



MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATURALES
UNIDOS CRECEMOS TODOS

**United Nations Development Programme
Country: El Salvador
PROJECT DOCUMENT**

Conservation, sustainable use of biodiversity, and maintenance of ecosystem services in protected wetlands of international importance

UNDAF Outcome(s):	The population and the most vulnerable and excluded people have increased their resilience to disasters, environmental degradation, and the adverse effects of climate change.
UNDP Strategic Plan Outcome:	Outcome 5: Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change.
Expected CP Outcome(s):	Outcome 4: Transitioning towards an economy and society that are environmentally sustainable and resilient to the adverse effects of climate change.
Executing Entity/Implementing Partner:	Ministry of the Environment and Natural Resources (MARN)
Implementing Entity/Responsible Partners:	United Nations Development Program (UNDP)

Brief Description

The project's objective is to promote the conservation and sustainable use of biodiversity and the maintenance of ecosystem services through the creation of new protected wetlands of international importance (PWII), as well as the improved management of existing protected wetlands. The project's incremental approach consists of two interrelated components that will 1) serve to expand protected wetland coverage and strengthen institutional and individual capacities for the effective management of the PWII, and 2) address threats to biodiversity, including the presence of invasive species and solid waste and agrochemicals originating in the buffer areas of the PWII. Through Component 1, the GEF investment will establish the Jiquilisco Bay wetlands, wetlands in the Golfo de Fonseca Islands, and the Olomega Complex wetlands as a new multiple-use protected areas, which will cover 37,709.46 hectares and include the largest and best-preserved area of mangroves in eastern El Salvador. The GEF investment will also serve to protect saltwater forests, freshwater mangroves, herbaceous wetlands, and dry forest. In addition, the management effectiveness of three (3) PWIIs will increase by 10% as measured by the Management Effectiveness Tracking Tool (METT) scorecard, and the financial gap to cover basic management costs will be reduced by 25% contributing to their financial sustainability. Component 2 will allow the delivery of multiple global environmental benefits through the reduction of threats in the Jiquilisco Bay Complex PWII and the Jocotal Lagoon PWII in the lower Río Grande de San Miguel watershed. By project's end, the presence of biodiversity of global importance will be stable; the pollution derived from agrochemicals, livestock waste, and household and urban solid wastes will be reduced by 50%; there will be a reduced presence of two invasive species (water hyacinth [*Eichornia crassipes*] and the Neotropic cormorant [*Phalacrocorax brasilianus*]) in the Olomega Lake, the Jocotal Lagoon, and the Jiquilisco Bay Complex PWIIs; and 18 720 ha of mangroves in the Jiquilisco Bay Complex PWII and associated freshwater lagoons will be conserved

Programme Period:	
Atlas Award ID:	00088358
Project ID:	00095068
PIMS #	5125
Start date:	April 2016
End date:	April 2020
Management Arrangements	NIM
PAC Meeting Date	_____

Total resources required	11,106,447.55
<i>Total allocated resources:</i>	
- GEF	2,191,781.00
- FIAES	2,850,000.00
- GIZ	1,500,000.00
- ISCOS	1,600,000.00
- MARN	2,106,666.55
- UNDP	10,000.00
<i>In-kind contributions:</i>	
- MARN	848,000.00

Agreed by (Government):

Date/Month/Year

Agreed by (Executing Entity/Implementing Partner):

Date/Month/Year

Agreed by (UNDP):

Date/Month/Year

List of Acronyms

ACUDESBAL	Asociación Intercomunal de Comunidades Unidas para el Desarrollo Económico y Social del Bajo Lempa
ADESCO	Community Development Association
ADESCOBN	Asociación de Desarrollo Comunal Bosque Nancuchiname
ADESCOMAR	Asociación de Desarrollo Comunal Maranata
AECID	Spanish Agency for International Cooperation for Development
AMS	Association for the Self-Determination and Development of the Salvadoran Women
APR	Annual Project Report
ASIBAHIA	Asociación Intermunicipal de la Bahía de Jiquilisco
AWP	Annual Work Plan
BMP	Best management practices
°C	Degrees Centigrade
CASSA	Salvadoran Sugar Company SA
CATIE	Center for Tropical Agricultural Research and Higher Education
CBD	Convention on Biological Diversity
CEDAW	Convention on the Elimination of all Forms of Discrimination Against Women
CEL	Río Lempa Hydroelectric Commission
CENCITA	Centro de Cooperación Integral sobre Tecnologías Alternativas
CENDEPESCA	Center for Development of Fisheries and Aquaculture
CENTA	National Center for Agricultural and Forestry Technology
CNR	National Registration Center
CO	Country Office
CONAMUS	Asociación Coordinadora Nacional de la Mujer Salvadoreña
CORSATUR	Salvadoran Tourism Corporation
CPAP	Country Programme Action Plan
CSO	Civil Society Organization
DDT	Dichlorodiphenyltrichloroethane
DGEVS	General Directorate of Ecosystems and Wildlife
DGGA	General Directorate of Environmental Governance
DPC	Direct Project Costs
DSA	Daily subsistence allowance
ECP	Environmental Compensation Program
EIA	Environmental Impact Assessments
EIS	Environmental Information System
ENBD	National Biodiversity Strategy
ERC	Evaluation Resource Center
FGR	Prosecutor General's Office
FIAES	Initiative Fund for the Americas El Salvador
FISDL	Social Investment Fund for Local Development
FONAES	Environmental Fund of El Salvador
GAP	Good agricultural practices
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIS	Geographic Information System
GIZ	German Agency for Technical Cooperation
GMS	General Management Support
ha	Hectares
HDI	Human Development Index
IADB	Inter-American Development Bank

IR	Inception Report
ISDEMU	Salvadoran Institute for the Development of Women
IUCN	International Union for the Conservation of Nature
IW	Inception Workshop
JICA	Japan International Cooperation Agency
km ²	Square kilometers
LAC	Latin America and the Caribbean
M&E	Monitoring and Evaluation
MAG	Ministry of Agriculture and Livestock
MARN	Ministry of the Environment and Natural Resources
masl	Meters above sea level
MCC	Millennium Challenge Corporation
MEU	Municipal Environmental Unit
METT	Management Effectiveness Tracking Tool
MINSAL	Ministry of Health
MITUR	Ministry of Tourism
MNP	Most probable number
MOP	Ministry of Public Works
MSM	Salvadoran Women's Movement
MTPS	Ministry of Labor and Social Welfare
MUPA	Multiple-use protected areas
NGO	Non-Governmental Organization
NIM	National Implementation Modality
NPAS	National Protected Areas System
NPWI	National Program for Wetlands Improvement
OSH	Occupational safety and health
PA	Protected Area
PACAP	Administration and Consolidation of Protected Areas Project
PC	Project Coordinator
PES	Payments for Environmental Services
PIF	Project Identification Form
PIR	Project Implementation Review
PIU	Project Implementation Unit
PLES	Local Plan for Sustainable Extraction
PMU	Project Management Unit
PNC	National Civil Police
PNMH	National Program for Wetlands Improvement
PPG	Project Preparation Grant
PPP	Private-Public Partnership
PREP	Ecosystem and Landscapes Restoration Program
PSC	Project Steering Committee
PWII	Protected Wetlands of International Importance
RAMSAR	Convention on Wetlands of International Importance Especially as Waterfowl Habitat
RBLAC	UNDP Regional Bureau
RCU	Regional Coordination Unit
ROAR	Results-Oriented Annual Report
SAF	Special Activities Fund
SBAA	Standard Basic Assistance Agreement
SC	Steering Committee
SIMANA	National System of Environmental Management
STPP	Technical Secretariat of the Presidency

TC	Tripartite Committee
ToR	Terms of Reference
PC	Project Coordinator
UNDAF	UN Development Action Framework
UNDP	United Nations Development Programme
UNDP CO	United Nations Development Programme Country Office
UPL	Universal Pricelist
USD	U.S. Dollars

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1. SITUATION ANALYSIS

1.1. Context and global significance

Environmental context

1. El Salvador is the smallest country in Central America, covering approximately 21,040 square kilometers (km²) and with a population of 6,460,271 people. Despite its small size, the country has numerous regionally and globally important wetlands. According to the National Wetland Inventory, the total surface area of wetlands in El Salvador is 113,835 hectares (ha), or 5.4 percent of the country's surface area. The country has seven marine-coastal and inland wetlands of international importance, also known as Convention on Wetlands of International Importance Especially as Waterfowl Habitat (RAMSAR) sites. These are the Güija Complex, Olomega Lagoon, Jocotal Lagoon Natural Protected Area, the Cerrón Grande Reservoir, Jaltepeque Complex, Jiquilisco Bay Complex, and the Barra de Santiago Complex), which are composed of ecosystems with wet variations of tropical dry forest, freshwater and saltwater swamps, reservoirs, islands, and mangrove forests. The total area of mangrove forests in the country is approximately 40,000 ha. The wetlands of El Salvador provide numerous ecosystem services, such as biodiversity habitat, carbon storage, food supply, timber and firewood, recreation and scenic beauty, and flood control and storm protection. The marine-coastal wetlands of El Salvador include important areas of mangroves in northern Central America as well as diverse types of inland lakes. Species found within the inland wetlands are at varying levels of threat of extinction, including the frog *Plectrohyla guatemalensis*, the American crocodile (*Crocodylus acutus*), and the boa (*Boa constrictor*), among other species.

2. The mangrove ecosystems serve as habitat for highly vulnerable species such as the hawksbill sea turtle (*Eretmochelys imbricata*, a critically endangered species), which in El Salvador lives part of its lifecycle in the mangroves and wetland beaches in the Jiquilisco Bay and the Golfo de Fonseca. In addition, there are three other species of sea turtles (*Lepidochelys olivacea*, *Chelonia mydas*, and *Dermochelys coriacea*) that nest along the national marine-coastal shores, including the previously mentioned wetlands. The Golfo de Fonseca also serves as either a permanent home or migratory site for different bird species, including a permanent population of the Magnificent Frigate bird (*Fregata magnificens*) on Pirigallo Island. It is also the richest area of gorgonian coral species nationally and also serves as important habitat for the region (Segovia-Prado, 2012). Recently, new species of fish (*Akko rossi* and *Notarius biffi*) have been identified in the Golfo de Fonseca, which add to the biological richness of the marine-coastal area and the associated wetlands.

3. El Salvador has established the National Protected Areas System (NPAS), which currently consists of 70 areas with a total cover of 38,459 ha¹. The NPAS is the central component of the country's strategy for the protection and sustainable use of the country's seven Protected Wetlands of International Importance (PWII) and their associated biodiversity. The system is managed by the Ministry of the Environment and Natural Resources (MARN), which has as one of its objectives to consolidate the NPAS through a management approach that, in addition to adequately conserving the most representative terrestrial, freshwater, marine-coastal ecosystems, species, and genetic resources, guarantees the permanent supply of ecosystem services. The project has prioritized three PWII for its implementation: the Jocotal Lagoon, the Jiquilisco Bay Complex, and the Olomega Lake located on the country's southeastern coast (Figure 1).

