interests and demands of different land and water users (in light of water scarcity); v) the need to consider tradeoffs between different stakeholder interests and warrant off elite capture; vi) the presence of crime and gang-violence in some areas, which can pose a threat to local communities and project workers and could hinder the implementation of subprojects; and vii) possible exclusion of IPs from project benefits due to historical barriers to access benefits, limited territorial connectivity, and lack of culturally sensitive engagements. No physical displacement is envisaged under the Project. The Project will include elements to minimize exclusion risks and put a strong focus on inclusive stakeholder engagement through the SEP, particularly regarding small producers, community/day/rotating workers, migrant workers, women and youth.

62. Mitigation measures for the above-mentioned environmental and social risks are set out in the Environmental and Social Management Framework (ESMF), which includes: a Process Framework (PF); a SEP; Labor Management Procedures (LMP); Biodiversity Management Guidelines; an Integrated Pest Management Plan; an Integrated Waste Management Plan; an Occupational Health and Safety Plan; a COVID-19 Response Plan; an Emergency Response Plan; and, a Cultural Tangible and Intangible Heritage Management Procedure. The commitments from these instruments are captured in the Environmental and Social Commitment Plan (ESCP) and include: i) comprehensive community and workforce health and safety measures; ii) hazardous substances and pollution prevention measures; iii) waste management measures; iv) biodiversity management considerations; v) labor and contract management procedures, including the enforcement of codes of conduct, transparency; vi) inclusiveness and participation of beneficiaries in designing and implementing the project activities; vii) communication and stakeholder engagement activities to continue throughout project implementation; and viii) a grievance mechanism, covering both workers and project stakeholders at large. The PIU will include one social specialist throughout project implementation. Advanced drafts of the ESMF, the associated Environmental and Social risk management instruments listed above, and the ESCP have been prepared by MARN prior to Appraisal⁶¹. They were disclosed on April 12th, 2021. A detailed description of Environmental and Social risks and impacts and a summary of proposed mitigation measures are included in the Environmental and Social Review Summary (ESRS), also disclosed on April 12th, 2021.

VI. GRIEVANCE REDRESS SERVICES

63. Communities and individuals who believe that they are adversely affected by a WB supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which

⁶¹ The documents are accessible at <https://marn.gob.sv/programas/proyecto-de-gestion-integrada-y-restauracion-del-paisaje-en-el-salvador/>.



determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the WB's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the WB's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the WB Inspection Panel, please visit www.inspectionpanel.org.

VII. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

64. The overall risk rating is Substantial. Key risks include (i) environmental and social, (ii) stakeholders; (iii) other: health security, and (iv) other: climate change.

65. Environmental and social: Substantial. This is mostly due to social risks (see Section V.D for details on risks and mitigation measures).

66. Stakeholders: Substantial. Violence is still widespread in the country, and conflicts might arise among stakeholders in the project implementation area. A significant challenge arises in working with diverse stakeholders in the region. Tensions persist between communities and sugar cane producers due to water usage and the expansion of sugar cane fields. Consequently, critical stakeholders (farmers) could oppose the proposed changes and deny the project interventions and support. As a mitigation strategy, building on the FCPF REDD+ Readiness Preparation Project, MARN will continue a board consultation process involving various sectors and working in the regional multi-stakeholder environment. The MRdR will allow stakeholders to be represented, creating an instance for collaboration with the MARN and MAG guidance. Also, partial funding of restoration activities will stimulate stakeholders' willingness to participate in the project interventions.

67. Other – COVID-19 pandemic: Substantial. The COVID-19 outbreak is not yet controlled and there are lingering impacts. Movement restrictions may reduce fieldwork and stakeholder participation; limitations in response to the pandemic may affect populations' livelihoods, increasing pressure on natural resources and land; the GoES might shift resources to health and economic departments. While the outbreak could be better contained by the time the Project starts, early in 2022, its evolution actually remains uncertain⁶². As a mitigation measure, COVID-19 risk assessments and guidelines were developed and revised in direct coordination with the GoES' health agencies and following the Bank's guidance. These will be updated periodically during project implementation. In addition, by strengthening forest landscapes and ecosystem services, the proposed project would be strengthening forests as a safety net for vulnerable rural population, as forests are sources of food, water, income, nutritional diversity, health, fiber, and energy for vulnerable rural population. The ecological recovery this project proposes would also contribute to enhancing the resilience of key sectors of the economy such as sugarcane, basic grains, and cacao by promoting best practices for land restoration and integrating compensation for environmental services.

68. Other – Climate Change: Substantial. The targeted landscape is exposed to climate-induced extreme

⁶² Hence, by December 15th, 2021, 64% of the population were reported as fully vaccinated. However, as many as 3,383 new cases were still recorded during the last month, against 10,288 at the peak, in September 2020 (source: John Hopkins University of Medicine Coronavirus Resource Center).



weather events, which are likely to be exacerbated by climate change (See Section 1. A, para 2). Related events could affect stakeholder participation, project implementation, and development outcomes. As a mitigation measure, a Climate Risk Assessment guided the project design.⁶³ The sustainable agricultural practices promoted by the Project will contribute to building resilience to the impacts of climate change by maintaining the essential functions of the forest ecosystems, underpinning rural livelihoods subsistence and key sectors of the economy such as agriculture, tourism, and infrastructure. Also, sustainable management of natural resources through an integrated landscape approach will help protect ecosystems and people's exposure to weather and physical conditions caused by climate change. This is consistent with the country's mitigation-based adaptation approach reflected in the NDC, which poses agriculture and water among the priority areas for climate action to promote climate change adaptation.

⁶³ <https://www.climatelinks.org/resources/climate-risk-profile-el-salvador>



VIII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: El Salvador

El Salvador Integrated Landscape Management and Restoration

Project Development Objectives(s)

The proposed Project Development Objective (PDO) is to promote integrated landscape management and restoration in targeted areas of El Salvador.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
To restore degraded land in El Imposible – Barra de Santiago Conservation Area							
Land area under sustainable landscape management practices (CRI, Hectare(Ha))		0.00	0.00	15,150.00	28,310.00	44,500.00	52,014.00
Area of landscapes under improved management to benefit biodiversity (Hectare(Ha))		0.00	0.00	15,000.00	28,000.00	44,000.00	51,294.00
Area of landscapes under sustainable land management in production systems (Hectare(Ha))		0.00	0.00	150.00	310.00	500.00	720.00
Restored land area (Hectare(Ha))		0.00	0.00	175.00	450.00	860.00	1,040.00
Area of degraded		0.00	0.00	150.00	350.00	720.00	900.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
agricultural land restored (Hectare(Ha))							
Area of forest and forest land restored (Hectare(Ha))		0.00	0.00	20.00	70.00	100.00	100.00
Area of wetlands (including estuaries, mangroves) restored (Hectare(Ha))		0.00	0.00	5.00	30.00	40.00	40.00
Share of targeted community members with rating 'Satisfied' or above on project interventions, disaggregated by gender (Percentage)		0.00	0.00	50.00	60.00	70.00	70.00
Of whom, women (Percentage)		0.00	0.00	50.00	60.00	70.00	70.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Enabling conditions for integrated landscape management							
Updated or new local sustainable development or exploitation plans (Number)		0.00	0.00	2.00	3.00	4.00	4.00
Public servants trained for monitoring and evaluating land restoration (Number)		0.00	10.00	25.00	25.00	25.00	25.00
Women public servants		0.00	33.00	33.00	33.00	33.00	33.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
trained for M&E of land restoration (Percentage)							
Area monitored using the updated Landscape Restoration Index (ISR) (Hectare(Ha))		0.00			67,655.00		67,655.00
Compensation for Ecosystem Services agreements signed (Number)		0.00			3.00		3.00
Local communication actions (Number)		0.00	5.00	10.00	15.00	20.00	20.00
Women participating in strategic dialogue processes (Percentage)		10.00	12.00	15.00	18.00	20.00	25.00
Improved management and restoration of ecosystems and degraded land							
Producers receiving project assistance and resources to restore degraded lands disaggregated by gender. (Number)		0.00	100.00	510.00	1,040.00	1,040.00	1,040.00
Women producers receiving project assistance and resources to restore degraded land (Number)		0.00	0.00	100.00	255.00	255.00	255.00
Farmers adopting sustainable sugar production technologies promoted by the project (Number)		0.00	0.00	50.00	250.00	250.00	250.00
Women adopting sustainable sugar production technologies (Number)		0.00	80.00				80.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Greenhouse gas emission mitigated through restoration practices (CO2 equivalent) (Metric ton)		0.00			70,000.00		444,851.00
Average yield increased in food crops by participating Households (Percentage)		0.00	0.00	0.00	10.00		20.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Land area under sustainable landscape management practices	The indicator measures, in hectares, the land area for which new and/or improved sustainable landscape management practices have been introduced. Land is the terrestrial biologically productive system comprising soil, vegetation, and the associated ecological and hydrological processes; Adoption refers to change of practice or change in the use of a	Annual	Project and activity records, and GIS backed field surveys. Technical inspection after works. Assessment of PA management interventions .	See Data Source. This indicator reflects GEF Core Indicator 4. It is the aggregation of two sub-indicators (GEF Core Indicators 4.1 and 4.3): <ul style="list-style-type: none"> Area of landscapes under improved management to benefit biodiversity; 	PCU M&E function



	<p>technology promoted or introduced by the project; Sustainable landscape management (SLM) practices refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management measures that, applied as a combination, increase the connectivity between protected areas, forest land, rangeland, and agriculture land.</p>			<ul style="list-style-type: none">and• Area of landscapes under sustainable land management in production systems.	
<p>Area of landscapes under improved management to benefit biodiversity</p>	<p>Sustainable practices that benefit biodiversity refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management measures that, applied as a combination, reduce pressures on biodiversity and increase the connectivity between</p>				



	protected areas, forest land, rangeland, and agriculture land. The area includes forested land, including mangroves, outside protected areas (such as riparian of core conservation areas).				
Area of landscapes under sustainable land management in production systems	This is focused at the implementation of improved practices in sugarcane following BONSUCRO standard guidelines. It includes 20 ha of demonstrative sugarcane plots and expected uptake of 250 sugarcane producers in 700 ha derived from the project's interventions.				
Restored land area	This indicator measures the total area restored through project activities. It reflects GOF Core Indicator 3. It is the aggregation of three sub-indicators (GEF Core Indicators 3.1, 3.2, and 3.4). It includes 40 ha of demonstration restoration plots under Component 1 and 1,000 ha of restoration actions under Component 2, which are divided among	Annual	Project and activity records complemented with satellite information (potentially including the landscape sustainability index).	See data source.	PCU M&E function



	productive agricultural land, riparian forests and mangroves. The indicator will be based on verifiable improvements in vegetation and ecosystem health compared to baseline situation. It identifies the land-use types that were restored. Information will be disaggregated by type of land: Agricultural, Forest, Wetland.				
Area of degraded agricultural land restored					
Area of forest and forest land restored					
Area of wetlands (including estuaries, mangroves) restored					
Share of targeted community members with rating 'Satisfied' or above on project interventions, disaggregated by gender	The indicator reflects demand-side social accountability. Through disaggregation by sex, captures the perception by women of interventions on land restoration, jobs, and livelihoods. Project beneficiaries include the direct beneficiaries of the restoration and sustainable land management promotion interventions	Annual	Perception Survey	Perception Survey	External Consultancy



	under Component 2 as well as the communities benefitting from local planning exercises supported by the project, and those linked to the Ramsar areas and in the riparian areas of conservation areas.				
Of whom, women					

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Updated or new local sustainable development or exploitation plans	This indicator measures the number of local sustainable exploitation plans (PLAS) or local sustainable development plans (PDLS) that are updated. The PDLS is a territorial development plan which will be updated through multi-stakeholders participation with project support. The PLAS target families whose livelihoods depend on non-timber mangrove-related products. They establish management	Annual	Project and activity records. Official institutional procedures and records.	See Data Source	PCU M&E function



	actions and support from MARN.				
Public servants trained for monitoring and evaluating land restoration	This indicator measures the number of relevant institutional units that underwent technical training for monitoring the sustainability of the landscape. It includes MARN, DGFCR, CENTA, and local governments (municipalities).	Annual	Project and activity records. Official institutional procedures and records.	See Data Source	PCU M&E function
Women public servants trained for M&E of land restoration	Percentage of women receiving the specialized training under the project	Same	Same	Same	same
Area monitored using the updated Landscape Restoration Index (ISR)	The indicator measures the area in hectares monitored using the improved Landscape Sustainability Index, which will include biodiversity considerations for the first time and has not been applied since 2017. This will be monitored by the DGFCR or other partner agencies from MARN/MAG. It includes the whole targeted conservation area.	Mid and end project.	Official institutional procedures and records.	See above.	PCU M&E function with the collaboration of MARN, CENTA and DGFCR.
Compensation for Ecosystem Services agreements signed	This indicator accounts for the number of Compensation for Ecosystem Services	Mid and end project	Project and activity records. Official		PCU M&E function.



	agreements established, that include sugarcane producers and upstream farmers.		signed contracts.		
Local communication actions	This indicator measures the number of media releases financed as part of the awareness campaign in the targeted landscape, about ecosystem services' benefits. It will be disaggregated by channel (radio, newspaper, physical publicity) as these have a different reach and target audiences.	Annual	Project and activity records.	See data source.	PCU M&E function.
Women participating in strategic dialogue processes	This indicator will track women's participation within strategic dialogues and negotiation processes in Project supported sectoral coordination platforms, including the two round tables for restoration and private sector dialogue, the meetings of the COAL and the Ramsar Committees, the PDLS and PLAS revision, and the dialogue meetings regarding the proposed Mechanism on Compensation for	Annual	Progress report, meeting minutes.	See above.	MARN



	Ecosystem Services.				
Producers receiving project assistance and resources to restore degraded lands disaggregated by gender.	The indicator measures the number of producers that receive non financial resources from the project to complement restoration investments. Implemented investments will have realized the committed restoration activities and measured the impacts. This indicator includes 1,000 basic grain producers upstream and 20 selected sugarcane producers that will serve as pilot/demonstrative farms.	Annual.	Project and activity records, complemented with field observations and reports.	See Data Source.	PCU M&E function.
Women producers receiving project assistance and resources to restore degraded land	Gender contribution to the same indicator	Same	Same	same	Same
Farmers adopting sustainable sugar production technologies promoted by the project	This indicator measures the number of sugarcane producers who implement biodiversity and ecosystem services techniques following the BONSUCRO standard.	Annual	Same as previous indicator.	Same as previous indicator.	Same as previous indicator.
Women adopting sustainable sugar production technologies					
Greenhouse gas emission mitigated through restoration practices (CO2	This indicator measures the GHG emissions mitigated	Mid and end	Field observations	Proxy estimations based on area changes	PCU M&E function in collaboration with DGFCR



equivalent)	through project interventions in the targeted degraded landscape.	project.	and reports, complemented with remote sensing observations.	regarding different land use and vegetation cover categories cover.	and MARN.
Average yield increased in food crops by participating Households	The indicator measures the land productivity increase at farm level from restoration and land management activities of the project. Total number of kg of corn and beans divided by the number of hectares of land cultivated by participating HH of component 2. Then, the percentage increase will be calculated against the baseline data of yields and yield changes in farms in similar agro-ecosystem areas outside the project intervention area.	Mid term and End of project.	Field surveys.	See data source.	PCU M&E function.