¹ MARN. 2010. Análisis de Vacíos y Omisiones de Representatividad para el Pacífico de El Salvador: Conservación de Diversidad Biológica Marino Costera. El Salvador: TNC-PROBIOMA. 104 p.

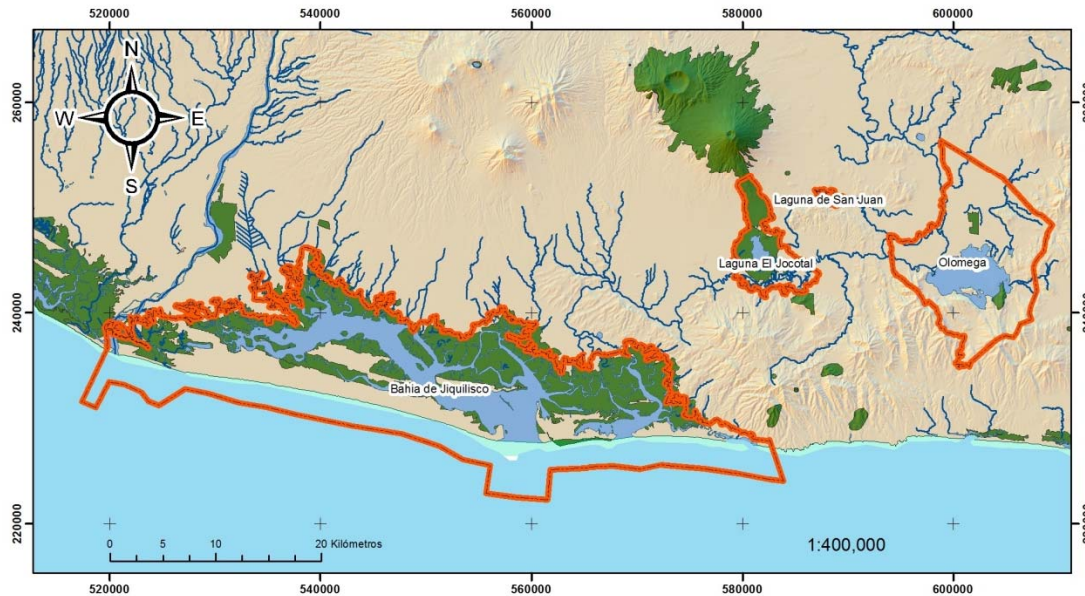
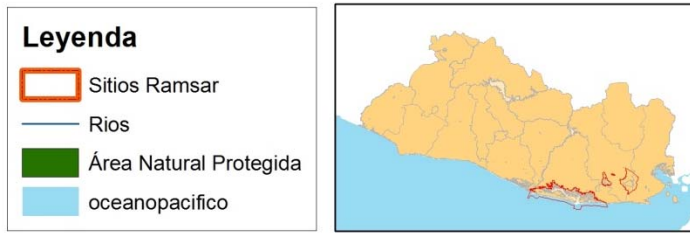


Figure 1 – Location of the three PWII prioritized by the project: the Jocotal Lagoon, the Jiquilisco Bay Complex, and the Olomega Lake.

4. A summary of the three PWII prioritized for this project is presented below:

PWII	Associated protected areas (PA) and size (ha)	Ecosystems and species present	Land use and threats	Location
1. El Jocotal Lagoon (established as a Ramsar site in 01/22/99, No. 970)	<ul style="list-style-type: none"> - El Jocotal Protected Natural Area (1,571) - Wetland of international importance (4,479) 	<p>Oligotrophic lagoon, dry tropical forest subject to flooding during the rainy season. It is characterized by the presence of patches of <i>Bravaisia integerrima</i>, commonly known as “freshwater mangrove.”</p> <p>Presence of migratory and resident birds and populations of two species of crocodiles.</p>	<p>Sedimentation, eutrophication of the lagoon, and low oxygen levels due to the presence of the water hyacinth (<i>Eichornia crassipes</i>) and contamination from domestic waste as well as agrochemicals.</p>	<p>Municipalities of El Tránsito, San Miguel, and Jucuarán</p>
2. Jiquilisco Bay Complex (established as a Ramsar site in 10/31/05 – No. 1586)	<ul style="list-style-type: none"> - Chaguantique PA (53) - Normadía PA (495) - Isla San Sebastián PA (161) - Wetland of international importance (63,500) 	<p>Tropical dry forest adapted to water saturation during the rainy season; transitional forest between mangroves and dry tropical forest adapted to flood conditions (Irilar) characterized by the species <i>Coccoloba floribunda</i>, which is rapidly disappearing due to the expansion of agriculture. Other ecosystems present are</p>	<p>Water contamination generated by domestic solid waste from nearby communities and from the use of agrochemicals. Loss of habitat due to deforestation and the expansion of agriculture, shrimp farms, and salt mining.</p>	<p>Municipalities of Jiquilisco, Puerto El Triunfo, Usulután, San Dionisio, Concepción Batres, and Jucuarán</p>

		mangroves, sandy beaches, and low intertidal and benthic subtidal communities. Species present are a new species of bivalve (<i>Periploma kaiserae</i>), nesting site for the Hawksbill turtle (<i>Eretmochelys imbricata</i>), and the American crocodile (<i>Crocodylus accutus</i>). Site with patches of beach vegetation and is the only location in the country with presence of seagrass (<i>Halodule wrightii</i>).	Unsustainable fishing, which includes the use of explosives. Presence of the Neotropic cormorant (<i>Phalacrocorax brasilianus</i>).	
3. Olomega Lake (established as a Ramsar site in 02/02/10 – No. 1899)	– Wetland of international importance (7,557)	Dry tropical forest adapted to flooding during the rainy season. Rich population of migratory and resident birds. Presence of <i>Crocodylus accutus</i> and the only location in the country where the freshwater clam <i>Mycetopoda subsinuata</i> is found.	Water contamination, sedimentation, deforestation, non-biodiversity-friendly cattle ranching, overfishing, and presence of exotic invasive species such as water hyacinth (<i>Eichornia crassipes</i>). Presence of the Neotropic cormorant (<i>Phalacrocorax brasilianus</i>).	Municipalities of San Miguel, Chirilagua, and El Carmen

Socioeconomic context

5. El Salvador is the smallest and most densely populated country in Central America. About 20 percent of El Salvador's population lives abroad. The remittances El Salvadorans living abroad send home account for close to 20 percent of the Gross Domestic Product (GDP) and is the second largest source of external income after exports; about a third of all households benefit from the remittances. Despite being the smallest country in Central America geographically, El Salvador has the fourth largest economy in the region. With the global recession, real GDP contracted in 2009 and economic growth has since remained low, averaging less than 2 percent from 2010 to 2014. Agriculture accounts for about 10 percent of GDP with the main products being coffee, sugar, corn, rice, beans, oilseed, cotton, sorghum, beef, and dairy products; while industry accounts for approximately 25 percent and includes food processing, beverages, petroleum, chemicals, fertilizer, textiles, furniture, and light metals.²

6. **Jocotal Lagoon:** This wetland serves as a source of fish for the almost 10,500 inhabitants of the area and as recreation ground for local and foreign tourists. Its buffer area includes pastures for livestock.

7. **Jiquilisco Bay Complex:** In the buffer area of the wetland there are about 120,000 people (52% female and 48% male) whose main economic activities are fishing, shellfish extraction, aquaculture, salt extraction, cattle ranching, and coconut and sugar cane cultivation. There is also some tourism in the area. Indigenous groups present are the Lencas, Kakawira, and Nahuat Pipil, which comprise 0.1% of the total population, 88% of whom live in rural areas.

8. **Olomega Lake:** The site plays a major role in flood control, water purification, and groundwater replenishment that will be later extracted through wells by the local population (ca. 9,000 inhabitants). The main economic activities in the area are cattle ranching and fishing.

² <https://www.cia.gov/library/publications/the-world-factbook/geos/es.html>

Policy and legislative context

9. Directives related to wetland conservation and PWII management in El Salvador are based on the 1983 Constitution of El Salvador, related laws, and the international treaties and agreements that have been ratified by the country, including the Convention on Biological Diversity (CBD). The 1983 Constitution establishes in Article 117 that “It is the duty of the Country to protect its natural resources, as well as the diversity and integrity of the environment, to ensure sustainable development.”

10. The Environmental Law and Regulation (1998) creates the NPAS, establishes its management objectives, recognizes the importance of the management plans, and defines the delegation of management as a strategy for shared responsibility with civil society. The objective of the Natural Protected Areas Law is to regulate the establishment of the legal, administrative, and management and growth frameworks of the NPAs in order to conserve biological diversity, ensure proper functioning of the essential ecological processes, and guarantee the continuity of the natural systems through sustainable management that will benefit the country’s inhabitants. Chapter V (Authorizations and Concessions) of the Natural Protected Areas Law specifies that the MARN will have the power to authorize the activities, work, and projects that are compatible with the NPAs. There is also a Special Regulation for Wastewater, a Special Regulation for Environmental Quality Technical Standards, and a Special Regulation for the Integrated Management of Solid Wastes, which are applicable within the NPAs and their buffer zones.

11. The signing of agreements related to the NPAs’ management is linked to the development of activities for investigation, resource use, protection, expansion, conservation, and restoration. With regard to the participation of civil society members in the NPAs’ management, the agreements are linked to the existence of a management plan and respond to four different levels of civil society participation that carry with it the delegation of management activities established in the management plan. Article 24 of the Natural Protected Areas Law establishes that the MARN may delegate these management activities through an Executive Agreement. In addition, Community Agreements constitute legal acts that allow legitimizing decision-making among the parties when there are conflicts, and can be used to establish an NPA and delegate the management of the NPA to a co-management entity.

12. Since 2003 the country has had a catalogue of prices for the sale of products and provision of services for activities related to the National Parks and Wildlife Service under the MARN. Through Executive Agreement #1280 of November 13, 2006, the Ministry of Finance, upon request by the MARN, determined the need to modify the prices in order to align them better with the NPAs’ management needs. A new list was agreed upon, and includes the permits required for entry into the NPAs. The Executive Agreement also establishes that all revenues from these services will be incorporated into a special account called the “Office of the Treasury – Special Activities Fund (SAF).” The MARN currently has an SAF through which it obtains revenue from the sale of products and services from the NPAs, which are then reinvested in the NPAs.