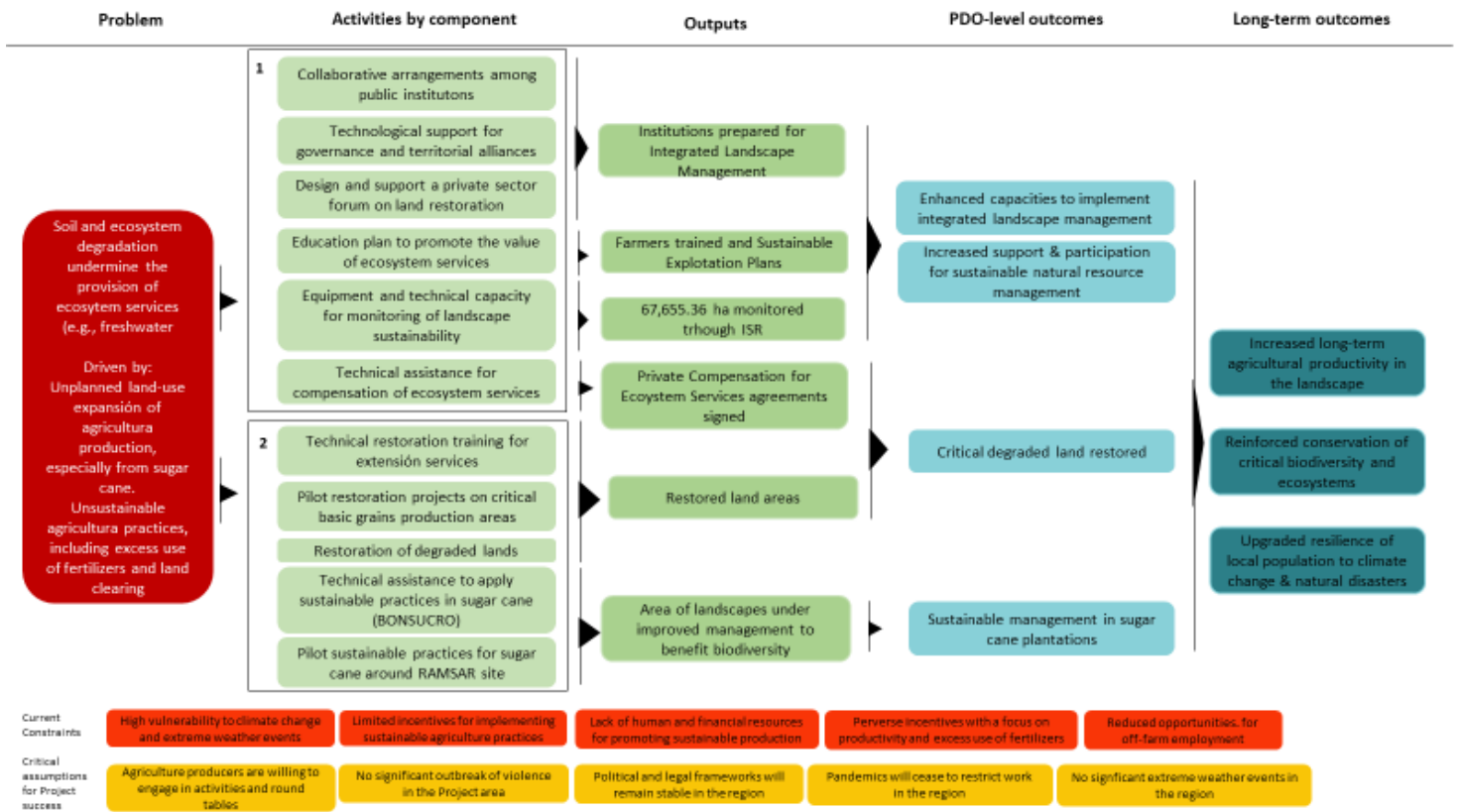


Annex 1: Theory of Change

1. Unplanned expansion of sugar cane and basic grain crops coupled with unsustainable production practices are degrading land and ecosystems across the landscape, including mangroves and riparian forests, and are also degrading biodiversity (including in agriculture ecosystems), as well as soil within farms, reducing their productivity and sustainability. Sugar cane expansion has also resulted in the direct conversion of mangrove forests, and the displacement of traditional crops to higher mountain areas, which are consequently degraded and affect the provision of hydrological services for the overall country's economy, and particularly for sugarcane crops themselves. Also, coffee agroforestry systems, which constitute an important area of the country's forest cover and provide critical ecosystem services, are being degraded or replaced by pasture or crops without shade, further degrading and deforesting the landscape. Solutions to this problem are constrained by (i) high vulnerability to climate change and extreme weather events, especially droughts and floods, that prompt farmers to deforest new land; (ii) limited incentives to implement sustainable production practices that mainstream biodiversity conservation and prevent land degradation; (iii) lack of institutional capacities and financial resources to manage ecosystem services at the landscape scale, including insufficient coordination between environmental and agricultural policies; (iv) perverse incentives with a focus on productivity and excess use of fertilizers; and (v) reduced opportunities for off-farm employment (exacerbated by the COVID-19 pandemic).
2. To address this issue, the proposed Project will work at a landscape scale to generate the enabling conditions for integrated landscape management, pilot improved management practices, and promote restoration of degraded lands and ecosystems. It will also engage the private sector to adopt sustainable production practices and invest in the conservation and restoration of ecosystems, targeting small farmers and communities. The Project will strengthen governance and technical capacities to manage natural resources at the landscape scale by enhancing coordination of public institutions, particularly between the MARN, the MAG and municipalities; and by generating technical capacities to mainstream biodiversity conservation and land degradation considerations in natural resources management decisions and policies. It will also promote private financial mechanisms to restore degraded lands and preserve ecosystem services by working with sugar cane producers who benefit from ecosystem services generated upstream, where healthy coffee agroforestry systems and gallery forests are key for biodiversity conservation and water provision and regulation. Additionally, technical assistance will be provided to landscape dwellers to help them adopt SLM practices that mainstream biodiversity conservation and LDN criteria, improving ecosystems' connectivity and reducing soil erosion at the farm level. The combined actions are expected to generate the financial and institutional conditions to ensure the sustainability of restoration and conservation efforts over time, contributing to reinforce the conservation of critical biodiversity and ecosystems, improve the provision of ecosystem services across the landscape and especially in downstream areas, and upgrade the resilience of local communities to climate change and natural disasters.
3. The success of these activities in achieving the ultimate outcomes will be dependent on the following assumptions: (i) The agricultural producers in the project area, and critically sugarcane producers, will be willing to engage in activities and governance bodies (such as the MRdR); (ii) the area will not face a significant outbreak of violence on top of the present security conditions; (iii) the relevant policies and programs established by the GoES will remain stable; and (iv) COVID-19 pandemic restrictions will cease, allowing for fieldwork.



Figure 2: Theory of Change

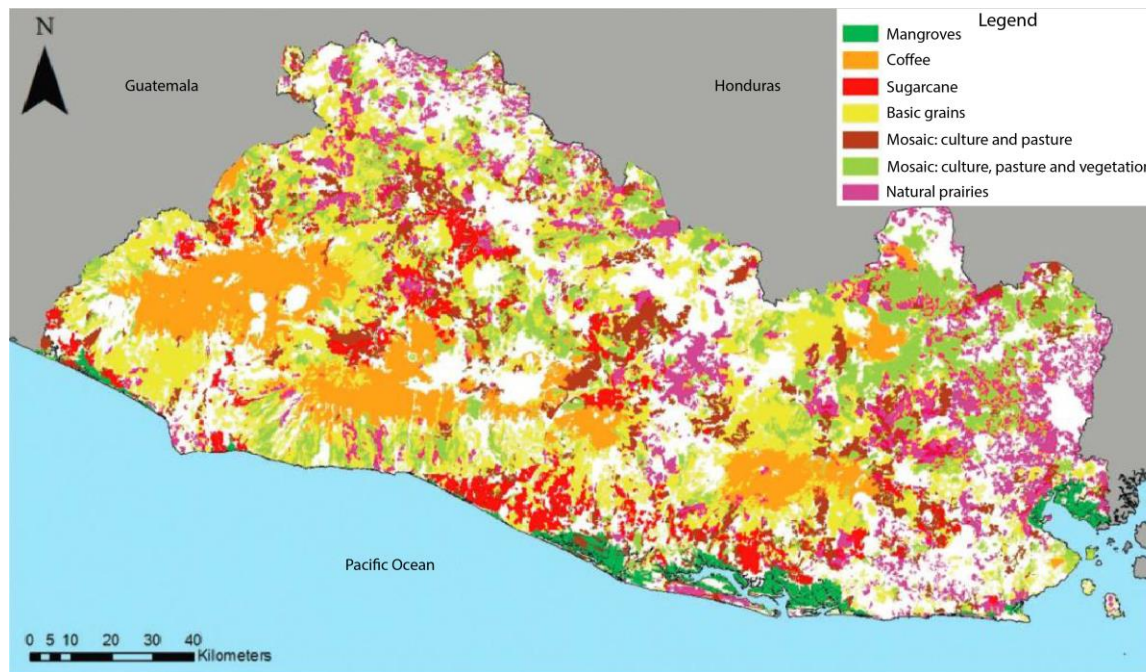




Annex 2: Project Description

1. El Salvador has a long history of anthropogenic intervention and land-use change in its territory, composed of intricate mosaics that include forest patches, coffee farms, pasture, bushes, subsistence crops, and sugarcane, among others, while the remaining area of natural ecosystems is limited. Land use is dominated by agriculture. Approximately 60 percent of the territory is used for agricultural production, and farms cover 80 percent of the land area in a diverse agriculture-forest-landscape⁶⁴ (See Figure 3)⁶⁵. Despite a decrease in the rate of forest loss in recent years, from 2001 to 2018, El Salvador lost 74,400 ha of tree cover, equivalent to a 7.5 percent decrease in tree cover since 2000⁶⁶. This places the country as the second most deforested in Latin America. Deforestation has also affected the country's coastal and marine forest resources: in the last five decades, the country lost 60 percent of its mangroves, passing from almost 100,000 ha to only 40,000 ha⁶⁷. According to the 2018 National Forest Inventory, 38.8 percent of the country is covered by forests. However, most of those forests are secondary (58 percent) and agroforestry systems of shade coffee (21 percent), and there is important fragmentation of forest ecosystems. Despite recent efforts to improve environmental sustainability and restore degraded land, land-use change remains a severe problem in the country as it drives land degradation and threatens biodiversity.

Figure 3: Land Use in El Salvador (2015)



Source: IUCN (2017).

⁶⁴ A landscape is the aggregation of visible features of an area of land, its landforms, and how they integrate with natural or man-made features.

⁶⁵ World Bank. (2020). El Salvador Country Forest Note.

⁶⁶ GFW. (2019). El Salvador Country Dashboard. Global Forest Watch.

⁶⁷ MARN. (2015). Hacia la restauración y reforestación de ecosistemas y paisajes 2016-2017.



2. **Agriculture makes a significant contribution to El Salvador's GDP and is an essential employment source, but its productivity is relatively low.** In 2016, the agriculture sector contributed 12 percent of the country's GDP, and 19 percent of the employed population is engaged in agriculture, fishing, and hunting. In rural areas, that number rises to 43 percent, and agricultural activities constitute the primary source of income⁶⁸. Due to its high levels of independent and informal workforce, this sector is especially vulnerable to the effects of the quarantines and macroeconomic disturbances provoked by the COVID-19 pandemic. Subsistence agriculture is practiced by 350,000 producers in farms of less than three hectares and steep terrains, dominated by low productivity corn crops. Most family farms do not participate in producer associations. Only 8 percent have access to credit, and 10 percent have access to technical assistance⁶⁹. Coffee is the main product in terms of GDP contribution, but others such as sugar cane are rapidly growing. The agricultural sector receives direct and indirect incentives, which often contradict the environmental commitments and objectives El Salvador has established in recent years.
3. **Sugar cane expansion, crop, and harvest practices have been identified as one of the main current threats to Salvadorian ecosystems.** Located mostly on the lower western and central lands, sugar cane plantations have spread into the country's coastal territories. They are primarily responsible for the clearing of mangroves and riparian forests. From 2006 to 2015, sugar cane plantations increased from approximately 60,000 to 80,000 ha. The country's Fifth Biodiversity Report found that 48,280 ha of deforestation between 2000 and 2010 were due to the expansion of sugarcane plantations⁷⁰. In terms of land degradation, unsustainable agricultural practices such as burning crops before harvest, heavy usage of herbicides and pesticides, and poor wastewater management practices generate soil erosion and mangroves' siltation, importantly affecting biodiversity. Erosion of soils and sedimentation of water leads to lower productivity rates, which farmers tend to compensate for by further expanding their agricultural area into mangrove, ecotones areas, and gallery forests⁷¹. Mangroves serve as an essential nursery habitat for fisheries and are rich in biodiversity and play an important role in coastal communities by protecting shorelines from storm and hurricane winds, waves, and floods⁷². Pressure on ecosystems may be accentuated in sugarcane and other crop areas because of the COVID-19 pandemic if unemployed workers return to rural areas or if the GoES increases assistance to secure food security and employment.
4. **In turn, land degradation affects the agricultural sector and increases the vulnerability of rural communities.** Land degradation and soil erosion, exacerbated by recurrent flood and drought, adversely impact agrarian production, further affecting the rural poor's livelihoods. The National Development Plan (2014) identifies natural disasters as one of the greatest threats to human development, with a disproportionate impact on the poor in combination with other factors like environmental degradation⁷³. Losses in infrastructure, crop production, and water supply caused by extreme rainfall events and droughts since 2009 has affected the economy by almost 1 percent⁷⁴.
5. **Lack of coordination and policy harmonization between environmental sustainability objectives and rural development objectives remain critical obstacles to effectively addressing land degradation and**

⁶⁸ Ministry of Agriculture and Livestock. Retrieved from <http://www.mag.gob.sv/mag-destaca-crecimiento-de-la-agricultura-y-aporte-al-pib-en-informe-de-rendicion-de-cuentas/>

⁶⁹ National Census, 2007. National Household Survey, 2010.

⁷⁰ Dominguez, J., Cherret, I., Catillo, J., & Kernan, C. (2018). Identificación y Análisis de las Causas Directas y Subyacentes de la Deforestación y Degradación de Hábitats Boscosos en El Salvador.

⁷¹ United States Agency for International Development (2018). Tropical forest and biodiversity analysis in El Salvador.

⁷² WWF. (n.d.). Central America: El Salvador into Guatemala. Retrieved from <https://www.worldwildlife.org/ecoregions/nt1425>

⁷³ GFDRR. (2019). Global Facility for Disaster Reduction and Recovery - El Salvador. Retrieved from <https://www.gfdrr.org/en/el-salvador>

⁷⁴ World Bank. (2020). El Salvador Country Forest Note.



biodiversity loss. Despite the development of multi-stakeholder dialog supported by rigorous analysis to advance restoration efforts, agricultural policies often contradict environmental objectives and commitments. MAG regulates land use planning for water, land, and forestry uses through the DGFCR. These institutions often provide direct and indirect support to both large scale and subsistence scale producers that do not consider environmental elements.

6. **Restoring ecosystems and landscapes to guarantee sustainable livelihoods is a national priority.** To address the environmental sustainability challenges it faces, El Salvador is committed to reverse the degradation process by setting ambitious targets to restore degraded land and mainstream biodiversity across the agricultural and forestry sectors. The main components of the 2012 National Environmental Policy are the restoration and conservation of ecosystems to reduce risks while sustaining productive activities and ensuring the well-being of the population. Within this framework, the PREP was developed in synergy with key biodiversity, environmental, water and sanitation, and climate change strategies. The PREP is already being translated into action: MARN has been working with different partners to design and implement instruments to strengthen and prioritize PREP actions. The PREP applies the ROAM to determine and analyze restoration options based on biophysical, social, and economic criteria⁷⁵. As a result, restoration actions have been implemented in 241,662 ha of degraded land across the country in the 2014-2019 period⁷⁶. Under a coordinated and synergistic approach, in El Salvador, restoration initiatives are contributing to recover and conserve biodiversity, rehabilitating degraded lands, supporting the climate change mitigation and adaptation strategies, and advancing towards Goal 15 of Aichi of the Convention on Biological Diversity.

7. **To reduce land degradation and restore degraded land, El Salvador updated the PANSAL and has developed an ambitious National Restoration Plan.** El Salvador is committed to LDN, and it will be a pilot country in the implementation of the LDN Framework under the UNCCD. The country is updating the PANSAL, developing a national strategy, country objectives, and voluntary targets that align with this project to achieve this objective. Moreover, as part of the Bonn Challenge, the country pledged to restore one million hectares of land by 2030⁷⁷. The MARN presented in 2017 the National REDD+ EN-REP to meet its ecosystem restoration commitments. The EN-REP aims at restoring the ecosystem functions of the country's degraded lands to reduce the loss and damage caused by natural and climate-related disaster risks; increase the country's carbon stocks and capture rate; pursue sustainable economic activities and protected infrastructure investments; and ensure the overall well-being of the population. In the same year, the MARN launched the 2018-2022 National Ecosystem Restoration Plan, which includes an economic analysis of the actions for the restoration of landscapes and promotes improved agricultural practices that reduce land degradation.

8. **A PDLs aims to improve coordination at the regional level and guide new investments on restoration efforts in the Conservation Areas.** The PDLs are developed using Miradi's open standards methodology⁷⁸. Each PDLs has two areas of work: (i) the protection, increase and restoration of forest ecosystems to ensure ecosystem services, conserve biodiversity, and contribute to the reduction of greenhouse gas emissions and increase of carbon reserves, and (ii) the transformation of traditional productive systems into agroecological or sustainable systems that contribute to improving the quality of life for the human population. The methodology for planning and implementing restoration actions follows four stages: (i) a participatory and inclusive analysis of the region's vulnerability and environmental degradation, to identify priority issues to be addressed; (ii) identify priority sites

⁷⁵ MARN. (2019). *Restauracion de Ecosistemas y Paisajes Dashboard*. Retrieved from <http://seaweb.marn.gob.sv:8080/geocumplimiento/vgres/dashboard.php>

⁷⁶ UICN, 2020. Proyecto Barómetro de Bonn: Actualización 2018-2020.

⁷⁷ Bonn Challenge. (n.d.). *El Salvador*. Retrieved from <http://www.bonnchallenge.org/content/el-salvador>

⁷⁸ <https://www.miradi.org/open-standards/>



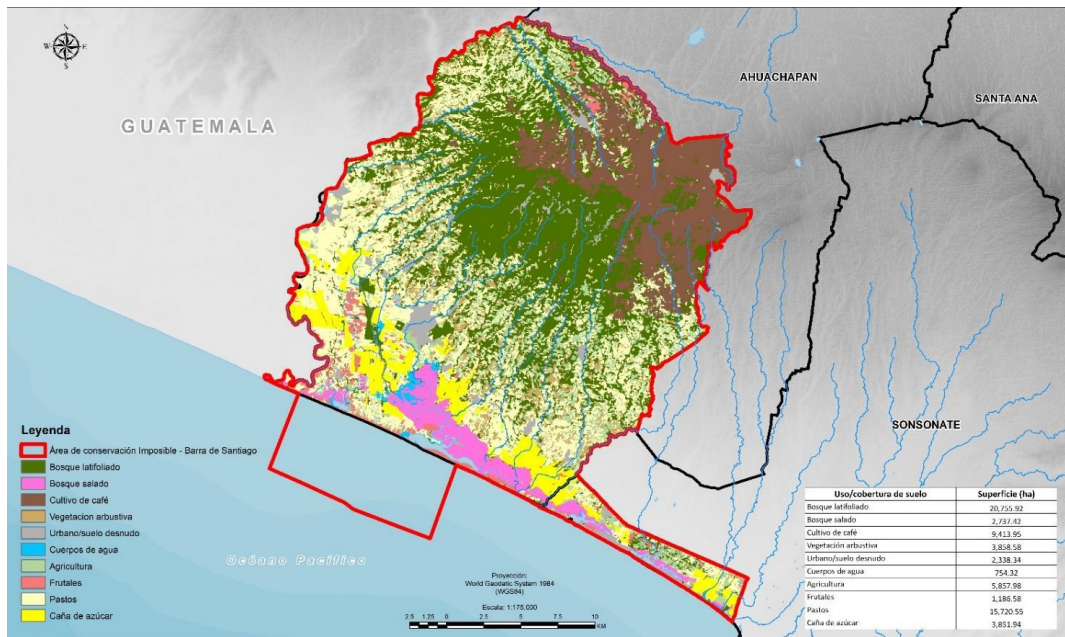
for action, including due to their potential for recovering and conserving ecosystem services, as well as reducing vulnerability to climate change; (iii) formulation of PDLs, which includes actions to address drivers of deforestation and a monitoring plan. Prior to implementation on the ground, strategic alliances and coordination mechanisms are established, backed up by signed agreements or Memorandums of Understanding. Finally, the stakeholders organize the necessary logistics, particularly the nurseries that will provide material to the different initiatives.

9. **Over the last decade, the sugar cane industry has adopted more socially and environmentally friendly practices.** FUNDAZUCAR and CONSAA began in 2012 the process of building the sustainability strategy of the sugar agroindustry, aiming to achieve a more sustainable and resilient agriculture. FUNDAZUCAR developed a Manual of Good Practices⁷⁹, which integrates environment criteria (including green harvest techniques), with a perspective to progressively adopt a territorial approach (i.e., water basin) and to contribute to comply with the country’s SDG commitments. The manual was developed with support from GIZ, IDB, and FUNDEMAS. More recently, the sugar cane industry started to certify its sustainability under the Bonsucro International Standard⁸⁰.

Selected area

10. **The Project will be implemented across selected areas in the EIBSCA (See Figure 4).** The area contains a population of 198,556 concentrated in rural areas. The land’s topography is mostly flat in the south, increasing altitude progressively towards the north, reaching a peak of 1844 meters. About 41 percent of the tree cover (28,690 ha) is in conservation areas, concentrated in southern mangroves, and dispersed as patches in the north. Annual precipitation ranges between 1455 and 1918 mm, with most rain concentrated in the north, feeding into the water basins’ high areas.

Figure 4: El Imposible – Barra de Santiago Conservation Area region landscape and land use cover



Source: MARN (2019)

11. **The EIBSCA, one of the poorest regions in the country, with steep slopes (greater than 35 percent) is especially vulnerable to land degradation and is prone to droughts.** The use of unsustainable practices and

⁷⁹ <http://fundazucarelsalvador.com/manual-de-buenas-practicas-agricolas/>

⁸⁰ <https://www.bonsucro.com/tools-and-resources/>



continued deforestation to produce basic grains for subsistence has aggravated erosion in the high areas of the region. The pressure of recent droughts and extreme weather events that lead to landslides combined with these factors to exacerbate land degradation. Meanwhile, in the lower elevations, traditional cultures have been lost to sugarcane, which is implemented at medium and large scales, and requires unique management approaches. The region is characterized for containing an entire water basin and connecting the practices of subsistence basic grain producers with sugarcane producers through water, requiring an integrated landscape management approach.

12. **Specific municipalities and basins were selected based on a ROAM analysis and based on FIAES' experiences restoring land in the region.** Component 1 will be implemented across the entire landscape, focusing on the municipalities of San Pedro Puxtla, Guaymango, Jujutla, San Francisco Menéndez, and Ataco. Component 2 will be implemented in the municipalities of Acajutla, San Francisco Menéndez, and Jujutla. These areas have been prioritized considering water recharge areas, riparian forests, and biological corridors. Similarly, areas in and around sugar cane plantation in the lower basin and coastal municipalities were prioritized on crop areas with degraded lands and targeting those close to fragile ecosystems. The Project area of influence totals 67,655.362 ha (See Table 1).