13. Chapter 1 of the Environmental Law sets forth the Environmental Incentives and Disincentives Programs as instruments of the Environmental Policy, which will be developed jointly with the MARN, the Ministry of the Economy, and the Ministry of Finance, in order to reverse the effects of contamination or activities that lead to excessive or inefficient use of the natural resources. Article 33 of the Environmental Law states that the MARN will encourage businesses to incorporate environmentally friendly processes and technologies into their production activities, making use of the incentives and disincentives programs and promoting national and international financial and technical cooperation. The standards for the environmental incentives programs included under the Environmental Law Regulation are described in Articles 54 and 55.

14. Article 5 of the Environmental Law defines Environmental Compensation as “the set of mechanisms that the country and its population can legally employ to replace or compensate for unavoidable impacts caused to the environment. Offsets can be carried out directly or through specialized

agents at the site of impact, or in neighboring areas that are more conducive to its replacement or in recovery areas.

15. The Environmental Fund of El Salvador (FONAES) was created in 1994 to obtain and manage financial resources to fund plans, programs, and projects and any activity aimed at the protection, conservation, improvement, restoration, and rational use of natural resources and the environment. In addition, in 1993 the Initiative Fund for the Americas El Salvador (FIAES) was established to fund activities for the protection, conservation, improvement, restoration, and rational use of natural resources and the environment. In March 2014, through Decision No. 31, the MARN signed cooperation agreements with FONAES and FIAES to comply with environmental compensation measures established related to environmental impact assessments (EIAs).

16. Other regulations related to the project are:

- The Wildlife Conservation Law, which outlines norms related to the sustainable management and use of wildlife.
- The Forestry Law and Regulations, which outline norms related to the sustainable management and use of forests, including NPAs, as long as these activities do not affect their conservation objectives, and gallery forests bordering private properties used for cattle ranching and forestry.
- The Special Public Private Partnerships Law (2013), which establishes the regulatory framework for the development of Public Private Partnership (PPP) projects for infrastructure development and the provision of services of public interest in an effective and efficient manner. Under this law, the private sector will provide financial resources, skills, and the knowledge necessary to develop these projects jointly with the government and for the benefit of the population.
- The National Tourism Policy (2014), which identifies tourism as a national priority for the country's development. Under this policy the Ministry of Tourism and the MARN work to promote the value of ecosystems and highlight the role that environmental services play in the lives of local communities.
- The National Environmental Policy and Strategic Guidelines for the conservation and use of natural resources.
- The Executive Agreement for classifying works and projects that do not require an EIA.
- The Law of Equality and Eradication of Discrimination Against Women of El Salvador, which in Article 32 directs the State institutions to incorporate into environmental policies the differential aspects of men and women regarding: a) access, management, use, and control of natural resources; b) development and implementation of training processes; c) development of environmental indicators and statistics; d) funding for projects managed or co-managed by women; and e) the process of designing public policies.
- Local regulatory ordinances related to the environment.
- International agreements such as the RAMSAR Wetlands Convention, the CBD, the Convention on Biosphere Reserves, the Convention on Climate Change, and the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW).

1.2. Threats to biodiversity, impacts, and root causes

17. The PWIIs of El Salvador and their associated biodiversity face numerous threats that have led to the loss of important habitat. For example, the area of mangrove forest has declined from 100,000 ha in the 1950s to close to 40,000 ha of mangrove forest currently³. The principal threats are: a) the expansion

³ MARN. 2013. Estrategia Nacional de Biodiversidad.

of agricultural and cattle ranching activities, including tree clearing and fires, as well as the contamination and eutrophication of water bodies; b) the illegal transformation of wetlands due to the demand for land for housing, agricultural crops, and cattle grazing areas; c) the uncontrolled use of agrochemicals, which causes the eutrophication and contamination of wetlands through runoff and promotes the development of algae and invasive plants to levels that literally choke the wetlands, thereby affecting biodiversity, traditional fishing, and other activities; d) the accumulation of solid wastes generated in urban areas such as Metapán (the metropolitan area of San Salvador), San Miguel, Usulután, and Zacatecoluca, which represents a threat to wildlife when they ingest toxic particulates from the waste; e) the presence of invasive species such as the Neotropic cormorant (*Phalacrocorax brasilianus*), which impacts the native fish species (it is estimated that each adult consumes 325 grams of fish each day), contributes to the eutrophication of the water, and creates conflicts with local fishermen; and the water hyacinth (*Eichornia crassipes*), which covers up to 95 percent of the water surface of the PWIIs in some seasons (for example, Jocotal Lagoon), thereby affecting the productivity and altering biological cycles of the native aquatic species, in addition to making navigation and fishing difficult; f) the unsustainable extraction of resources, including fishing with destructive methods such as the use of explosives, principally in the Jiquilisco Bay Complex wetland, thereby affecting populations of fish, invertebrates, cetaceans, and the Hawksbill turtle (*E. imbricata*); g) floods associated with climate change that cause the loss of forest cover, reductions in the populations of threatened or endangered species, as well as the loss of human lives, infrastructure, and crops; and h) groundwater salinization due to alteration of the watersheds and the influence of the Pacific Ocean.

Threats to biodiversity

18. Habitat fragmentation and loss brought on by changes in land use. This is one of the major threats to ecosystem loss in El Salvador; its causes are complex and vary from one area to another. Just within the period from 2000 and 2010 a loss of forest coverage was reported to be at 6.57 percent, which is equivalent to 138,288 ha.⁴ Damages are primarily attributed to the following activities: a) agricultural expansion, where approximately 48 percent of the country's territory is under cultivation, and where 40% of the cultivated areas is in the watershed of the Jiquilisco-Goascorán Bay; b) urban growth and infrastructure development (it is currently estimated that the urban areas occupy more than 4 percent of the national territory); and c) expansion of cattle ranching activities (creation of new pastures), which cover approximately one-fifth of the nation's territory.⁵ For this last activity, cattle ranching farms that surround the Jocotal Lagoon and Olomega Lake tend to reduce the water body to enlarge cattle ranching borders, while the fishermen try to maintain the water surface area as large as possible, leading to a conflict of interest between the two parties.⁶

19. Deforestation of the southern slopes of the Olomega Lake through logging, agricultural transformation, and uncontrolled forest fires in the mountainous areas creates a serious problem of erosion and soil loss that also leads to the clogging of the lagoon and increases turbidity. The logging of riparian trees in the seasonally saturated forest causes a reduction in the coverage of the few patches of freshwater mangroves and the biodiversity this type of ecosystem houses, as well as the periodic forest fires in the areas that affect the tropical dry forest patches.⁷ In the marine-coastal wetland areas, another factor that progressively influences the loss of mangrove forest is the establishment of salt mines and

⁴ MARN. 2014. Quinto Informe Nacional para el Convenio sobre la Diversidad Biológica. El Salvador.

⁵ Gallo, M. 2013. Estado del Conocimiento de la Biodiversidad en El Salvador. Documento Final. MARN/INBIO/Norwegian Ministry of Foreign Affairs; MARN. 2013. Estrategia Nacional de Biodiversidad; MARN/AECID. 2014. Plan Nacional de Gestión Integrada del Recurso Hídrico en El Salvador: Zona Hidrográfica III-Jiquilisco-Goascorán.

⁶ MARN. 2004. Ficha Informativa de los Humedales de RAMSAR: Laguna de Olomega, El Salvador.

⁷ Ibid.

small-scale shrimp farms; many times it is difficult to regenerate ecosystems in those spaces that are already disturbed, thereby creating irreversible damage.⁸

20. Deforestation of mangroves. Saltwater forests or mangroves cover at least 2 percent of the territory of El Salvador. This ecosystem shows a marked reduction; it has been estimated that in the 1950s there were 100,000 ha of mangroves in existence, which contrasts with the approximately 40,000 ha that currently exists.⁹ Union Bay and Jiquilisco Bay contain the largest area of mangroves in the country. Jiquilisco Bay was recorded in 2012 to have 19,265.67 ha of mangroves; between 1994 and 2012 there was a decrease of 3,646.33 ha in mangrove coverage.¹⁰ The main causes of the reduction of mangroves are attributed to the growth of salt mines and shrimp farms, the expansion of agricultural borders, and logging for timber to be used in construction. Fires are periodically started as a result of burns conducted at sugar cane plantations that are adjacent to natural forests. In addition, the extraction of mangrove soil to be used for the construction of walls for shrimp farms prevents the regeneration of mangroves that are in a state of deterioration or have been deforested. In Jiquilisco Bay construction for urban and tourism development has caused the deterioration of the mangroves, and as a direct result, the ecological equilibrium of the area.¹¹

21. The wetlands that contain mangrove forests are sites that function as habitat for a wide range of biodiversity; for example, these wetlands are habitat for a large number of migratory birds such as *Numenius phaeopus* (Whimbrel), *Actitis macularia* (Spotted sandpiper) and *Ardea herodias* (Great blue heron), and endangered species such as *Amazona auropalliata* (Yellow-naped amazon), *Vireo pallens* (Mangrove vireo), *Buteogallus urubitinga* (Great black hawk), *Cairina moschata* (Muscovy duck), *Crocodylus acutus* (Crocodile), *Eretmochelys imbricata* (Hawksbill sea turtle), and some species of importance for consumption and sale such as the *Anadara grandis* (mangrove cockle), *Ucides occidentalis* (Punche crab), and *Lutjanus guttatus* (snapper), among others.¹² If the reduction of mangrove coverage continues as it has been, the effects will be felt by the species that depend on it, including humans, and will lead to an imbalance in the food chains and loss of ecosystem services.

22. Alien invasive species. Invasive species such as the Neotropic cormorant (*Phalacrocorax brasilianus*), whose population has reached 30,000 in the Cerrón Grande Reservoir wetland, impacts the native fish populations (it is estimated that each adult consumes 325 grams of fish per day), and generates conflicts with local fishermen. Since its construction began in 1973, the Cerrón Grande Reservoir wetland became the perfect incubator for this species that is without natural predators and highly successful in reproduction by providing a good climate, abundant water, and sufficient food. These conditions converted the wetland into the perfect place for growing the Neotropic cormorant population to the point that in early 2000 the fishermen from 13 municipalities that border the wetland began to complain about the large number of these birds as they were consuming great quantities of fish that the local residents also needed for their subsistence. As individuals of this species easily move from one site to another, they were distributed among different wetlands around the country to the extent that they impacted Jocotal Lagoon and Olomega Lake.

23. To manage the populations of the Neotropic cormorant, the MARN has staged controlled hunting activities, primarily on Bird Island in Cerrón Grande. The agency has also tried to control the populations

⁸ MARN. 2014. Quinto Informe Nacional para el Convenio sobre la Diversidad Biológica. El Salvador.

⁹ Gallo, M. 2013. Estado del Conocimiento de la Biodiversidad en El Salvador. Documento Final. MARN/INBIO/Norwegian Ministry of Foreign Affairs

¹⁰ MARN/PACAP 2012. Propuesta de Plan de Manejo Actualizado para el período 2012-2017 del Área de Conservación Bahía de Jiquilisco. Documento sin oficializar.

¹¹ MARN/AECID. 2004. Complejo Bahía de Jiquilisco: Propuesta de sitio RAMSAR. El Salvador. MARN/PACAP 2012. Propuesta de Plan de Manejo Actualizado para el período 2012-2017 del Área de Conservación Bahía de Jiquilisco. Documento sin oficializar

¹² Jiménez, I.; Sánchez-Mármol, L.; Herrera, N. 2004. Inventario Nacional y Diagnóstico de los Humedales de El Salvador. MARN/AECID. San Salvador, El Salvador; MARN/PACAP 2012. Propuesta de Plan de Manejo Actualizado para el período 2012-2017 del Área de Conservación Bahía de Jiquilisco. Documento sin oficializar.

by interrupting the nesting season of this species. Nevertheless, these activities have not been permanent and have not achieved a significant reduction in the population. This has also generated conflicts with some local residents who are involved in tourism, as they believe that hunting activities would impact the number of tourists visiting the area for birdwatching. The cormorant also causes the displacement of other local aquatic species, which leads to an imbalance of other species' populations and the wetland ecosystems.

24. Water hyacinth (*Eichornia crassipes*) has covered up to 95 percent of the water surface of some PWIIs (e.g., Cerrón Grande Reservoir, Jocotal Lagoon, and Olomega Lake) during some seasons, contributing to the eutrophication of the water, affecting the primary productivity of the ecosystems and the biological cycles of the aquatic species, in addition to hindering navigation and fishing. This species reproduces through seeds that generate new roots, creating mantles that are distributed by currents and wind. High levels of nutrients in the water favor its growth, especially nitrogen, phosphorus, and potassium levels that are the direct result of runoff from agricultural fertilizers applied in areas close to the water bodies. One method used to eradicate the water hyacinth from these water bodies is through direct removal. In 2012 in the Jocotal Lagoon two removal activities were conducted, one that yielded 100 m³ of water hyacinth and the other 800 tons; in 2013 a removal was conducted that yielded 2,400 m³. In 2011 in the Olomega Lake a total of 4 km² of the plant were removed. The next year (2012) 100 m³ were removed and in 2013 4,950 m² were removed. Other methods to mitigate the impact of the overgrowth of water hyacinth include activities by women's groups in 2014 to develop an organic fertilizer using cow manure and water hyacinth, generation of crafts using parts of the plant, and days spent in the field extracting the plants. Nevertheless, the species continues to proliferate, as the efforts were not conducted in a permanent manner and there is little control of the reduction of contamination of water bodies that favor its proliferation.

25. In addition, exotic fish species such as Tilapia (*Oreochromis* sp.) and the Jaguar cichlid (*Parachromis managuensis*) have been introduced to the PWIIs. In the case of the Jocotal Lagoon and the Olomega Lake, the presence of these species may reduce the diversity of native fish species present in the water bodies.

26. **Contamination of Water Bodies.** It is estimated that 73 percent of the 55 rivers in El Salvador are contaminated¹³; wetlands are included in this category as they are connected through rivers to continental and marine-coastal water bodies such as the Jocotal Lagoon, Olomega Lake, and Jiquilisco Bay. In the Jiquilisco-Goascorán catchment area there are high concentrations of fecal coliform detected in the Juana, Diente de Oro, and Grande de San Miguel rivers (in the Juana River alone the concentration is estimated at 1,700,000 most probable number [MNP] per 100 milliliters¹⁴) as well as the strong deoxygenation of the Grande de San Miguel River, the Jocotal Lagoon, and the Olomega Lake that exceed the thresholds established by Decree 51 (Waters), as the water used for residential and industrial purposes that are discharged to these water bodies have not undergone any treatment process (≤ 4 milligrams per liter [mg/l] of wastewater).¹⁵ In addition, dichlorodiphenyltrichloroethane (DDT) residues have been found in the sediments of some river outfalls. This limits the development of aquatic life and the related ecological processes and also affects human health.¹⁶

27. Cattle-ranching activities contribute to the contamination of water bodies with manure and waste from related activities such as clearing pasture land through logging and burning, which leads to eutrophication processes occurring in the nearby water bodies; this also occurs with the uncontrolled use

¹³ MARN. 2013. Estrategia Nacional de Recursos Hídricos.

¹⁴ OMS: $\leq 1,000$ NMP/100 ml

¹⁵ It is estimated that 82% of these ordinary and special wastewaters, which originate from domestic and industrial activities, do not receive any type of treatment and are discharged directly to the water bodies (MARN/AECID 2014).

¹⁶ MARN (Ministerio del Medio Ambiente y Recursos Naturales). 2014. Quinto Informe Nacional para el Convenio sobre la Diversidad Biológica 2011-2020; MARN/AECID. 2014. Plan Nacional de Gestión Integrada del Recurso Hídrico en El Salvador: Zona Hidrográfica III-Jiquilisco-Goascorán.

of agrochemicals (fertilizers and pesticide).¹⁷ Sugar cane is one of the crops with the greatest impact; it covered 3.4 percent of the national territory during 2013-2014, and one-fifth of this total was located in the buffer zones of the mangroves. The crop's agricultural practices are highly damaging to health, soil, and the environment; it is calculated that 97 percent of the total area under sugar cane cultivation is burned for harvesting.¹⁸ Agrochemicals that run off to the water bodies through rainfall cause their contamination, leading to toxicity and eutrophication that increase the quantity of nutrients and the growth of algae and invasive plants, which when decomposing consume oxygen. This affects aquatic organisms and a diversity of species through food chains, including human health and the livelihoods of the local communities who depend on these aquatic resources.¹⁹

28. High concentrations of detergents are found along the banks of the wetlands of the Jocotal Lagoon where people gather to wash clothes.²⁰ Added to this is the accumulation of urban-origin solid wastes from areas such as San Miguel, Usulután, and Zacatecoluca, primarily through creeks and rivers such as the Grande de San Miguel, which is considered one of the most contaminated rivers in the country and is directly connected to the Olomega Lake and Jiquilisco Bay wetlands, thereby impacting the biodiversity of these areas.

29. **Unsustainable resource use.** The unsustainable use of resources, including illegal fishing using destructive methods such as explosives, is one of the greatest problems in the Jiquilisco Bay wetland complex. This method of fishing eliminates larvae and eggs and affects fish, invertebrate, cetaceans, and the Hawksbill sea turtle (*E. imbricate*) population.²¹ This practice also affects the American crocodile (*Crocodylus acutus*), whose populations have also been reduced because of pressure from hunting for the sale of skins and their occasional capture in fishing nets, principally in the Jiquilisco Bay and the Jocotal Lagoon. Other species affected by illegal hunting practices in the Jocotal Lagoon and the Olomega Lake and their surroundings are the black spiny-tailed iguana (*Ctenosaura similis*) and the white-tailed deer (*Odocoileus virginianus*).²²

30. There is also the overexploitation (through self-consumption and sale) of species of the genus *Anadara* (saltwater bivalves); the number of individuals collected has been estimated at over 38 million annually in Jiquilisco Bay, according to a study developed between August 2008 and July 2009; however, these numbers could be greater given the lack of control over extraction.²³ The perception is that they are being overexploited due to the fact that there is a decrease in the size of the individuals that are currently extracted for sale. In the Fifth National Report to the CBD (2014), *Anadara* sp. is reported as “in danger of extinction” in the country; nevertheless, it is not currently found on the official list of threatened or endangered wildlife in the country according to the MARN (2009). Sea turtles present in El Salvador (*Lepidochelys olivacea* [Olive Ridley sea turtle], *Chelonia agassizi* [Green sea turtle], *Dermochelys coriacea* [Leatherback sea turtle], and *Eretmochelys imbricata* [Hawksbill sea turtle]) are seen as threatened principally because of the overexploitation of their eggs, the degradation of the beaches where they nest, the unsustainable fishing methods in which they become trapped in nets or hooks, and the contamination of the coastal waters.

¹⁷ MARN/AECID. 2003. Plan de Manejo del Área Natural Humedal de Olomega. Propuesta Final. El Salvador; MARN. 2004. Ficha Informativa de los Humedales de RAMSAR: Laguna de Olomega, El Salvador.

¹⁸ MARN (Ministerio del Medio Ambiente y Recursos Naturales). 2014. Quinto Informe Nacional para el Convenio sobre la Diversidad Biológica 2011-2020; MARN/AECID. 2014. Plan Nacional de Gestión Integrada del Recurso Hídrico en El Salvador: Zona Hidrográfica III-Jiquilisco-Goascorán

¹⁹ MARN. 2013. Estrategia Nacional de Biodiversidad; MARN. 2014. Quinto Informe Nacional para el Convenio sobre la Diversidad Biológica. El Salvador.

²⁰ MARN/AECID. 2003. Plan de Manejo del Área Natural Humedal de Olomega. Propuesta Final. El Salvador; MARN. 2012. Ficha Informativa de los Humedales RAMSAR: Área Natural Protegida El Jocotal. El Salvador.

²¹ MARN/AECID. 2004. Complejo Bahía de Jiquilisco: Propuesta de sitio RAMSAR. El Salvador; MARN/PACAP 2012. Propuesta de Plan de Manejo Actualizado para el periodo 2012-2017 del Área de Conservación Bahía de Jiquilisco. Documento sin oficializar.

²² Ibid.

²³ PACAP (Proyecto Consolidación y Administración de Áreas Protegidas), MARN (Ministerio del Medio Ambiente y Recursos Naturales). 2010. Línea Base del Área de Conservación Bahía de Jiquilisco, El Salvador. Banco Mundial y Fondo/GEF.

31. **Extreme events associated with climate change.** According to historical records, El Salvador has been impacted by 16 extreme hydrometeorological events since the 1960s, half of which occurred during the past 10 years.²⁴ It is estimated that close to 9.36 percent of the national territory is exposed to severe and moderate floods and 19.2 percent is exposed to various types of landslides, while more than 47 percent is at risk of being affected by drought ranging from severe to moderate or reduced. The floods associated with climate change may cause loss of forest cover, reduction in populations of plants and animals, primarily those threatened and in danger of extinction, as well as loss of human life, infrastructure, and crops; and the salinization of the water table, due to changes to the watersheds and the influence of the Pacific Ocean.