Table 1. Project area and land-use type by municipality

Municipality	Broadleaf forest outside Protected Areas	Broadleaf forest inside Protected Areas	Other uses inside Protected Areas (including mangroves and wetlands)	Other uses outside protected areas	Total
San Francisco Menéndez	6,178	2,678	1,136	16,089	26,081
Jujutla	4,471	102	1,192	12,158	17,923
Concepción de Ataco	568	0	0	4,080	4,648
Tacuba	5,734	1,097	53	8,851	15,735
Acajutla	69	5	507	2,665	3,246
Ahuachapán	3	0	0	10	13
Guaymango	6	0	0	3	9
Total	17,029	3,882	2,888	43,857	67,655

Source: MARN & IUCN 2016

13. The table below shows the project areas under SLM practices, the first PDO indicator in the Results Framework.

Table 2. Area under SLM practices

Municipality	Forests outside Protected Areas	Basic grains	Pastures	Agroforestry Systems	Sugar cane	Fruit plantations	Total
San Francisco Menéndez	6,178	3,018	6,178	65	2,077	434	17,950



Municipality	Forests outside Protected Areas	Basic grains	Pastures	Agroforestry Systems	Sugar cane	Fruit plantations	Total
Jujutla	4,471	3,063	3,389	1,816	1,225	29	13,993
Concepción de Ataco	568	31	0	3,867	0	0	4,466
Tacuba	5,734	2,453	1,037	4,194	0	155	13,573
Acajutla	69	713	571	0	611	59	2,023
Ahuachapán	3	0	0	0	0	0	3
Guaymango	6	0	0	0	0	0	6
Total	17,029	9,278	11,175	9,942	3,913	677	52,014

Component 1

Table 3. Component 1 Outcomes and Activities

Outcome	Outcome-related activity
Enhanced capacity to implement integrated landscape management and restoration	Strengthen coordination among public institutions.
	Strengthen local participatory governance structures and territorial alliances.
	Design and support a roundtable for restoration with the private sector. Education plan about the value of ecosystem services
Increased support and participation for sustainable natural resources management	Strengthen the technical capacity for monitoring landscape sustainability
	Promote CES agreements and the aggregation of ecosystem services offer through the creation of multi-stakeholder coalition
Increased support and participation for sustainable natural resources management	Technical assistance to apply the BONSUCRO standard.
	Pilot sustainable practices for sugar cane around the RAMSAR site

14. The activities under Component 1 will improve the conditions to mainstream biodiversity and address land degradation. This will be achieved by laying the foundations to promote and implement land-use practices to avoid, reduce, and reverse land degradation. They will directly contribute to PANSAL components 4 (strengthening institutional capacities and human resources for sustainable land use management) and 5 (generating, systematizing, and disseminating information related to land degradation to monitor landscape sustainability effectively).

15. A variety of bilateral arrangements will be established for collaboration between MARN, MAG agencies, and municipalities. These will be implemented at regional and local levels and promote the involvement of private institutions such as NGOs, universities, and companies, to support the limited capacities of CENTA in the region. Collaboration with MAG will improve coordination between ministries for land-use planning, landscape, and ecosystem restoration (including PREP), as well as technology transfer activities. Local governments (municipalities) involvement in planning restoration will be promoted through local environmental governance instances and the collaboration with NGOs. For this activity, the Project will finance (i) the development of



collaboration agreements, including the appropriate implementation plans, costs, and finance opportunities; (ii) consulting support for the development of three PLAS; (iii) logistic support for vigilance, inspection, and participation activities as determined in the collaboration agreements; and (iv) tools and equipment for the activities determined in the local work plans.

16. In parallel, local participatory governance instances will be strengthened, specifically the COAL⁸¹, the Barra de Santiago Ramsar committee, and the water boards. This activity will promote the participation of vulnerable populations such as women, young and indigenous communities. The actions to be financed include: (i) the operations of the COAL and the Ramsar committee; (ii) implementing an education plan (developed separately, see paragraph 25) for water boards participants, to provide them with knowledge of restoration and sustainable practices (including CES, governance for climate resilience, and adaptive management), and highlight the role of women and indigenous communities in landscape management; (iii) diverse technical support for environmental governance in the region, promoting the participation of public institutions and NGOs; and (iv) updating a PLAS and producing two new ones in Barra de Santiago, Metalio and Garita Palmera, to guide family-scale sustainable practices for the extraction of non-timber products from mangrove forests.

17. The Project will also contribute to the design, implementation, coordination, and technical assistance of the MRdR and the private sector forum. The MRdR will be established through COAL, for the Ahuachapán Coordination area or a Restoration RoundTable, and will liaise with the Ahuachapán Coordination Roundtable, which incorporates relevant national institutions and international agencies that implement projects in the area (e.g., GIZ, UNDP and IUCN), by relying on advice from it and, through it, building synergies with other projects in the area. Similarly, it will be supported by the Roundtable of Irrigators from Ahuachapán, which integrates the local water boards to manage water resources. The MRdR will integrate representatives of MARN, MAG (including CENTA and DGFCR), institutions driving other local projects (e.g., FIAES, UNDP, FAO), and the relevant local instances for each selected basin or Municipality. New alliances and improved coordination will be pursued between local water boards and the private sector actors intervening in the landscape (mainly sugar cane producers), promoting investments in the conservation of water recharge and important biodiversity areas.

18. Creating awareness among the public and especially the agricultural producer in the area is considered a key step for the Project's successful implementation. To achieve this, the valuation of local ecosystem services and examples of successful CES projects will be studied and communicated. A consultant will study the benefits of ecosystem services for the population in the area, positive restoration actions carried out in the past, and their impacts of degradation. Communication of this information through an environmental education plan will aim to increase awareness on the contribution of ecosystem services to the rural and IP's subsistence and culture, as well as the relevance of participative and inclusive governance. This plan will finance the preparation and dissemination of information about SLM practices, restoration, the value of ecosystem services, land tenure security and related gender equality issues. This activity includes (i) preparing a study of the economic value of ecosystem services and the benefits of successful restoration projects; (ii) developing a communication plan for the results of the study; (iii) providing capacities for local communication agents; (iv) preparing graphical promotional products; and (v) implementing the campaign through local and regional media.

19. The public institutions capacity to evaluate restoration and sustainable land-use at the landscape scale will allow for improved management and public policy decisions. The activities to achieve this would be, (i) with

⁸¹ The COALs are local intersectoral committees made up of representatives of municipalities, non-governmental organizations and local communities, as established by the Law of Protected Natural Areas (2005), to guarantee the participation of community, public and private sectors surrounding the conservation areas. In addition, they are people who, through their work, are committed to conserving and caring for the environment.



the support of external consultants, the ISR will be strengthened by including specific biodiversity and land degradation considerations to the existing variables, and the information required to feed the index with these new variables will be collected or generated. This will help assess and monitor the state and trajectory of sustainability conditions in the landscape, considering environmental, social, and economic criteria at the landscape level. The ISR will be used to monitor the total project area (67,655.36 ha). In addition, (ii) the capacity to generate the information and regularly assess the sustainability of the landscape through this index will be strengthened by training the personnel of the local governments and public institutions involved and acquiring the necessary equipment for its efficient implementation. The landscape sustainability index will have the potential to become a tool to demonstrate sustainability factors from the agricultural products harvested in the landscape, constituting an enabling factor to access specialized markets for sustainably sourced products.

20. A series of private CES agreements will be supported, as pilots, to provide sustainable financial resources for the restoration and conservation of essential water-related ecosystem services. This scheme will (i) provide support of the MARN and the MRdR for the establishment of the agreements, and (ii) identify potential financial or investment sources for restoration. It will further be supported by (iii) facilitating the negotiations between water boards, sugarcane, and cattle farmers, including the support for technical and financial proposals for the biodiversity and water-related uses, and (iv) aggregating offer through multi-stakeholder coalitions that will be trained to negotiate larger and more convenient CES. The outcome of these negotiations will be captured through (v) the formulation of an integrated plan for environmental compensation in the area, with the support of public institutions, which will help secure these agreements’ sustainability and promote other agreements in the future.

Component 2

Table 4. Component 2 outcomes, subcomponents, and activities

Outcome	Subcomponent	Outcome-related activity
Critical degraded lands restored.	1. Restoration of agriculturally degraded land	Strengthen the technical capacity of extension services for restoration. Promote and educate about restoration activities. Restore of critical degraded land
Sustainable management in sugar cane plantations	2. Support for improved agricultural practices in sugar cane production	Technical assistance to apply sustainable practices in sugarcane through BONSUCRO standard’s guidelines. Pilot sustainable management on critical sugarcane production areas

21. Interventions will institutionalize sustainable development practices in extension support schemes. They will also support the implementation of land-use practices that contribute to forest restoration and conservation, as well as investments in forest restoration, targeted in ecologically sensitive mountain areas with potential biodiversity connectivity or water recharge that are currently degraded or used for agriculture, usually basic grains, coffee, or cattle ranching. The activities will directly contribute to: REDD+ efforts in El Salvador; PANSAL Component 1 on restoring ecosystems and controlling forest degradation in agroforestry systems and Component 2 on restoring soil health by preventing erosion, restoring biodiversity in soil, and increasing net primary productivity. The latter includes a specific objective of partially funding and promoting the transition towards sustainable soil management practices and the restoration of degraded ecosystems, which is closely aligned with the proposed activities.

22. Subcomponent 2.1 will invest in the restoration of degraded lands because of unsustainable agricultural practices or expansion. The technical capacities of CENTA, DGFCR, MARN, local NGOs, and the relevant Municipal

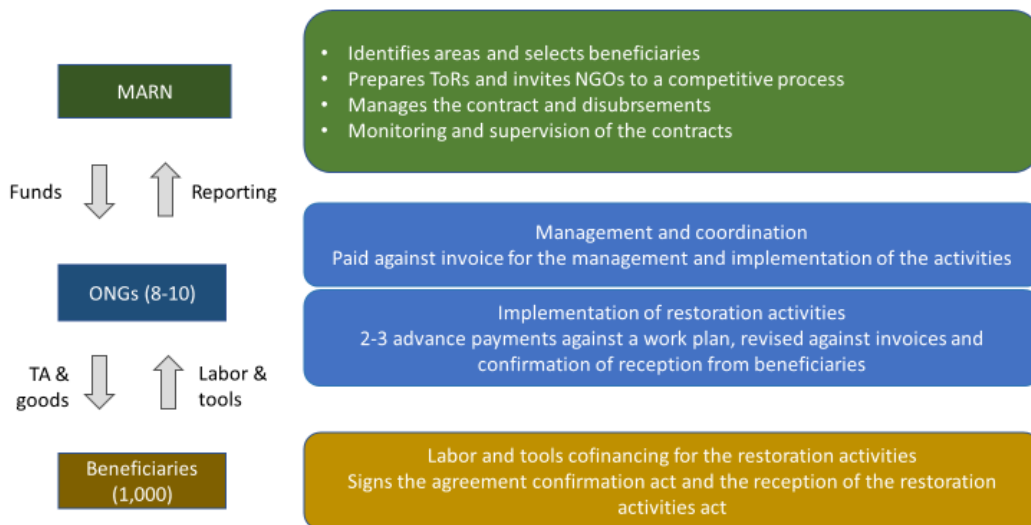


Environmental Units (*Unidad Municipal Ambiental, UMA*)⁸² will be strengthened. From this, a local extension system is expected to be established, which will support the monitoring and evaluation of restoration interventions of the Project.

23. Additionally, demonstrative restoration activities will be developed to educate and promote sustainable practices. Specific techniques for soil conservation such as mangrove and riparian forest restoration, live and dead fire barriers, green fertilizers, and pesticide waste management will be promoted. Specifically, the activity will finance workshops, as well as pilot and demonstrative projects. These efforts will complement funding to encourage restoration activities in private degraded lands and critical ecosystems.

24. Selected areas will be restored for sustainable activities that include soil rehabilitation in basic grains and pasturelands, sustainable agroforestry and agro-silvo-pastoralism, ecosystem restoration and other sustainable systems selected by local producers with support from extension personnel. Technical assistance for the restoration of the aforementioned areas will be developed by contracting services with NGOs with experience in the project area (see Figure 5), as well as consultants for monitoring and supporting the activities as required.

Figure 5: Implementation arrangements with NGOs for Component 2



25. The restoration activities will be based on IUCN restoration guidelines for El Salvador, or Central America when a national guideline is not available (see Table 5). The targeted areas will be identified based on the ROAM analyses performed by MARN in 2018, and in coordination with other initiatives implemented through FIAES for the restoration of agroforestry systems, prioritizing areas that are essential for the provision of ecosystem services and biological corridors. Tropical and subtropical forests in water recharge areas of the basins as well as mangroves affected by sugarcane production, will also be restored and conserved. Throughout this activity, local structures for the products and actions required in restoration investments will be preferred when they include indigenous communities, women, and young.

⁸² Each municipality in the project intervention area has its UMA that advises the Municipal Council on management for the preparation, promotion and implementation of environmental instruments and actions in the different activities of municipal competence; as well as promoting environmental actions in the different plans, programs and projects under his charge. UMAs coordinate actions in environmental matters with MARN and with other institutions, and collect, exchange and disseminate environmental information.