32. During the last 60 years the average sea level increased approximately 7.8 centimeters (cm) at an average rate of 1.3 millimeters (mm) per year.²⁵ An average coastal erosion rate of 0.12 meters (m) per year is a direct result of this. In addition, the average temperature in El Salvador has increased by 1.3 degrees Centigrade (°C) in relation to the 1950s, and the largest increase was recorded in the 1990s (24.2°C between 1950-1959 to 25.5°C between 2000-2006). The annual accumulated precipitation recorded has also had a high level of variability, varying between a minimum of 1.274 mm to a maximum of 2.310 mm between 1950 and 2006. The mangroves are believed to be the coastal ecosystems most affected by the increase in sea level, temperature, and the greatest frequency and intensities of hurricanes and storms. With the increase in sea level an increase in the salinity of the coastal area has also been seen and as a consequence the deterioration and shrinking of the mangroves that are formed by species such as *Rhizophora mangle*, *R. racemosa*, *R. harrizini*, *Avicennia germinans*, *A. bicolor*, *Conocarpus erecta*, and *Laguncularia racemosa*.²⁶ Also associated with the rise in sea level, the successful reproduction of some species has been affected. Such is the case of an islet in front of San Sebastián Island (Jiquilisco Bay), where the only nesting colony in Central America of the *Rynchops niger* (Black skimmer) is located, as well as other bird populations such as *Sternula antillarum* (Least tern), *Charadrius wilsonia* (Wilson's plover), and *Haemantopus palliatus* (American oystercatcher), which are in danger of extinction in El Salvador. The nesting sites of the sea turtles on beaches are also affected; these sites are destroyed by physical alteration of the land during the extreme climate events.²⁷ Added to this is the change in temperature that determines the proportion of male and female sea turtles, where an increase in temperature increases the number of females and a reduction in temperature favors the birth of males. Last, as a consequence of intense rainfall and phenomena such as El Niño, the continental wetlands show visible affectation, becoming flooded and losing space for erosion, putting the aquatic biodiversity and the habitat of the terrestrial biodiversity at risk.

Direct and underlying causes

33. **Poverty and population growth.** One of the principal problems that the natural areas and biodiversity in general in El Salvador faces is population growth and the situation of poverty in which many people find themselves. Forty-nine percent (49%) of the total population of El Salvador (6,460,271 people) live in poverty.²⁸ Poverty is also common in the project's prioritized areas. For example, in the Jiquilisco area the population increased by 6% from 2010 to 2015²⁹; two-thirds of its population lives in poverty and the average education is only 4.4 years of primary education (4.5 years for men and 4.3 years

²⁴ Rodríguez, E. 2012. Documento de diagnóstico del Bajo Lempa y Estero de Jaltepeque. RIMISP (Centro Latinoamericano para el Desarrollo Rural).

²⁵ MARN (Ministerio del Medio Ambiente y Recursos Naturales). 2013. Estrategia Nacional de la Biodiversidad. San Salvador, El Salvador

²⁶ MARN/PACAP 2012. Propuesta de Plan de Manejo Actualizado para el período 2012-2017 del Área de Conservación Bahía de Jiquilisco. Documento sin oficializar.

²⁷ Jiménez, I.; Sánchez-Mármol, L.; Herrera, N. 2004. Inventario Nacional y Diagnóstico de los Humedales de El Salvador. MARN/AECID. San Salvador, El Salvador; MARN/PACAP 2012. Propuesta de Plan de Manejo Actualizado para el período 2012-2017 del Área de Conservación Bahía de Jiquilisco. Documento sin oficializar.

²⁸ CEPAL, 2014.

²⁹ MINEC, Proyección de Población Municipal 2005-2020.

for women)³⁰. People's basic needs are not addressed and there is little concern for the environment. The population growth and demands for goods and services (agricultural, cattle ranchers, and housing/urbanization) has led to unmanaged and unplanned development of the land, an increase in habitat fragmentation, and loss of connectivity. In most cases this minimizes the possibility of ecosystem recuperation.³¹

34. Uncontrolled expansion of the agriculture, aquaculture, cattle ranching, and urban areas. The expansion of the agricultural, aquaculture, cattle-raising, and urban borders is one of the direct causes of deterioration that the country's wetlands face, and is linked with threats such as land use change, contamination, and the general degradation of biodiversity. In El Salvador the urban areas occupy more than 4 percent of the national territory, the agricultural ecosystems (basic grains, coffee, sugar cane, grasses, etc.) occupy 74 percent. In addition, it is estimated that 2,052 ha have been intervened upon for aquaculture activities and salt production: 61 percent (1,249 ha) in Jiquilisco Bay; 30 percent (611 ha) La Unión Bay, and the remaining 9 percent in the estuary of Jaltepeque (125 ha) and Los Cóbanos (66 ha).

35. This growth is evident in areas such as Jiquilisco Bay where the mangroves have been cleared to expand sugar cane crops, construct housing, for fuelwood, and to establish shrimp and salt farms, and even to establish artificial reefs for harvesting fish using inappropriate fishing methods.³² The continental wetlands such as the Jocotal Lagoon and Olomega Lake have also been affected by the expansion of cattle ranching (areas for new pastures), causing a reduction in the area of the water of these lagoons and creating conflicts between cattle ranchers and fishermen.³³ This causes an alternation in the wetland areas, making them vulnerable to floods or droughts, with high levels of contamination due to runoff of agrochemicals and sedimentation (siltation) producing toxicity and limited capacity of the aquatic life and impacting the food chains.

36. The constant degradation of natural resources leads to deterioration of living conditions. The challenge facing the country is to continue sustainable development strategies that focus on the protection of natural resources without putting economic competitiveness at risk or discouraging national and foreign investment.³⁴

37. Lack of harmonization of national policies, regulations, and sectoral laws. There is a lack of effective harmonization of the policies, regulations, and sectoral laws that are related to land use, control of land use change, illegal logging, control of forest fires, contamination, etc. Effective inter-institutional coordination with other ministries is necessary, including joint leadership and establishing shared goals; for example, the MARN, Ministry of Agriculture and Livestock (MAG), Ministry of Health (MINSAL), Ministry of Tourism (MITUR), Ministry of Public Works (MOP), need to articulate and coordinate mechanisms for prioritized environmental activities in key sectors and to promote compliance with environmental regulations and environmental management plans.³⁵ In addition, guidelines for institutions to incorporate the differential aspects of men and women into environmental policies (e.g., Law of Equality and Eradication of Discrimination Against Women) are not taken into account.

38. Institutional weakness for effective monitoring and control. There is little economic and human resource support for the development of monitoring and control plans and application of the law. The PWIIIs do not have sufficient staff to adequately manage the areas; for example, Jiquilisco Bay only has 19 park rangers for 63,000 ha, Jocotal Lagoon has 11 rangers for 4,479 ha, and Olomega Lake does not

³⁰ PNUD, Informe 262.

³¹ MARN (Ministerio del Medio Ambiente y Recursos Naturales). 2014. Quinto Informe Nacional para el Convenio sobre la Diversidad Biológica 2011-2020.

³² MARN (Ministerio del Medio Ambiente y Recursos Naturales). 2013. Estrategia Nacional de la Biodiversidad. San Salvador, El Salvador.

³³ MARN (Ministerio del Medio Ambiente y Recursos Naturales). 2009. Listado oficial de especies de vida silvestre amenazados o en Peligro de Extinción; MARN/AECID. 2014. Plan Nacional de Gestión Integrada del Recurso Hídrico en El Salvador: Zona Hidrográfica III-Jiquilisco-Goascorán

³⁴ MARN (Ministerio del Medio Ambiente y Recursos Naturales). 2013. Estrategia Nacional de la Biodiversidad. San Salvador, El Salvador.

³⁵ Ibid.

have any rangers. In addition, support from other institutions such as the National Civil Police (Environmental Unit) is not sufficient, as it has other immediate priorities related to vandalism in the surrounding areas. Because of this lack of personnel and support, effective control for minimizing inappropriate artisanal and industrial fishing methods, clearing of mangroves for establishing shrimp or salt farms, and the control of inappropriate agricultural practices remains difficult. The appropriate demarcation of the PWIIs will be a help to clearly inform local residents about their boundaries and to assist the park rangers in their monitoring and control activities. In addition, PWII authorities do not take advantage of local mechanisms for social control or community organizations for enforcing the sustainable management of natural resources.

39. Deficient regulation of land use, water, and the extraction of natural resources. Greater compliance and awareness about the regulatory framework related to land use, water, and extraction of natural resources in wetlands is needed. According to Article 74 of the Environment Law (MARN 1998), the mangroves and reefs are ecological reserves in which alteration of any kind is prohibited. Nevertheless, this has not been completely controlled; these ecosystems continue to be reduced, putting the associated biodiversity and ecosystem services at risk. Compliance with laws such as the General Land Use Law and Promotion of Fishing and Aquaculture (MAG/CENDEPESCA 2001) is also necessary; these laws have as their objectives to ensure the conservation and sustainable development of hydrobiological resources. In addition, it requires the existence and application of laws that regulate production/cultivation practices and the management of water resources. There are no existing regulations that prohibit the use of fire as part of agricultural activities such as those associated with sugar cane production, the cattle ranching sector, as well as subsistence agriculture. At the national level, between 2001 and 2013, fires affect around 46,100 ha, causing destruction and severe damage to natural forests, forest plantation, and natural protected areas.³⁶ In addition, the approval of a Water Law and the implementation of water resource strategies are necessary, so that they may serve as instruments to facilitate their integral and inter-institutional management. This will help to strengthen the application of this law to avoid the severe contamination of water bodies, the disappearance of potable water sources, and the regulation of water use.

1.3. Long-term solution

40. The long-term solution is to mitigate the current threats and to ensure the conservation, sustainable use, and maintenance of the PWIIs and their ecosystem services in El Salvador depends on strengthening the NPAS to improve their management capacity of the wetlands, and the development of strategies to reduce threats to biodiversity, including the pressures derived from invasive species and the generation of solid waste and use of agrochemicals in their buffer areas. Specific actions that will be developed through the Project that will contribute to reducing threats to biodiversity are summarized in Table 1.

Table 1 – Project contributions to the reduction of deforestation, land degradation, and threats to biodiversity.

Threats	Solutions
Habitat fragmentation and loss	<ul style="list-style-type: none"> <li data-bbox="509 1497 1421 1570">– Increase protection of 37,709.46 ha of wetlands through the establishment of new multiple-use protected areas (MUPAs) <li data-bbox="509 1570 1421 1696">– Update or develop the management plans for three (3) existing PWIIs (Jiquilisco Bay Complex, Jaltepeque Complex, and Gulf of Fonseca Islands PA to be established through the project) and include strategies to reduce habitat loss and fragmentation. <li data-bbox="509 1696 1421 1755">– Train staff and review and adjust institutional procedures and personnel roles within the MARN for the improved management of wetlands,

³⁶ MARN (Ministerio del Medio Ambiente y Recursos Naturales). 2014. Quinto Informe Nacional para el Convenio sobre la Diversidad Biológica 2011-2020.