Table 5. Sample restoration actions, extension, description, project inputs and counterparties

Restoration action	Area (Ha)	Description	Project and counterpart support	IUCN Guideline
Cocoa Agroforestry System	140	<p>To be established in areas with annual crops, pastures, and vegetation located in hillside areas or buffering protected areas. It can also be used in areas of abandoned coffee production.</p> <p>Actions include sowing cocoa at three meters between each plant and groove. Associated with both slow-growing and fast-growing wood trees. Diversification with annual temporary shade crops and fruit trees. Establishment of living fences. Maintenance through the Project for a period of 3 years.</p>	<p>Forest Plants (Shadow), Cocoa plants, Fruit plants (Incorporate 4 types of fruit trees), Solid Organic Inputs (Gallinaza), Liquid organic inputs (pests, diseases, and biofertilizers), Calcium oxide, Green manure (Mucuna, Canavalia, forage mani)</p> <p>Labor: chapoda, drowning, planting, subscriber</p> <p>Counterpart: Tools (couma, corvo, piocha, azadón, bar, duplex shovel, backpack pump)</p> <p>Labor prunes living barriers, weed control, and maintenance.</p>	<p>Nello, Tony; Fonseca, Francisco; Raes, Leander; Sanchún, Andrés; Saborío, Javier y Chacón, Óscar, (2018) Sistemas agroforestales de cacao. Guía técnica para la restauración en El Salvador, 4. San José, Costa Rica: UICN-ORMACC. Xii, 24 p.</p>
Agroforestry System Basic Grains	520	<p>Basic grains agroforestry maintains today's major crops (maize, beans, sorghum) under an agroforestry arrangement. Thus, the current production system is diversified by incorporating fruit trees, wood, wood, and forage trees scattered in the growing area and living fences while implementing soil and water conservation practices. Maintenance through the Project for a period of 3 years.</p>	<p>Creole seeds (corn, bean, sorghum, vegetables), Vegetative Material (Vetiver 7 hace/m), Vegetative Material (Black Head Pineapple), Forest Plants, Organic inputs for fertilizer</p> <p>Green manure (Mucuna, Canavalia, forage peanuts)</p> <p>Labor: chapoda, drowning, material planting, subscriber, planting plants, sowing beans.</p> <p>Counterpart: Tools (couma, corvo, piocha, azadón, bar, duplex shovel, backpack pump);</p> <p>Labor prunes living barriers, weed control, and maintenance.</p>	<p>Nello, Tony; Fonseca, Francisco; Raes, Leander; Sanchún, Andrés; Saborío, Javier y Chacón, Óscar, (2018) Sistema agroforestal en granos básicos. Guía técnica para la restauración en El Salvador, 5. San José, Costa Rica: UICN-ORMACC. Xii, 24 p.</p>
Agro-silvo-pastoral Systems	200	<p>The proposed planting arrangement consists of eight sections where rotational grazing and legume production takes place in alleys. The management includes the following actions: fencing, leguminous shrub alley, double fencing, the establishment of living barriers, planting of forage and timber trees within the sections, planting grasses, fertilization, close maintenance, production pruning, fire rounds, grazing, and</p>	<p>Grass seeds (Bombasa, Mulato, Decumbens), Forest Plants</p> <p>Forage plants (protein bank 1x1.5), Fruit plants</p> <p>Green manure (Mucuna, Canavalia, forage peanuts), Fence Material (Wire), Hen's organic manure, Labor for fencing</p> <p>Wire (Includes fence repair), Drowning labor, bean</p>	<p>Nello, Tony; Fonseca, Francisco; Raes, Leander; Sanchún, Andrés; Saborío, Javier y Chacón, Óscar, (2018) Sistemas silvopastoril y agrosilvopastoril. Guía</p>



Restoration action	Area (Ha)	Description	Project and counterpart support	IUCN Guideline
		harvesting techniques. Maintenance through the Project for a period of 3 years.	planting, planting plants, grass seed, round against fire. Counterpart: Tools (Cuma, corvo, piocha, azadón, bar, duplex shovel, backpack pump) Labor Chapoda and Subscriber Maintenance Phase	técnica para la restauración en El Salvador, 3. San José, Costa Rica: UICN-ORMACC. Xii, 24 p.
Gallery Forests	100	Reforestation and the establishment of artificial hangers in the places to be restored. The process considers the diagnosis of the state of degradation and conditions for restoration. Phases: Establishment that includes cleaning, tracing, planting of trees. It comprises management for pest and weed control and fertilization in the initial stage. Maintenance through the Project for a period of 3 years.	Fence Material (Wire), Forest Plants, Live posts for fenced Labor for: drowning, planting plants, fenced, short round fire. Counterpart: Tools (Cuma, corvo, piocha, azadón, bar, duplex shovel, backpack pump) Labor: plazueleado, maintenance of short round fire.	Nello, Tony; Fonseca, Francisco; Raes, Leander; Sanchún, Andrés; Saborío, Javier y Chacón, Óscar, (2018) Restauración de manglar y bosque de galería. Serie de guías técnicas para la restauración en El Salvador, 6. San José, Costa Rica: UICN-ORMACC. Xii, 24 p.
Mangrove Restoration	40	With a holistic approach that conceives animal and plant communities as part of a larger ecosystem. Ecological restoration is based on ecosystem ecology and knowledge of factors that changed natural conditions, hydrology, and particular pressures at the site. A diagnosis and recognition of the territory are carried out through a study of hydrology. Diagnosis includes information on hydrological status, identification of species that historically develop at the site, and whether they can be established naturally when recovering their hydrological conditions. The first step is to restore the natural hydrology of the site and then observe if it is necessary to propagate plants, as long as it is verified that it has not been possible to insert them naturally. During the intervention phase, the following tasks are carried out: 1) Cleaning sites for tracing and cleaning, 2) Channel stroke and shearing, 3) Removal of logs, 4) Removal of dry trees, 5) Sediment removal and, 6) Monitoring and evaluation. Maintenance through the Project for a period of 3 years.	Teaching material, Chainsaw, Fuel for boats and chainsaw Chainsaw spare parts (chain and spark plugs), 5-gallon plastic buckets without cover, Plastic bottles, Leather gloves, Plasticized Laso, Synthetic sacks, Plastic hose ¾", 6-ton ratchet, Machetes, Files, Handbarrow Labor: channel cleaning, for cleaning logs, for sediment hauling. Counterpart: Boat and cayuco rental, removal labor and sediment hauling, Machetes, Place for training	
Total	1,000			



26. **Ecological restoration of mangroves** is carried out following a six-step process: 1. On-site characterization of the mangrove's ecology; 2. Understand the normal hydrological patterns that control the distribution, establishment, and successful growth of target mangrove species; 3. Evaluate the barriers preventing natural recover of mangroves. 4. Select restoration areas with potential success by applying the previous steps, considering available resources and labor, as well as solution to property and land use issues, to ensure ownership; 5. Design the restoration program at the selected sites to appropriate restore the mangrove's hydrology; 6. Plant seedlings or mangrove candelas, after determining that natural reestablishment does not provide the number of seedlings, stabilization rate, or growth rate necessary for project success.

27. **Formulation of PLAS for mangroves** requires involving mangrove users' communities that benefit from the consumption of shellfish and crabs. The planning process builds on relevant studies and data on population and morphometric characteristics, carried out with the participation of local stakeholders (puncheros and curileros); it also utilizes information from inventories of the harvesting and fishing practices and gear used by the communities, as well as the curileros and puncheros, which specify the species used by each one of them. In this process, it is of utmost importance to establish agreements to promote sustainable use of resources among communities. These agreements address the spatio-temporal regulation of activities to achieve established goals of mangrove protection, management, and use, defining the permitted sizes and maximum allowable numbers, and adopting zoning guidelines and, on some occasions, closed periods. This planning process aim at achieving a meaningful involvement of local stakeholders in sustainable use of mangrove, while supporting their livelihoods.

28. Subcomponent 2.2 will focus on sugarcane production, aiming at implementing sustainable practices that incorporate biodiversity considerations, in the industry at the regional scale. This will be achieved through technical support in alignment with the BONSUCRO standard for large producers. Small and medium-scale producers will also receive technical support to improve their practices in pilot areas critical for the provision of ecosystem services and serve as biological corridors.

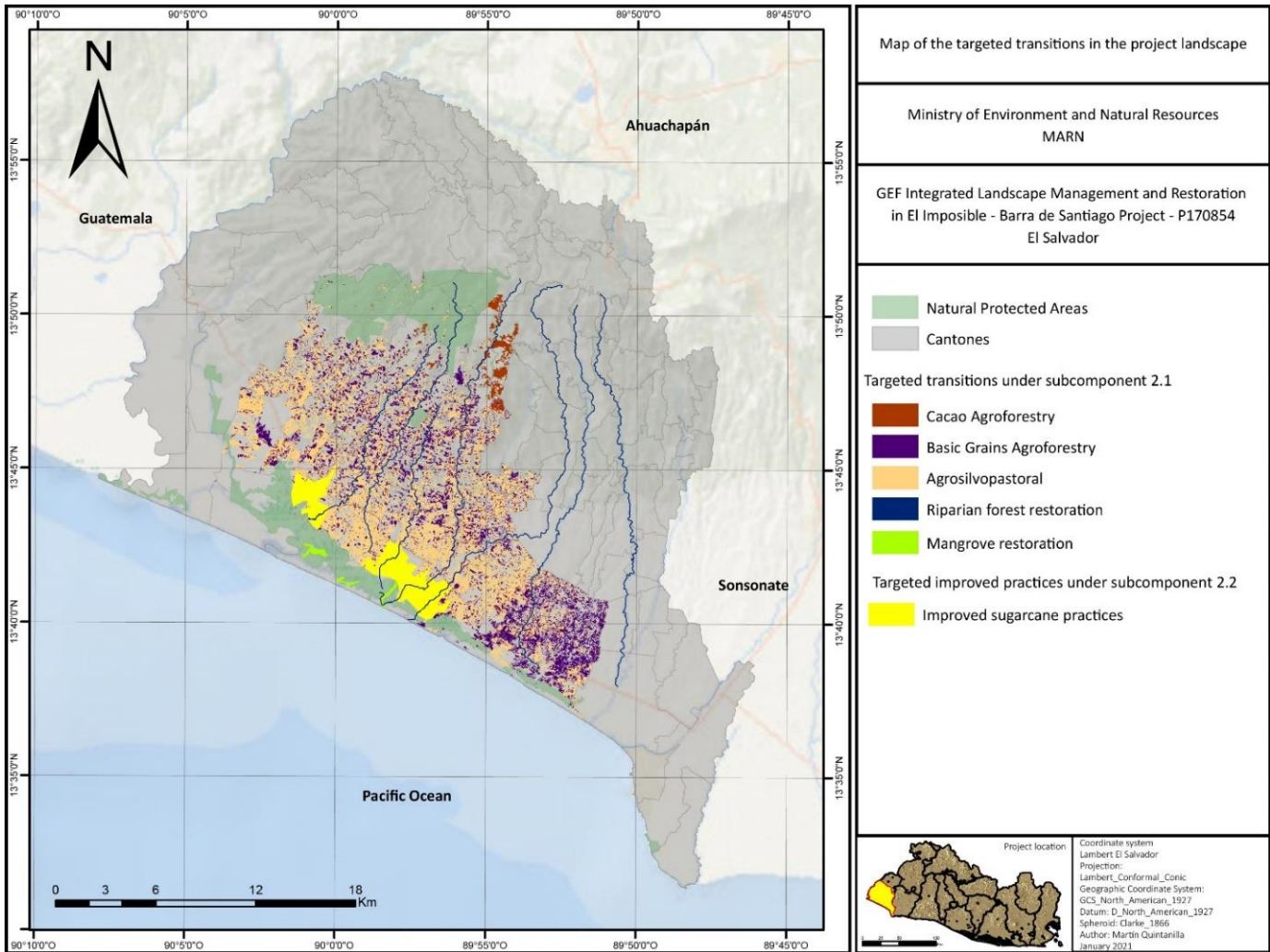
29. The Project will also support the development of a roadmap for implementing the BONSUCRO standard at the national level, taking advantage of the experiences and working methods of FUNDAZUCAR and CONSAA. It will include institutional coordination to support an observatory that facilitates monitoring of the sector's sustainability actions, and the consequent generation of sector recommendations to develop policies and plans.

30. The Project will implement a plan for advising and generating technical capacities for associations of sugarcane producers and the representatives who will support the implementation of sustainable practices and biodiversity criteria in sugarcane production. It will hire specialists to guide the training with the support of MAG, FIAES, NGOs from the sugarcane sector, such as FUNDEMAS and FUNDAZUCAR, as well as other local NGOs. It will target 250 sugarcane producers and agreements with the local industry (*Ingenio Central Izalco*).

31. Demonstrative sustainable management projects will be selected from organizations of small sugarcane producers and single small or medium-scale producers. These will be targeted at mangrove buffer areas and gallery forests around rivers. Activities include developing improved agro-silvo-pastoral practices and improving landscape connectivity through native patches of forest and sediment erosion control. This process includes financing a diagnostic of the current conditions and compatible land-use arrangements, and technical assistance for implementing the selected arrangements. A total of 20 pilot farms will be selected and provided with support for three years, with the support of FUNDAZUCAR and the largest sugarcane facility (*Ingenio Central Izalco*).



Figure 6: Targeted transitions from subcomponents 2.1 and 2.2





Annex 3: Gender Analysis and Gender Action Plan

1. **Differences in gender roles in rural communities have led male and female jobs to have considerably different wages, leadership, and safety conditions.** El Salvador has made significant efforts to recognize and advance women's rights by signing and ratifying major international treaties and including them in domestic legislation. However, improvements in the legal framework have not resulted in comparable progress in gender equality of endowments, such as health, education, economic opportunities, family dynamics, voice, and agency. Females also face limited participation in rural organizations and access to land. In addition, males are significantly more likely to migrate than females. Females in households that receive remittances have lower labor force participation rates, making young women dependent on income support from male partners living abroad (remittances)⁸³.

(a) Gender analysis in agricultural and forestry productive sectors

2. **In rural El Salvador, women's economic empowerment and participation in economic activities are challenged by land rights, meaningful involvement in unpaid activities, and low access to education.** Women often do not obtain or enjoy the benefits of their participation in agricultural production, which partly leads them to rely on additional income and take care of other responsibilities (household chores, family care, food, etc.). In addition to attending to household chores, many rural women perform unpaid work alongside men on farms and livestock farms: planting, weeding, harvesting, raising livestock, feeding, and caring for sick animals, as well as cooking for other agricultural workers. Some women also work outside the home making clothes, or as employees or owners of specific stores (such as supermarkets or kiosks), or as administrative assistants, among other activities.