	<p>including the reduction of habitat loss and fragmentation and other threats</p> <ul style="list-style-type: none"> - Develop standards to regulate the restoration of ecotonal ecosystems (e.g., gallery forests and dry and saltwater forests) - Develop proposal for a new agricultural law or policy to eliminate adverse incentives that affect wetlands.
Deforestation of mangroves	<ul style="list-style-type: none"> - Develop participatory management plans for the conservation and sustainable use of mangroves and floodplain forest in Jiquilisco Bay and its associated freshwater lagoons, Jaltepeque Complex, and Gulf of Fonseca Islands, including equal participation of men and women and NGOs. - Rehabilitation of 500 ha of dry forest associated with mangroves
Alien invasive species	<ul style="list-style-type: none"> - Include strategies to control the presence of alien invasive species as part of the management plans for three existing PWIIs (Jocotal Lagoon, Jiquilisco Bay Complex, and Olomega Lake). - Control the growth of water hyacinth [<i>Eichornia crassipes</i>] and the presence of the Neotropic cormorant [<i>Phalacrocorax brasilianus</i>] in three PWIIs and their buffer areas (Jiquilisco Bay Complex, Olomega Lake, and Jocotal Lagoon) in coordination with other initiatives.
Contamination of water bodies	<ul style="list-style-type: none"> - Create inter-institutional cooperation agreements for the reduction of agrochemicals and solid wastes originating in the buffer areas of the PWIIs - Implement an incentives program to promote the use of biodiversity friendly agricultural and livestock management practices in the buffer areas of wetland PAs for the reduced use of agrochemicals and sustainable management of manure - Develop standards to regulate the use of agrochemicals (insecticides and pesticides) - Develop a protocol to reduce the threats to biodiversity in the PWIIs, including contamination from agrochemicals, livestock waste, and household and urban solid wastes
Unsustainable resource use	<ul style="list-style-type: none"> - Implement a local environmental governance and awareness program for the sustainable management of biodiversity in the PWIIs - Develop standards to regulate the sustainable use of natural resources (including fishing resources)
Climate change	<ul style="list-style-type: none"> - Update the management plans for three existing PWIIs (Jocotal Lagoon, Jiquilisco Bay Complex, and Olomega Lake) and include strategies to build ecosystem resiliency to climate change - Equip wetlands staff and volunteers detect and notify about floods and landslides associated with climate change in a timely manner in the three PWIIs

1.4. Barriers analysis

41. **Limited capacity of environmental officials for the sustainable management of PWII.** One of the two main barriers to the effective management of the PWIIs in El Salvador and the conservation of their associated biodiversity is the existence of outdated management plans for the PAs that are part of the wetlands, which makes the planning and control of existing threats deficient. In addition, there is no currently no framework to regulate activities that lead to the contamination of the PWIIs, such as the use of agrochemicals in agricultural activities, wastes generated by cattle, and solid wastes from urban and residential areas. This is compounded by the lack of information systems that would 1) serve to monitor

these and other threats (for example, the presence of invasive species), 2) assess the impact of the initiatives that tend to promote the sustainable use of the wetlands and their associated biodiversity, and 3) facilitate decision making. There is also limited capacity of the national authorities (MARN, MAG) and local municipalities to effectively plan and manage the PWIIs and their associated PAs. Finally, there is little awareness among the local populations and organizations about the importance of these ecosystems and little knowledge about the services they provide, which is why there is little public support for their conservation or the adoption of best management practices (BMPs) to reduce the pressures on the PAs and their buffer areas.

42. **Current environmental programs and strategies are ineffective in reducing pressures derived from invasive species, generation of solid wastes, and agrochemicals.** The existing initiatives to reduce threats to the PWIIs due to the presence of invasive species and contamination from solid wastes and agrochemicals have not been effective as they lack strategies that facilitate the coordination of efforts between the different authorities who influence the management of the wetlands and the PAs. This creates a situation in which the efforts to monitor the conservation and sustainable use of biodiversity in these areas are made in an unarticulated form and result in the duplication of efforts. In addition, these initiatives have had limited participation from the municipalities, local communities, and the private sector. As a result, they lack the necessary local support to reduce the presence of invasive species, control solid wastes and agrochemicals, and prevent the degradation of the mangroves and facilitate the rehabilitation of the degraded wetlands. In addition, there is a lack of necessary incentives, such as green seals, to motivate the adoption of BMPs by the agricultural sector and other users of the wetlands and their biodiversity.

1.5. Stakeholder analysis

43. The successful implementation of the project will largely depend on effective communication with the multiple project stakeholders and the implementation of mechanisms to ensure these stakeholders' participation. The key national stakeholders include the MARN, MAG, MOP, and CEL. At the local level, the most relevant stakeholders are the municipalities, civil society organizations (CSOs), and local communities. Table 2 presents a description of the principal stakeholders involved in the project, and the stakeholder involvement plan is presented in Annex 8.4.

Table 2 – Summary of key stakeholders.

Stakeholders/ Interested Parties	Role in Project Implementation
Ministry of the Environment and Natural Resources (MARN)	Principal entity for project execution. Mandated by law, the MARN manages the country's wetlands and PAs. The agency acts as the focal point for the RAMSAR Convention and the CBD, and is charged with the project's technical and financial execution.
Ministry of Agriculture and Livestock (MAG)	Designs and implements the country's agricultural policies. It is a key partner in regulating productive activities around and within the PAs and wetlands. The MAG will participate in joint conservation/management agreements and committees to supervise conservation efforts and the management effectiveness of the PAs, and to monitor the reduction of solid wastes and controlled use of agrochemicals in the PAs' buffer areas. The agency includes the Center for Development of Fisheries and Aquaculture (CENDEPESCA), which is the national authority for fisheries.
Ministry of Public Works (MOP)	El Salvador's MOP is the government body that oversees the areas of public works, transportation, and housing and urban development. The agency develops programs and projects designed to benefit the population through the provision of basic infrastructure, transportation systems, and human settlements. The MOP will establish inter-institutional cooperation agreements with MARN to address the threats in PWIIs.

Ministry of Tourism (MITUR), Ministry of Health (MINSAL), and Ministry of Labor and Social Welfare (MTPS)	Other ministries participating in the project are MITUR, MINSAL, and MTPS. These ministries will provide technical support to develop financial mechanisms for the sustainability of the PWIIs and their associated PAs, and in the implementation of a certification program for sustainable sugar cane cultivation in the buffer areas of the prioritized PWIIs. Particularly the agencies will manage the certification of adequate working conditions for men and women.
Salvadoran Institute for the Development of Women (ISDEMU)	ISDEMU is responsible for formulating, managing, implementing, and monitoring compliance with the National Policy on Women. At the local level ISMEDU will provide technical support to the project through their field staff to mainstream gender during implementation.
Río Lempa Hydroelectric Commission (CEL)	CEL is El Salvador's utilities company and is engaged in developing hydro- and wind-power generation projects. CEL will establish inter-institutional cooperation agreements with the MARN to address threats in the PWIIs.
Municipalities (at least 10)	The municipalities will participate in defining land use plans to address threats to biodiversity, particularly those related to the use of agrochemicals, waste generated by cattle, and solid wastes that contaminate the wetlands and PAs. The municipalities are key stakeholders in the execution of the project and will benefit from training.
Producers' Associations of the sugar cane, agricultural, and fisheries sectors	Companies and associations of the cultivation and processing of sugar cane (e.g., Salvadoran Sugar Company – CASSA; and the Salvadoran Sugar Association), agriculture, and livestock, and artisanal fishing sectors will be the focuses of the campaigns to raise awareness at the national level (marine-coastal zone) as well as in the PWIIs. Agricultural producers, cattle ranchers, and companies dedicated to sugar cane cultivation and processing will be involved in the development and application of new protocols for managing their production systems and standards to regulate human activities, particularly for the control of contamination threatening biodiversity. They will be beneficiaries of an incentives program to promote biodiversity-friendly agricultural practices, including the certification of biodiversity-friendly sugar cane cultivation.
Local communities	The project will involve the local communities who use the PWIIs and their associated PAs, including indigenous communities (the Lencas, Kakawira, and Nahuat Pipil). The communities will participate as decision makers in the planning and execution of the project's activities; the sustainable use of wetlands; and as beneficiaries of training and technical support activities, including the active participation of women.
Civil society organizations (CSOs)	The project will work closely with local CSOs in managing the PWIIs and their associated PAs, including developing financial mechanisms for the sustainability of the PWIIs (e.g., visitor entrance fee schemes and PPP) and mainstreaming gender during implementation. Multiple CSOs were consulted during the project design phase, including the Agricultural and Fisheries Production Cooperative Association of El Jocotal, the Fisheries Production Cooperative Association of Oro de R.L. of Olomega Lagoon, and the Association of Women Merchants of Fisheries Products of El Espino, Olomega Lagoon.
Academic Sector and Non-Governmental Organizations (NGOs)	The project will establish partnerships with national academic institutions (e.g., José Simeón Cañas Central American University, University of El Salvador, and the National Center for Agricultural and Forestry Technology [CENTA]) and NGOs (ECOVIVA, CATIE, CESTA, and MSM) that will provide technical and scientific support to the project, including information related to the baseline of the PWIIs.

United Nations Development Programme (UNDP)	UNDP will provide general technical and administrative support, management tools, and theoretical and practical knowledge to the executing agencies to aid in the execution of the project's activities and the timely and efficient delivery of the desired outcomes.
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1.6. Baseline analysis

44. Under the baseline scenario El Salvador will continue to implement the National Program for Wetlands Improvement (NPWI) and conservation of biodiversity through PWIIs, through the MARN's Wetlands Unit and in coordination with other public agencies, local governments, local communities, and the private sector. The baseline analysis describes investments related biodiversity conservation and its sustainable use in PWIIs.

45. Baseline programs total \$26,848,000 USD. During the four years of the project, the Government of El Salvador will invest \$1,130,666 USD (\$282,666.50/year) to cover operational costs (salaries, offices, equipment, other) for the management of the country's PWIIs through the MARN's Wetlands Unit. The Wetlands Unit (created through Ministerial Agreement No. 160, 2011) has as its principal function to secure the sustainable development of the wetlands. It has coordinated and will support efforts to protect the wetlands as part of the NPWI in El Salvador. In addition, the unit has assessed the current condition of the RAMSAR wetlands in the country and has identified the most threatened sites and areas. This information is included in the "Catalogue of Maps of Prioritized Critical Areas in the RAMSAR Wetlands of El Salvador," which was developed through a participatory process for each wetland. In addition, a strategy and action plan has been developed for the restoration of the wetlands that includes the management of solid wastes and wastewater; research, environmental governance, and education; wildlife management; information management; and financial management.

46. Baseline investments will also include a Tourism Development Program for the Coastal-Marine Area of El Salvador. Through the program, the Ministry of Tourism of El Salvador will invest a total of \$6 million USD in Jiquilisco Bay as part of a loan from the Inter-American Development Bank (IADB). The IADB loan will contribute to increasing income and employment generated by the tourism industry in the coastal areas of the La Libertad and Jiquilisco departments where the Global Environment Facility (GEF) project will be implemented. It will include the promotion of ecotourism, management of tourism activities, and monitoring of environmental conditions. This baseline investment will also allow the development of tourism infrastructure and the construction of a water treatment plant in Jiquilisco, which will reduce the contamination of coastal wetlands and other ecosystems. In addition, the IADB loan will strengthen local and national tourism governance, including the development of information systems and reporting mechanisms as well as a National Tourism Database. The GEF grant will complement these activities by piloting an entrance fee scheme to generate revenue from the increased visitation that will result from ecotourism promotion through the IADB loan. It will take advantage of the development of tourism infrastructure and data information systems to improve the collection of visitor and service fees and to improve tourism-related services through the promotion of a PPP. These activities will increase revenue from tourism in wetland PAs, thereby contributing to their financial sustainability.