3. **The gender gap is present throughout the life cycle of women and men, reflected in indicators that measure choices and opportunities, including health, education, labor, seats in parliament, time employment, and social protection.** Overall, there are more men in poverty (35 percent) than women (32 percent). An analysis of equity relationships in water use and management in rural populations in southern Ahuachapán⁸⁴ indicates; 368 men (88.67 percent) and 47 women (11.33 percent) from different parts of the Basin of the Cara Sucia-San Pedro watershed are engaged in forestry and agro-silvo-pastoral activities⁸⁵. The water distribution service's property by basin areas, disaggregated by sex, showed 43 percent women and 57 percent men⁸⁶. Regarding water use, women use it mainly for domestic work and personal grooming, with an average consumption of 408 liters per year. In contrast, men use it for personal grooming and agriculture, consuming 117 liters per year.⁸⁷

4. In the municipalities of the El Imposible-Barra de Santiago Conservation Area, the rural population predominates. In the area, men have a higher percentage of income than women (6 percent), and years of study increase the gender gap. Women are employed in commerce, hotels and restaurants, the manufacturing industry, domestic services, and communal, social, and health services. In men's case, jobs predominate in Agriculture and Livestock production, commerce, hotels and restaurants, manufacturing industry, and construction⁸⁷. There are 1,301 active cooperatives

⁸³ World Bank. (2015). *El Salvador Systematic Country Diagnostic*.

⁸⁴ The municipalities of: Ataco, Guaymango, Jujutla, San Francisco Menéndez, San Pedro Puxtla y Tacuba.

⁸⁵ In 2005, the Integrated Watershed Management project associated with the El Imposible-Barra de Santiago Hydrographic Complex, known as BASIM, funded and coordinated by the International Union for Conservation of Nature (IUCN).

⁸⁶ Partners of companies and/or water boards reported.

⁸⁷ There is an average of Women 52.9% and men 47.1%; obtaining an index of 92 men per 100. The working-age population accounts for 73.8%. 63.4% urban area and 36.6% in rural areas. 54.3% are women and 45.7% are men. The Economically Active Population (PEA) is



legally registered, with a universe of 604,108 people associated, of which 51.5 percent are women.⁸⁸ Women predominate in Savings and Credit Associations, Craft Production, and Housing Cooperatives. In EIBSCA, 58,471 jobs were demanded in 2007, of which 91.6 percent were from men, and 8.4 from women. A significant amount of permanent positions are occupied by men (97.3 percent) compared with woman (2.7 percent); a similar trend exist in temporary contracts with 91.3 percent occupied by men and 8.7 percent by women. Agricultural production controlled by 21,236 farmers, 88 percent of which are men and 12 percent women.

5. The Project will be implemented with a focus on social and gender equity. This social management process will be facilitated by considering the specialized instruments for gender inclusion and equity analysis with an emphasis on equitable stakeholder participation, including for the preparation of ESMF documents of the Project, to identify inclusive and affirmative actions that strengthen and improve women's active and substantive participation, recognize their role in landscape and land management, while reducing gaps in inequalities with respect to men, enhancing their environment and quality of life concerning the current situations encountered in equity relationships in water use and management, women's socio-economic empowerment, associativity, opportunities for quality jobs in the labor market.

6. In its final version, the Gender Action Plan (GAP) will include indicators to monitor the progress of specific activities in addition to the gender-sensitive indicators already included in the Project Results Framework. These indicators will be included in the POM to ensure regular monitoring and control. Analytical activities are also planned to understand women's participation in project-supported production activities.

65.1% in the urban area and 39.9% in the rural area. 59.2% are men and 40.8% are women (DIGESTYC, 2019). Women are employed in trade, hotels and restaurants (44.7%), manufacturing industry, (16.8%); in domestic services, (10.6%) and; communal, social and health services (9.5%).

⁸⁸ INSAFOCOOP, 2020.



Table 6. Actions and indicators for the GAP

Project results	GAP Actions	GAP Indicators	Responsible
<p>1.1. Strengthened coordination between public sector institutions.</p> <p>1.2. Strengthened local governance structures, water boards and territorial alliances.</p>	<p>Support for COAL and the Ramsar Barra de Santiago Site Committee and the organizational strengthening of the Water Boards.</p> <p>Administrative strengthening to COAL/Ramsar Barra de Santiago Site Committee.</p> <p>Implementation of an Environmental Education Plan with Water Boards.</p> <p>Include women's and youth in the COAL advisory committee and the wetland and Ramsar committees.</p> <p>Include women's and youth organizations in the private sector restoration roundtable.</p> <p>Local governance organizations, such as water boards, are trained for their operation with women, youth and indigenous communities as a priority.</p> <p>Establish a network of women's groups to develop exchanges of experiences, which contributes to the development of the family economy and the ecosystem.</p> <p>The ecosystem services communications plan in the landscape promotes gender equity for sustainable development.</p> <p>Develop a communication and information strategy at the level of women's organizations and networks incorporating actions that promote gender equity conditions.</p> <p>Establish partnerships with local universities to coordinate a training plan that promotes women's rights and duties.</p>	<ul style="list-style-type: none"> • No. Institutionalized gender instance. • No. Systematized practices. • No. Women enrolled in organizations (Water Boards). • No. Women in decision-making positions. 	<p>1.1.</p> <p>PIU – Ecosystem Management and Governance Specialist.</p> <p>MARN, MAG, Local GoES</p> <p>1.2.</p> <p>EMU – MARN.</p> <p>MARN Units:</p> <p>Management of Integral Water Resource Management, Directorate-General for Water Safety.</p>



Project results	GAP Actions	GAP Indicators	Responsible
	Promotion of associativism as a key factor for productive development and the value chain.		
Developed the technical capabilities in terms of gender within the program and the creation of tools and tools of monitoring and monitoring disaggregated by sex evaluating performance in women and men.	<p>Apply a diagnostic and baseline erroneous basis on the participation and role of women in the fishing value chain. participation, role and actual inclusion of women in productive and marketing links.</p> <p>Validation of action lines by project component. Identified from gender gaps.</p> <p>Identify how women participate/affect: a) the fishing value chain b) biodiversity protection and (c) resource governance.</p> <p>Systematization of good practices of the environment sector in gender issues.</p> <p>Define the Project’s gender approach strategy in a participatory way.</p> <p>Training workshops for technical staff in gender strategy.</p> <p>Definition of tools for measuring gender indicators in plans and projects, linked to the evaluation of institutional performance.</p> <p>Presentation of the action plan to implement the gender equity strategy.</p> <p>Implementation of a campaign to raise awareness of women's rights and duties, which is culturally harmonized. (With inclusive, respectful, equitable and sensitive language towards gender equity).</p>	<ul style="list-style-type: none"> • Technical Gender Unit trained. • Percentage of gender-trained women and men and legal and political instruments for equality. • No. of institutions and organizations involved in gender practices. • No. Actions that are set in the agenda. • No. of dialogue spaces where you participate. 	<p>2.1. PIU - MARN Coordinator - M&E Consultant</p> <p>MARN</p>
1.3. Contribute to improving the family economy and resilience	Integrate Women, poor households, people with disabilities, the rural sector, and women's organizations, into public consultations.	<ul style="list-style-type: none"> • Number of men and women, poor houses, people 	<p>3.1 PIU Restoration Specialist, MARN</p> <p>3.2. PIU, MARN</p>



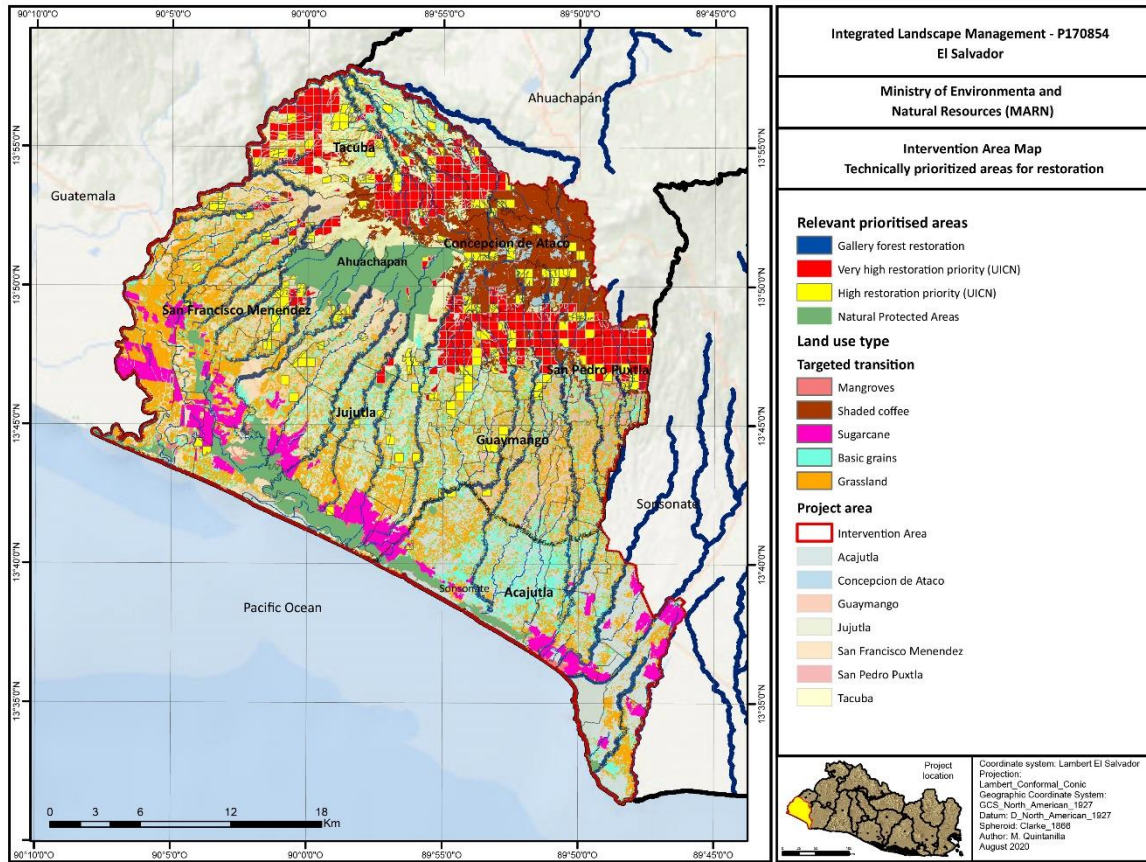
Project results	GAP Actions	GAP Indicators	Responsible
<p>to climate change.</p> <p>1.4. To facilitate women's access to new improved technologies for production and information according to their priorities.</p> <p>1.5. Women informed and implementing new technologies based on increased production and resilience to climate variability.</p>	<p>Systematization of experiences of women and their families in productive work and their contribution to improving the income of the family economy and the ecosystem.</p> <p>Strengthen initiatives of productive projects led by rural women that aim to restore the landscape and generate income.</p> <p>Implement demonstration plots with agroecological approach, promoting women's knowledge for increased yield, use of organic inputs, low costs and environmental sustainability.</p> <p>Develop incentives for the restoration of basic grains and pilot sustainable sugarcane projects for vulnerable beneficiaries such as women, young people and IP.</p> <p>Restoration actions, such as soil preparation, planting and maintenance, will also be aimed at vulnerable populations, such as women, young people and indigenous communities.</p>	<p>with disabilities, women's organizations consulted.</p> <ul style="list-style-type: none"> Percentage of male and female applicants who successfully receive benefits. 	<p>3.3. Ecosystem and Governance Specialist, Restoration Specialist, MARN</p> <p>3.4. PIU, Restoration Specialist, MARN</p> <p>3.5. PIU, MARN</p>



Annex 4: Project area selection

1. Restoration activities under Component 2 will target selected beneficiaries in prioritized areas, considering a list of exclusions to minimize the risk of harmful social and environmental impacts. This is based on previous studies that prioritized degraded areas considering the ISR, by the IUCN⁸⁹. This study implemented a ROAM analysis to prioritize degraded areas for restoration. The Project will target areas identified as High and Very High priorities for restoration and avoiding overlaps with other projects identified in the landscape. Figure 4 presents the selection of prioritized areas based on the ROAM analysis. To complement this technical assessment, the project interventions will be adjusted to align with the perception of priority areas by the project beneficiaries and local communities. Figure 7 shows the resulting prioritized areas based on an initial consultation.