47. Additionally, through the Technical Secretariat of the Presidency (STPP), the Government of El Salvador will invest approximately \$20 million USD in Jiquilisco Bay as part of the Fomilenio2 project. This initiative has funding from the Millennium Challenge Corporation (MCC), an independent U.S. government foreign aid agency established in 2004 with the mission of reducing global poverty through the promotion of sustainable economic growth and whose guiding principles are competitive selection, country-led solutions, and country-led implementation (<http://www.mcc.gov>). El Salvador has received funding from the MCC since 2008 through the Fomilenio project, fueling economic growth in El Salvador's Northern Area through technical assistance, rehabilitation of roads, credit, and investments in people—including vocational education, better water and sanitation services, and improved energy supply. Through the second phase of Fomilenio (Fomilenio2; MCC funding was approved in 2013 and

was signed on September 30th, 2014) a development strategy will be put into place in El Salvador's marine coastal fringe, which includes the removal of obstacles for socioeconomic growth and increased private sector participation in political reform, including a focus on gender. More specifically, the MCC funding will support the following: a) ensure the sustainability of coastal and marine ecosystems as well as local livelihoods; b) enhance local governance through capacity-building for effective territorial planning and citizen participation; c) promote economic investment for wetland-friendly productive activities; and d) promote environmental certification of sustainable fisheries, tourism, agriculture, and livestock practices. The proposed activities of the GEF grant will complement these activities through the effective management of three PWII and the protection of its associated biodiversity, and addressing the threats to biodiversity in the prioritized PWIIs. Additionally, in 2012, the MARN completed a Strategic Environmental Assessment that was requested by the STPP, which recommended that investments be directed towards the restoration of mangroves and wetlands, sustainable fisheries, sustainable tourism, integrated water resource management, environmental sanitation, environmental territorial planning, and capacity building.

2. STRATEGY

2.1. Project rationale and policy conformity

48. This project will serve to strengthen the conservation and sustainable use of PWIIs and their associated PAs in El Salvador, as well as prevent and mitigate threats and pressures on the wetlands and globally important biodiversity. The project is consistent with Objective 1 of the GEF Biodiversity Focal Area (BD-1): *Improve Sustainability of Protected Area Systems* and will contribute to achieving Outcome 1.1: *Improved management effectiveness of existing and new protected areas*. The wetlands prioritized for this project are: Jocotal Lagoon, Jiquilisco Bay Complex, and Olomega Lake, as well as the islands of the Golfo de Fonseca: Periquito, Ilca, Martín Pérez, and Pirigallo.

2.2. Country ownership: Country eligibility and country drivenness

49. The project is consistent with the Environmental Law of El Salvador, which in Article 74 identifies mangroves as fragile ecosystems whose alteration of any type is prohibited. The same law identifies in Articles 20 and 21 the requirement for obtaining an environmental permit through an Environmental Impact Study for "works, activities, or projects in wetlands." The project is also consistent with the Natural Protected Areas Law (2005), which states in Article 9 that mangroves, lakes, and lagoons are property of the government. Resolutions have been established through this law to create PAs, which encompass inland and marine-coastal wetlands.

50. The project is framed within the National Biodiversity Strategy (ENBD) (2013) and focuses particularly on the strategic integration of biodiversity into the economy, as well as the restoration and inclusive conservation of critical ecosystems. The ENBD states as its priority the restoration of mangroves and wetlands, as well as reversing the processes that lead to their degradation, including awareness building, research, education training, technology, and financing. The first three themes are congruent with this project. The project will contribute to achieving the following Aichi Targets of the CBD, which was ratified by El Salvador in 1994: a) Target 7: "By 2020 areas under agriculture, aquaculture, and forestry are managed sustainably, ensuring conservation of biodiversity." More specifically, the project will promote biodiversity-friendly practices in agricultural lands and water-related resource use in the buffer areas of four PAs within the Jiquilisco Bay and Jocotal Lagoon PWIIs; b) Target 8: "By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity." More specifically, the project will develop a program for the prevention, reduction, and control of pollution stemming from agricultural and cattle-ranching activities (agrochemicals and excess nutrients) and human settlements (solid wastes) in two PWIIs (Jiquilisco Bay and Jocotal Lagoon) and their buffer areas; c) Target 9: "By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and

measures are in place to manage pathways to prevent their introduction and establishment.” More specifically, the project will develop strategies for controlling the invasive species water hyacinth (*Eichornia crassipes*) and Neotropic cormorant (*Phalacrocorax brasilianus*) in three PWIIs and their buffer areas (Jiquilisco Bay Complex, Jocotal Lagoon, and Olomega Lake); d) Target 11: “By 2020, at least 17 percent of terrestrial and inland water, and 10 percent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.” More specifically, the project will contribute to improving the management effectiveness of three PWIIs (Jocotal Lagoon, Jiquilisco Bay Complex, and Olomega Lake) covering more than 75,000 ha of coastal and inland wetland areas of particular importance for biodiversity and ecosystem services, with the participation of local communities and municipal authorities; e) Target 12: “By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.” The project will contribute to the reduction of threats to biodiversity of global importance including the American crocodile (*Crocodylus acutus*), the spectacled caiman (*Caiman crocodilus*), the hawksbill sea turtle (*Eretmochelys imbricata*), the Buff-breasted Sandpiper (*Tryngites subruficollis*), the Yellow-naped Parrot (*Amazona auropalliata*), and mangroves (*Rhizophora mangle*, *Laguncularia racemosa*, and *Avicennia* spp.); f) Target 14: “By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods, and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.” The project will facilitate the participatory rehabilitation of at least 500 ha of dry forest associated with mangroves that provide key habitat for migratory species; and g) Target 19: “By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared, and transferred and applied.” The project will enhance biodiversity scientific knowledge within the PWII of El Salvador, including the development of an information monitoring system to facilitate decision making for the reduction of threats to biodiversity.

51. El Salvador has a Regional Wetlands Policy (Central America) (2002) that has a common objective with the project, which is to promote mechanisms and strengthen institutional capacity at the local, regional, and national levels for the conservation and rational use of wetlands.

52. Finally, the project is consistent with the 2015-2020 Gender Plan of Action under the Convention on Biological Diversity (COP 12 Decision XII/7. Mainstreaming gender considerations) and the Beijing Platform for Action (Chapter on Women and the Environment).

2.3. Design principles and strategic considerations

53. Project Identification Form (PIF) Conformity: The project design is aligned with the original PIF. The project’s strategy, including the structure of the project components, closely resembles the PIF that was approved by the GEF. The following changes were made, which do not represent a departure from the project’s strategy as defined originally in the PIF and it will not have an impact on the funds (GEF and co-financing) originally budgeted.

PIF Outputs (Component 1)	Project Document Outputs (Component 1)
<i>Output 1.1. Scientific characterization, local consultations, boundary demarcation, and gazettal of two (2) new MUPAs protected wetlands: a) Jiquilisco Bay wetland and upriver protected wetlands (Jocotal, Olomega) and b) Islas del Golfo de Fonseca (Periquito, Pirigallo, Ilca, and Martín Pérez).</i>	<i>Output 1.1. Three new multiple-use PAs gazzeted: a) Jiquilisco Bay wetland (40 islands and surrounding waters); b) Islas de Golfo de Fonseca (Martín Pérez Island, Pirigallo or Meanguerita Island, Ilca Island, Periquito Island and part of the surroundings of Meangueta Island); c) Olomega Complex (Olomeguita Island, Tierra Blanca, and sectors of the La Chiricana or San Antonio Silva).</i>

	<p>The number of PAs to be established through the project was increased from two to three, for a total of 37,709.46 ha of new protected wetlands (up from 20,000 ha estimated in the PIF).</p>
<p><i>Output 1.2 – Management plans for up to three (3) PWII updated</i></p>	<p><i>Output 1.2 – Management plans for up to three (3) PWIIs updated or developed</i></p> <p>Updating the management plans for three (3) existing PWIIs (Jiquilisco Bay Complex, Olomega Lake, and the El Jocotal Lagoon) was proposed at the time of the PIF. However, the management plans for the Olomega Lake PWII and the El Jocotal Lagoon PWII will be updated through an initiative (2015) funded by the Japan International Cooperation Agency (JICA) for the sustainable management of these PWIIs. Instead, the project proposed herein will update/develop the management plans for the Jaltepeque Complex PWII, which is hydrologically and ecologically connected to the Jiquilisco Bay Complex to the west, and the Golfo de Fonseca Islands, which will be established as a new protected area through the project.</p>
<p><i>Output 1.7 – Economic environmental compensation from local development projects that alter the surrounding environment and wetland mitigation banking support PWII management.</i></p>	<p><i>Output 1.7 – Economic environmental compensation from local development projects that alter the surrounding environment support PWII management.</i></p> <p>A feasibility analysis was completed during the Project Preparation Grant (PPG) that determined wetland mitigation banking as a financial strategy to support PWII management is not feasible in El Salvador due to the lack of related legislation and the potential market for wetland banking; thus, wetland mitigation banking has not been considered in the final project design. PPG activities indicated that economic environmental compensation is the only mechanism currently available in El Salvador to restore or rehabilitate areas where unavoidable impacts of development activities have occurred or may occur. The Environmental Law (1998; Article 5) states that compensation must be made at the site of impact, or in neighboring areas that are conducive to its replacement or in other recovery areas. Thus, economic environmental compensation will be the only mechanism for mobilizing resources to support PWII management.</p>
<p>PIF Outputs (Component 2)</p>	<p>Project Document Outputs (Component 2)</p>
<p><i>Output 2.1. At least three inter-institutional cooperation agreements (MARN, MAG, municipalities, Department of Housing and</i></p>	<p><i>Output 2.1. Six (6) inter-institutional cooperation agreements (MARN, MAG, CEL, MOP, and the municipalities) established, including conservation</i></p>