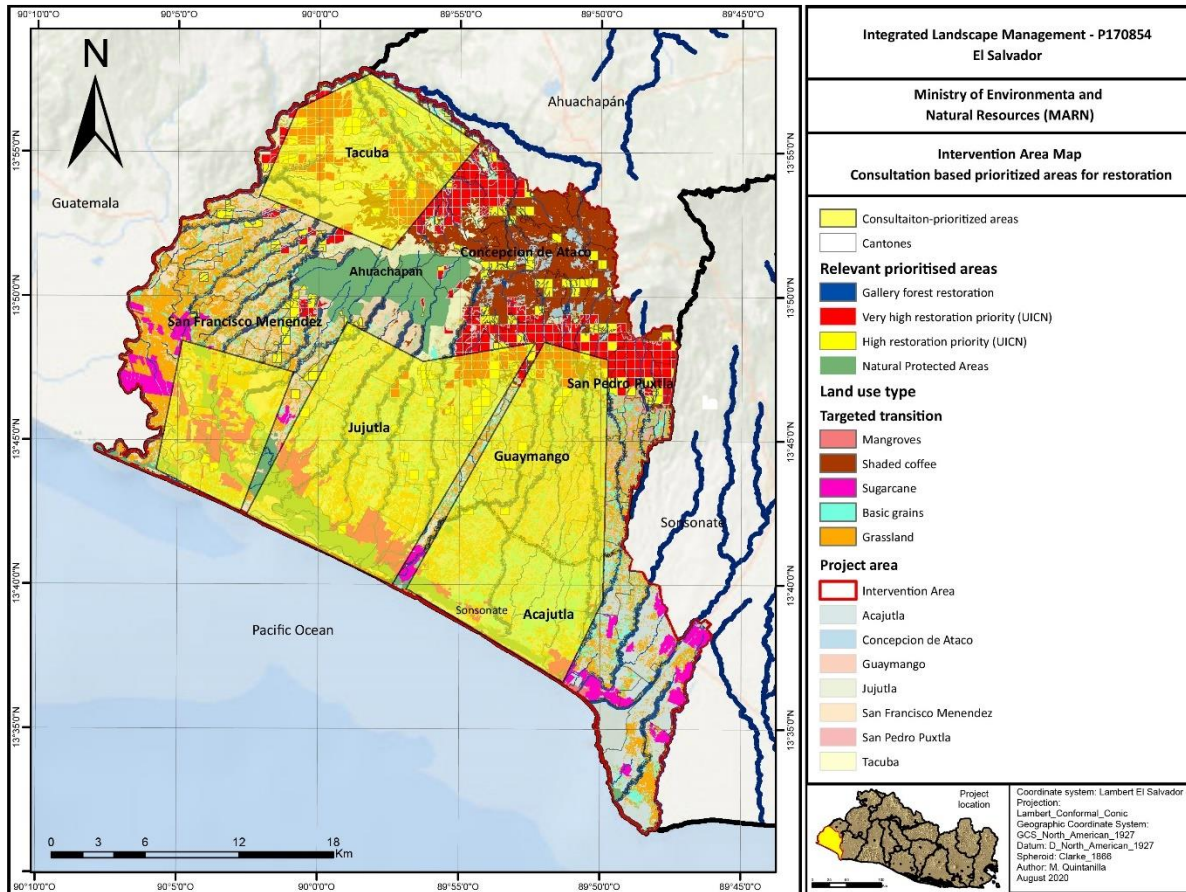
Figure 7: MARN-IUCN, Priority areas for restoration in El Imposible - Barra de Santiago Conservation Area based on IUCN's analysis



⁸⁹ MARN-IUCN. (2017). Strengthening the National Restoration Strategy. MARN.



Figure 8: MARN-IUCN, Priority areas for restoration in El Imposible - Barra de Santiago Conservation Area based on the Project's consultation



2. Based on IUCN’s ROAM prioritization process, and considering data for land-use, vegetation cover, and water resources, the total area with potential for restoration accounts for 3,993 ha. These areas include various opportunities for restoration activities on a variety of land uses. Table 7 describes the potential by land use type.

Table 7. Total potential area for restoration in the project area, prioritized and filtered

Land use	Forest area (ha) with riparian potential	Percentage
Latifoliate forest	1615.52	40.45
Pastures	586.76	14.69
Coffee under shade	539.84	13.52
Basic grains	358.81	8.98
Bushes	263.14	6.59
Sugar cane	183.59	4.60
Salt forest	140.12	3.51



Land use	Forest area (ha) with riparian potential	Percentage
Urban -naked soil	102.63	2.57
Bodies of water	59.66	1.49
Rice, agriculture under irrigation	50.55	1.27
Fruit crops	48.42	1.21
Sands and dunes	15.60	0.39
Wetlands	15.09	0.38
Coconut cultivation	13.74	0.34
Total	3,993.49	



Annex 5: GHG Analysis

1. The WB incorporates GHG emission accounting for all investment project financing since 2012, and GEF projects are included in this standard. Emission reductions are increasingly relevant for mitigating climate change and can only be effectively managed if GHG emissions are quantified and monitored. The bank adopted EX-ACT as the default tool for quantifying GHG emissions related to agriculture, reforestation, and land use. The tool was developed by the FAO in 2010 to assess the impact of agricultural investment lending on GHG emissions and carbon sequestration. EX-ACT allows the assessment of a project's net carbon-balance, defined as the net balance of CO₂ equivalent that was emitted or sequestered because of project implementation compared to a *without project scenario*. It then estimates the carbon stock changes (emissions or sinks), expressed in equivalent tons of CO₂ per hectare and year, including uncertainties (See Tables 9 and 10).

2. This GEF project aims at promoting improved agricultural practices and restoring degraded landscapes in EIBSCA. It is designed to support the sustainable management of basins and retain the provision of ecosystem services, while improving productive economic activities for basic grains, cacao and sugarcane based on improved and integrated management of water and soil. The EX-ACT v8.5.4 tool was used to assess the GHG impacts associated with the investment activities.

Application of EX-ACT

3. **Project boundaries.** The GHG accounting analysis considers activities under Component 2. Although Component 1 will create enabling conditions that will promote improved landscape management, which are expected to reduce emissions, these are not measurable. Specifically, the CES agreements under Component 1 will likely reduce emissions, and potentially increase carbon sequestration, but these are not yet defined and therefore, were excluded from the analysis. On the other hand, Component 2 will restore and improve practices in 930 ha, restore further 70 ha, and produce demonstrative plots for sugarcane and other cultures. Moreover, support for the implementation of BONSUCRO 5.1 practices in sugarcane fields is expected to reach at least half (3.300 ha) of the land managed by farmers that already demonstrated interest. Other activities will not be included since there is no set goal expected to be reached. For example, capacity building activities and awareness campaigns are expected to increase the uptake of sustainable management practices across the landscape, but the effects are hard to predict.

4. **Basic assumptions.** Soil type was selected as Low Activity Clay based on FAO's EX ACT maps, which is the dominant soil type in area. The project's implementation period is five years, and the capitalization of the investments were calculated for 15 years after project completion, thus, the GHG analysis was conducted for a 20-year period. The "without project scenario" is assumed to be equal to a "no project scenario" or "business-as-usual". This default assumption is deemed reasonable as changes in agricultural activity crucially depend on information, knowledge, and technology available to beneficiaries, which are expected contributions of the Project.

5. **Inputs to the analysis.** The project interventions will directly target an estimated area of 1,020 ha, including restoration and adoption of improved production practices on 520 ha of basic grains agroforestry and 140 ha of cacao agroforestry in the upper watershed, 20 ha of sugarcane plantations and 200 ha of agro-silvo-pastoral production. Agro-silvo-pastoral practices are expected to be extended to 2,000 heads of cattle. The improvements include sustainable management of soil (tillage, nutrient application), selection of improved genetic material, and agroforestry linked to sustainable cacao production. It also considers the restoration of 50 ha of gallery forests and 30 ha of mangrove forests. Indirectly a much larger area is expected to be improved through capacity building, implementing BONSUCRO certification for sugarcane, raising awareness across small-scale farmers, and demonstrative activities.



Over 6,600 are already implementing BONSUCRO 4.1 and have demonstrated interest in applying improved practices. For deforestation, the analysis assumes the Project would lead to a 50 percent reduction of the average annual national deforestation rate of 0.54 percent both for dry tropical forest (Gallery) and mangroves (See Table 8).⁹⁰ Table 9 provides results on the targeted systems. Table 10 presents the uncertainties associated to these estimations, considering that the Intergovernmental Panel on Climate Change’s Tier 1 emission factors are applied for all estimations.

Table 8. Annual deforestation rates applied per type of vegetation.

Type of vegetation	Annual deforestation rate without Project, %	Annual deforestation rate with project, %
Dry tropical forest (Gallery)	0.54	0.27
Mangrove	0.54	0.27

Table 9. Total GHG mitigation potential of the Project.

Project Components		Gross fluxes (ton CO2e)		
		Without	With	Balance
		Positive = source / negative = sink		
Land use changes	Deforestation	421,791	210,541	-211,250
	Afforestation	-	-87,613	-87,613
Agriculture	Annual	141,130	63,631	-77,499
	Perennial	-7,007	-3,498	3,509
Grasslands & Livestock	Grassland	62,775	44,516	-18,259
	Livestock	92,459	91,126	-1,333
Coastal wetlands		112,893	66,930	-45,964
Inputs & Investments		10,018	3,575	-6,443
Total		834,058	389,208	-444,851
Per hectare		13.2	6.2	-7.1

Table 10. Percent uncertainty in the estimations (mainly due to emission factors).

Scenario	Emission uncertainty	Percentage uncertainty
Without	834,058	±34.8%
With	389,208	±35.9%
Net balance	-444,851	±39.5%

⁹⁰ MARN, 2021. Nivel de Referencia Forestal El Salvador. https://redd.unfccc.int/files/annex_-_forest_reference_level_el_salvador__04-01-2021_vf.pdf



Annex 6: Economic and Financial Cost Analysis

A. Additionality of the Project

1. In the absence of the Project, beneficiaries would likely remain without access to financing and other support to transition to reach an Integrated Landscape Management and Restoration in targeted areas of the seven municipalities. The land areas would continue on a decreasing track of ecosystem health and sustainability of the agriculture and cattle ranching that would lead to further pressure on the agriculture frontier; conventional agricultural practices would continue to low tree cover on productive lands and thus limited capacity to absorb carbon; a limited number of sustainable forest operations would be incorporated into the economic activities of local communities; and, therefore, land-use conversion would remain subject to agricultural activities with intensive use of water and herbicides and pesticides.

2. For this analysis, a “business-as-usual” baseline case is used that assumes that future development trends follow those of the past and no changes in policies and practices will take place. In developing countries, land-use patterns are changing quickly, so in this analysis as well, it is more relevant to use recent past trends than long-term past trends. Thus, this analysis uses recent trends of long-term trends as the recent changes seem to be more representative of current evolution.

3. The Project creates additionality by: (i) enhancing the social and natural capital in the project sites; (ii) fostering the transformation and value aggregation of economic activities through strengthening building capacities to promote restoration and sustainable management of natural resources; (iii) linking local, regional, and federal actors to producer groups to derive benefits of information and knowledge exchange of biodiversity, sustainable productive practices, and related legislation and programs to incremental benefits strengthen both environmental and the beneficiary farmer’s capacities for productivity improvements, especially for producers of sugar cane, coffee, cocoa, and basic grains.

4. The GEF incremental support would assist the El Salvador in strengthening the improved landscape management and restoration of degraded lands with sustainable practices, and it is long-term economic and financial sustainability. The government budget is limited, but the Project will support alternative instruments to overcome any further limitation, involving new cross-sectoral actors to address policies related to integrated landscape management. Without the Project, the budget forecast to be allocated for conservation of land areas by the GoES (baseline scenario) would be limited. The proposed GEF investment would leverage additional resources from other partners over the same period. This financing will help develop the necessary institutional capabilities, set up policy frameworks for sustainable productive areas, and develop mechanisms for sustainable productive practices.

B. Methodology, main assumption, and cost factors

5. To simplify the incremental economic analysis of the Project, assumptions were used taking account the possible benefits in the project sites. The Project is expected to provide three economic benefit streams: (i) ecosystem services and biodiversity benefits provided by Integrated Landscape Management, (ii) carbon storage and sequestration by sustainable practices and restoration, and (iii) mangrove restoration and activities at producer level, enabling them to transit to sustainable management activities that have positive social and private

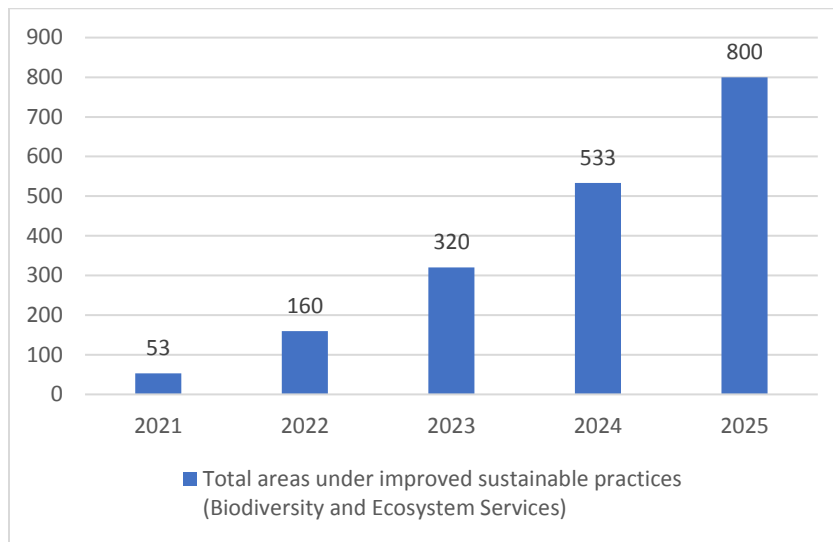


returns. In direct terms, the first benefit is related with Component 2, the second, with both components, while the third benefit is most associated with Component 1.

Economic Benefits Generated by the Project

6. **Ecosystem services and Biodiversity benefit stream.** For this stream, improved sustainable practices provide many ecosystem services that are necessary for social and economic wellbeing. These services include water filtration and storage, cleaning air, soil formation, recreation, food, and timber.⁹¹ Much of the El Salvador state’s economy depends on the natural, resources, products, and productive activities developed in the watersheds/basins. To estimate the benefits associated to this benefit stream, the total hectares of landscapes under improved sustainable practices intervened by the Project are considered as defined in the Results Framework. It is assumed that the total area and is based on the triangular distribution⁹² for five project years, that is, the Project divided by 15 to obtain the factor that is each year added to the growth of the previous year (shown Figure 9)⁹³

Figure 9: Distribution of the increase of areas under improved sustainable practices (in ha)



Source: WB Task Team.

7. Monetary values associated with ecosystem service is taken from recognized studies that assessed the incremental economic benefits of ecosystem services in El Salvador. Table 11 shows two different bounds assumed as the ecosystem services valuation: the lower bound depicts the value of ecosystem services from **Siikamäki et al. (2015)**⁹⁴ such as Recreation (US\$49.8/ha/year), habitat (US\$1/ha/year), NTFPs (US\$147.10/ha/year), and water (US\$20.60/ha/year), giving a total of (US\$218.50/ha/year); and the upper bound

⁹¹ EPA – United States Environmental Protection Agency (2012). The Economic Benefits of Protecting Healthy Watersheds.

⁹² The triangular number is $n(n+1)/2$, and for five project years $5 \times 6 / 2$.

⁹³ The formula for year n is therefore: $n \times n(n+1) / 2$.

⁹⁴ Siikamäki, J., Santiago-Ávila, F., Vail, P. (2015) Global Assessment of Nonwood Forest Ecosystem Services. PROFOR.



represents an aggregate value of ecosystem services (US\$1,312) valued by Carrasco et al. (2014).⁹⁵ Both studies are methodologically sound, focused on El Salvador territory and tropical ecosystems, and relevant for this analysis.

Table 11. Overview of study estimates on economic values of ecosystem services in El Salvador (per hectare)

Ecosystem Services (El Salvador)	Lower Bound US\$	Ecosystem Services (tropical areas)	Upper Bound US\$
	Siikamäki et al. (2015)		Carrasco et al. (2014)
Recreation	49.8	Total (Aggregate value)	1,312
Habitat	1		
NWFPS	147.10		
Water	20.60		
Total	218.50		

Source: Own elaboration based on Siikamäki et al. (2015, p. 42) and Carrasco et al. (2014, p.167)

8. **Carbon Storage Benefit Stream.** Total carbon sequestered (tons) was estimated using EX-ACT from FAO. It is estimated that 0.2 tons/ha/year will be avoided in the total area intervened in the Project (including the reduction of degradation, loss of ecosystems, and sustainable productive practices) over 20 years.

9. Monetary values were estimated based on the carbon social price.⁹⁶ Here it is used US\$60 t/C as an upper bound and US\$40 t/Carbon as a lower bound. Additionally, the value of voluntary carbon market US\$3.01 t/Carbon, which do not include that social part, was added in the analysis as an alternative case.⁹⁷ According to the High-Level Commission on Carbon Prices, it is recommended that the Project’s economic analysis use a low and high estimate of the carbon price and take a value that is consistent with achieving the core objective of the Paris Agreement of keeping temperature rise below 2 degrees. Therefore, a higher value (US\$60) was taken as an objective indicator in the economic analysis.

10. **Producer Level and Mangrove Restoration Benefit Stream.** Major activities under this section are related to investments on improved/sustainable productive practices for coffee, cacao, sugar cane, and basic grain producer groups as well as agro-silvo-pastoral and agroforestry systems, and mangrove restoration. Therefore, these activities supported under each component bring social, financial, and environmental benefits. The benefit of producer groups activities is found by comparing the situation with and without the Project.

11. In simple terms, there are two ways to assess economically this benefit stream: (i) estimating the difference of benefits between conventional (current or baseline scenario) and regenerative production practices (sustainable practice scenario), or (ii) taking a percentage that represents an improvement in benefits for adopting

Carrasco, L.R., T.P.L. Nghiem, T. Sunderland, and L.P. Koh. 2014. “Economic valuation of ecosystem services fails to capture biodiversity value of tropical forests.” *Biological Conservation* 178 (2014): 163–170.

⁹⁶ World Bank (2017). Guidance note on shadow price of carbon in economic analysis. Washington, D.C.

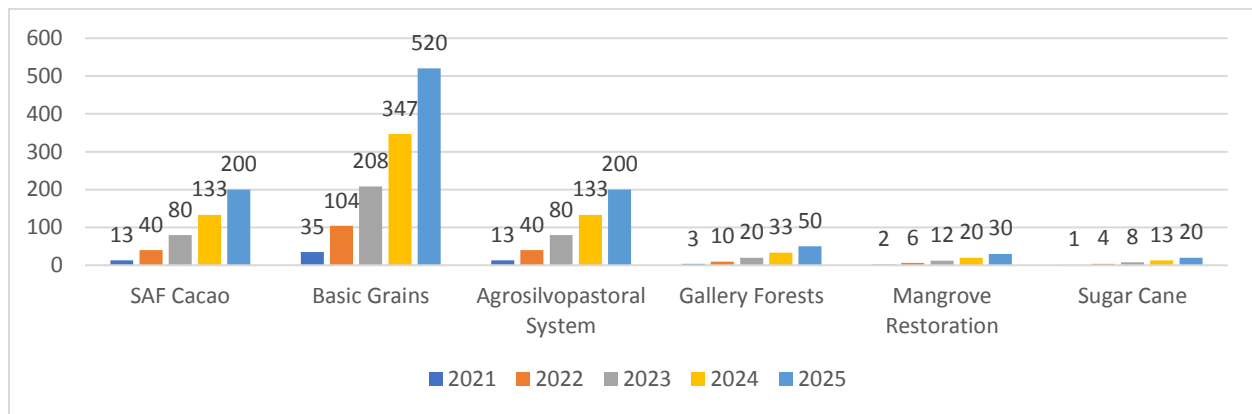
⁹⁷ Forest Trends’ Ecosystem Marketplace. (2019). Financing Emission Reduction for the Future: State of Voluntary Carbon Markets 2019. Washington D.C: Forest Trends.



regenerative production practices compared to conventional. In this sense, for this economic analysis, it is considered an increase in their productivity by at least 10 percent.

12. There are five types of activities to be financed at the producer level: (a) cacao, (b) basic grains, (c) sugar cane production, (d) agro-silvo-pastoral system, and (e) gallery forests. In addition to this, mangroves restoration is included as one more activity in the total intervened areas. These six activities were chosen because they are related to the sustainable management of land use. Figure 10 shows the distribution of land-use types and their number of intervened areas.

Figure 10: Distribution of land-use types and the number of intervened areas (in ha)



Source: Own elaboration by the WB Task Team.

Also, in this case, it is assumed that the total area is based on the distribution of the Results Framework.

13. The economic value of these six types of selected activities is obtained from a national study of financial, environmental, and social benefits of nine restoration actions that are part of the Action Plan for Restoration of Ecosystems and Landscapes of El Salvador, in compliance with the country’s commitment in the framework of the Bonn Challenge to restore one million ha⁹⁸. It is one of the first economic analyzes of the restoration actions completed under the ROAM framework.

14. Specifically, these economic values were obtained from different agricultural products of El Salvador, considering their characteristic benefits and costs. The social annual flows (which include both, social and private returns) for all the economic activities assessed are taken from Raes et al. (2017).⁹⁹ Here it was taken the values of Cacao Production Activities (US\$25,984/ha/year), Agro-silvo-pastoral system (US\$ 20,275/ha/year), Mangrove Restoration (US\$6,906/ha/year). The values for basic grains, gallery forests and sugar cane production activities do not show a significant change in the eleven-year period of the study; however, they could present an increase of the benefits in a much longer period.

⁹⁸ Raes, L., Nello, T. Nájera, M., Chacón, O., Meza Prado, K. and Sanchún, A. (2017). Análisis económico de acciones para la restauración de paisajes productivos en El Salvador. Gland, Suiza: IUCN. 2017, 72 p.

⁹⁹ Raes, L., Nello, T. Nájera, M., Chacón, O., Meza Prado, K. and Sanchún, A. (2017). Análisis económico de acciones para la restauración de paisajes productivos en El Salvador. Gland, Suiza: IUCN. 2017, 72 p.



Distribution of Costs and Benefits Over Time

15. A 20-year period is assumed to assess the economic feasibility of the Project. It is also assumed there are no further incremental changes of project-generated benefits beyond the 20-year project evaluation period. While the project costs are only assumed to emerge for the five years of project implementation, the benefits and opportunity costs are assumed to be generated beyond the implementation period. Project costs over the implementation period are approximated considering the project financing of US\$ 3.56 million by GEF. Also, an assumption of two percent, as an additional operating cost, were added along with the projection of a 20-year project evaluation that will be added for the incremental economic analysis.

16. A sensitivity analysis is applied for the main simulation parameters, notably the discount rate and project horizon, to assess project robustness. For the discount rate, alternative rates of six and nine percent are applied. In addition to varying discount rates, simulation results are tested against changing the project horizon (10 and 20 years). This set of sensitivity assessments enables a comprehensive analysis of the economic robustness of the Project in relation to the changing or differentiated value parameters. All sensitivity analyses are run for all discount rate scenarios.

C. Results

17. Table 12 shows baseline results as well as a sensitivity analysis. The first panel shows the 20-year baseline scenario. The second panel reduces further project lifetime to ten years. All the case scenarios are positive suggesting that the Project creates more benefits than costs. At the same time, increasing the discount rate from six to nine percent, reducing the carbon social price by 33 percent (from US\$60 to US\$40) as well as adopting the value of voluntary carbon market (US\$ 3.01) and using more conservative estimates regarding the value of ecosystem services provided (upper bound and lower bound), do not substantially affect the estimates.

Table 12. NPVs (US\$) and BC Ratio under Different Scenarios

a. Baseline Scenario, project implementation of 20 years and project costs included.

		Upper Bound		Lower Bound	
		NPV US\$	BC-Ratio	NPV US\$	BC-Ratio
Carbon Price (US\$ 60)	Discount rate 6%	\$5,145,760	2.37	\$4,429,157	2.18
	Discount rate 9%	\$3,364,863	2.00	\$2,822,509	1.84
Carbon Price (US\$ 40)	Discount rate 6%	\$5,081,392	2.36	\$4,364,789	2.17
	Discount rate 9%	\$3,316,114	1.99	\$2,773,760	1.82
Carbon Price (US\$ 3.01)	Discount rate 6%	\$4,962,336	2.33	\$4,245,733	2.13
	Discount rate 9%	\$3,225,946	1.96	\$2,683,593	1.80

b. Robustness Check 1, project implementation 10 years and project costs included.

		Upper Bound		Lower Bound	
		NPV US\$	BC-Ratio	NPV US\$	BC-Ratio
Carbon Price (US\$ 60)	Discount rate 6%	\$1,434,932	1.42	\$1,041,905	1.30
	Discount rate 9%	\$917,164	1.29	\$588,244	1.19
Carbon Price (US\$ 40)	Discount rate 6%	\$1,399,497	1.41	\$1,006,469	1.29
	Discount rate 9%	\$887,499	1.28	\$558,579	1.18
	Discount rate 6%	\$1,333,953	1.39	\$940,925	1.27



		Upper Bound		Lower Bound	
		NPV US\$	BC-Ratio	NPV US\$	BC-Ratio
Carbon Price (US\$ 3.01)	Discount rate 9%	\$832,628	1.26	\$503,708	1.16

Source: Own elaboration by the WB Task Team

D. Conclusions

18. This incremental economic analysis for the Project in El Salvador shows substantial benefits for beneficiaries in areas served by the Project, as well as substantial benefits for the Salvadoran society. Overall, the NPV is projected to reach US\$ 4.4 million (lower bound), and US\$ 5.1 million (upper bound) in the baseline scenario (20 years, carbon social price of US\$ 60, and 6 percent discount rate). The investments evaluated for the economic and financial analysis will generate a Benefit-Cost ratio between 2.18 and 2.37; and an IRR between 23 percent and 25 percent. The economic and financial analysis thus shows that if Project implementation is effective and efficient, Project-supported investments will bring substantial financial and economic benefits to small-scale farm producers in the Project area and to Salvadoran society in general.

19. The results of the quantitative simulations are robust in terms of sensitivity analyses, assuming different project years and discount rates, varying Benefit-Cost ratio between 1.16 and 2.37, and an IRR between 15 percent and 25 percent. Throughout the analysis, the benefit assumptions were based on the values of ecosystem services and carbon sequestration in El Salvador by recognized studies.

20. Estimates shown correspond to a lower bound as they represent the benefit streams derived from Components 1 and 2 applying a very conservative approach. The economic value of project is likely to be higher since the analysis did not include in the calculations other non-economic global and local benefits such as the value of the resulting improvement in food security, among other benefits. Certainly, it is expected that Component 3 will have additional benefits, but they are difficult to measure due to the social and environmental qualitative approach, based on project management. Worth noting, this last component is needed to carry out the main components and the overall project activities efficiently to thus achieving the desired results through the strengthening of business skills for sustainable rural production and the project coordination, monitoring, and evaluation.

21. Additional incremental benefits can be associated with incremental economic benefits arising from better public service delivery resulting from the Integrated Landscape Management and Restoration through CES that incentive the capacity building of small-scale farm producers embedded in all the project components. In summary, this project will benefit the sustainable development of El Salvador, providing long-term benefits to local communities and global public goods.



Annex 7: Map



EL SALVADOR
EL IMPOSIBLE BARRA DE SANTIAGO CONSERVATION AREA
PROJECT INTERVENTION AREA

- PROJECT INTERVENTION AREA EIBSCA
- NATURAL PROTECTED AREA
- SELECTED CITY AND TOWN
- DEPARTMENT CAPITAL
- NATIONAL CAPITAL



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