<p><i>Urban Development [VVDU]) established, including conservation and management committees for monitoring the conservation and sustainable use of biodiversity in at least four PAs of the Jocotal and the Jiquilisco Bay PWII (the PAs are mentioned in the text), as well as their buffer areas.</i></p>	<p><i>and management committees for monitoring the conservation and sustainable use of biodiversity in at least three PAs of the Jocotal Lagoon and the Jiquilisco Bay PWIIs.</i></p> <p>The institutions to establish cooperation agreements for the conservation and sustainable use of biodiversity in the prioritized PWIIs were revised and updated based on the roles that they will play in reducing threats to the wetlands. A total of six (6) agreements (i.e., three [3] municipal agreements for managing invasive species and solid wastes and three [3] new agreements between the MARN and the MAG, MOP, and CEL) will be established during the life of the project. In addition, the number of PAs where activities will be implemented was reduced from four (4) to three (3) based on the feasibility of establishing the agreements and the impact that they will have for reducing threats.</p>
<p><i>Output 2.3. Incentives program, including green certification for reduced use of agrochemicals in sugar cane cultivation and sustainable livestock management (other incentives to be defined during the PPG phase), promotes biodiversity-friendly agricultural practices and water-related resource use in the buffer areas of four PAs of the Jocotal Lagoon and the Jiquilisco Bay PWII</i></p>	<p><i>Output 2.3. Incentives program, including green certification for reduced use of agrochemicals in sugar cane cultivation and sustainable livestock management promotes biodiversity-friendly agricultural practices and water-related resource use in the buffer areas of five PAs of the Jocotal Lagoon and the Jiquilisco Bay PWIIs.</i></p> <p>The number of PAs where incentives will be implemented was increased from four to five to increase the opportunity for using incentives to reduce threats from non-sustainable agricultural and cattle ranching activities.</p>

54. UNDP’s Comparative Advantage: The UNDP has a long history as the implementing agency for GEF projects that are focused on ecosystems management and biodiversity. Currently the UNDP is supervising projects in more than 15 countries in Latin America and the Caribbean (LAC), with a total resource mobilization of USD \$156 million (June 2013), and which encompasses an area of approximately 32 million ha in PAs. The UNDP in El Salvador has an in-country office (CO) with significant experience working with the government and different partners in the integration and conservation of biodiversity, the management of PAs, and sustainable development. The CO has staff with extensive technical experience in the development and promotion of community participation in businesses based on the sustainable management of natural resources, which is critical to eradicating poverty, and promoting social justice and economic development. The CO is currently implementing two GEF projects, *National Biodiversity Planning to Support the Implementation of the CBD 2011-2020 Strategic Plan* and *Mainstreaming Biodiversity Management into Fisheries and Tourism Activities carried out in Coastal/Marine Ecosystems*. As such, the organization is in an ideal position to ensure the dissemination of lessons learned and complementarity of efforts.

55. Coordination with other related initiatives: This project will coordinate actions with and adopt lessons learned from regional and national initiatives, such as the GEF project *Mainstreaming Biodiversity Management into Fisheries and Tourism Activities carried out in Coastal/Marine*

Ecosystems. The objective of the project is to promote inter-sectorial approaches to biodiversity conservation through the tourism and fisheries sectors. This GEF project will be implemented within the regulatory framework that is being developed under the tourism/fisheries mainstreaming project, particularly the development of policies and regulations that promote tourism and fisheries practices that are compatible with biodiversity conservation and sustainable resource use (e.g., the Strategic Plan for Sustainable Tourism Development, the updating of the National Tourism Policy, and the review of the General Law for the Management and Promotion of Fisheries and Aquaculture). Additionally, stakeholders involved in tourism and fisheries in Jiquilisco Bay, as well as municipal authorities, will have the capacity and motivation to operate in accordance with the principles of resource sustainability and biodiversity conservation, particularly in facilitating the implementation of ecotourism initiatives associated with protected wetlands and the reduced impacts of tourism and fisheries practices (prevention, reduction, and control of solid waste). Finally, the tourism/fisheries mainstreaming project will establish a solid base for maintaining the existing coverage of mangroves in Jiquilisco Bay (18,720 ha), which will be further protected by this GEF project through the development of participatory plans for their conservation and sustainable use and the participatory rehabilitation of at least 500 ha of dry forest associated with this ecosystem. Lessons learned from the tourism/fisheries mainstreaming project indicate that increase awareness is key to encouraging people to change specific negative behaviors with regard to biodiversity. In addition, the monitoring and recording of processes for improving knowledge and adopting new technologies and improving know-how with regard to biodiversity conservation is key for the successful implementation of the project at the local level. Also, the establishment of partnerships between development agents and other stakeholders involved in the project allows the optimization of resources and the implementation of more far-reaching activities, as well as the exchange of knowledge, BMPs, and technologies related to the sustainable management of biodiversity. Finally, it is anticipated that all environmental and social networks established by the tourism/fisheries mainstreaming project within the municipalities and communities of the departments of La Libertad and Jiquilisco will aid in the implementation of this GEF project. The tourism/fisheries-mainstreaming project is in its final year of implementation and the final evaluation is expected before the end of 2015.

56. In addition, the project will follow up on the guidelines that will be defined in the GEF project *National Biodiversity Planning to Support the Implementation of the CBD 2011-2020 Strategic Plan*, which will respond to the CBD Strategic Plan, including the National Biodiversity Strategy (2013) and its Strategic Plan (2014).

57. The project will coordinate activities with other initiatives concerning wetlands. This includes the 2012 call for action of the FIAES to finance activities for the resolution of environmental problems in wetlands of international importance. In addition, the project will complement activities to seek alternatives for the management of the Neotropic cormorant (*P. brasiliensis*) in Jiquilisco Bay and Olomega Lake PWIIs, where the FIAES is currently funding the management of the water hyacinth (*E. crassipes*). Efforts will also be carried out in conjunction with the activities and investments that the MARN's National Program for Ecosystem and Landscape Restoration will implement, in particular for the management of micro-watersheds at the lower Río Grande de San Miguel basin. The project will also coordinate actions with the Water Fund project (Spanish Agency for International Cooperation for Development [AECID]), which will support the restoration of mangroves, the management of the micro-watersheds associated to this watershed, and the acquisition of a barge for mechanically extracting the water hyacinth in the affected PWIIs. Finally, the project will closely coordinate actions with the JICA-funded initiative (2015) for the sustainable management of Olomega Lake and the El Jocotal Lagoon PWIIs. Specifically, coordination and complementary actions will be sought for the control and removal of invasive species (i.e., water hyacinth and Neotropical cormorant) and for piloting small-scale operations for the recycling of related materials (e.g., productions of baskets and furniture from water hyacinth, and to use it as feed for livestock as part of a program with cattle ranchers for the prevention, reduction, and control of contamination). Both the JICA project and the GEF project proposed herein will

be coordinated by the MARN through their Division of Ecosystems and Wildlife, which will facilitate the exchange of lessons learned and avoid duplication of efforts.

2.4. Project objective, outcomes, and outputs/activities

58. The project's objective is to promote the conservation and sustainable use of biodiversity and the maintenance of ecosystem services through the creation of new PWIIs and the improved management of existing protected wetlands. The project's incremental approach consists of the following two components: Component 1 will expand protected wetland coverage and strengthened institutional and individual capacities for the effective management of PWIIs. Component 2 activities will address threats to biodiversity, including the presence of invasive species and solid waste and agrochemicals originating in the buffer areas of the PWIIs. The project's outcomes and outputs are described below.

Component 1 – Expanded protected wetland coverage and strengthened institutional and individual capacities for the effective management of PWIIs.

59. Through Component 1, the GEF investment will allow the MARN to establish the Jiquilisco Bay wetlands, wetlands in the Golfo de Fonseca Islands, and the Olomega Lake Complex wetlands as a new MUPAs covering 37,709.46 ha and which includes the largest and best preserved area of mangroves in eastern El Salvador, as well as to protect salt water forests, freshwater mangroves, herbaceous wetlands, and dry forest. The GEF investment will also allow the development of a national wetlands inventory to maintain and update information about their physical, chemical, biological, geological, and socio-environmental conditions. This inventory will serve as a tool to prioritize future municipal, national, and regional actions to sustainably manage the different types of wetlands and the conservation of the associated globally important biodiversity. The management plans of up to three prioritized PWII (Jiquilisco Bay Complex, Jaltepeque Complex, and Gulf of Fonseca Islands) will be updated through a participatory process involving different local and national stakeholders.

60. As part of the project's actions to improve PWII management effectiveness, the institutional capacities of the MARN and other institutions involved in the management of three PWIIs will be strengthened. This will include training activities directed mainly towards strengthening the capability of the MARN to manage the PAs within the PWII to reduce threats to biodiversity. To mitigate the impacts from climate change associated with flooding and landslides, a wetland climate change monitoring team (PA staff and volunteers) will be formed and equipped to effectively detect and inform about these threats. Finally, the management effectiveness of prioritized PWIIs will be improved through the development of a local environmental governance and awareness-building program for sustainable management of biodiversity in the PWIIs, in which the municipalities, local communities and organizations, NGOs, and the private sectors (e.g., agriculture, cattle ranching, and urban development) will participate.

61. After 4 years, the project's outcomes will include:

- a. Three newly established MUPAs increase the coverage of the NPAS by 37,709.46 ha.
- b. The management effectiveness of three (3) PWIIs increases by 10 percent as measured by the Management Effectiveness Tracking Tool (METT).
- c. Increased annual revenue by \$160,00 USD contributes to the financial sustainability of three PWIIs.

Output 1.1 – Three new MUPAs gazzeted: a) Jiquilisco Bay wetland (40 islands and surrounding waters); b) Golfo de Fonseca Islands (Martín Pérez Island, Pirigallo or Meanguerita Island, Ilca Island, Periquito Island and part of the surroundings of Meangueta Island); c) Olomega Complex (Olomeguita Island, Tierra Blanca, and sectors of the La Chiricana or San Antonio Silva).

62. The project will support the development of all legal and technical studies for the creation of three new MUPAs (International Union for Conservation of Nature [IUCN] Category VI). The new MUPAs are located within three PWII: the Jiquilisco Bay wetlands, wetlands in the Golfo de Fonseca Islands, and the Olomega Complex wetlands. The new MUPAs will have a total surface area of 37,709.46 ha (see Table 3).

63. The MUPA in Jiquilisco Bay (Figure 2) will protect 40 islands where mangroves and salt-water forests are present. These ecosystems provide valuable habitat to species of global importance including migratory birds and sea turtles. In addition, they provide natural resources to local communities. The project will build on the results of the Administration and Consolidation of Protected Areas project (PACAP) implemented between 2009 and 2012, in particular in the description of the biodiversity and social values of the islands and their preliminary delineation. The GEF project proposed herein will allow updating these studies, including the final delineation, and will support all activities for the gazetting of the MUPA.

64. The MUPA in the Golfo de Fonseca (Figure 3) will protect remnants of red mangroves and dry forests, which serve as habitat for a variety of species including birds, reptiles, amphibians, fish, crustaceans, and mollusks, among other species. The islands to be protected also serve as nesting sites for sea turtles. The project will support all necessary legal and technical studies for the creation of the MUPA, including a detailed land tenure study of the islands. Final gazetting will follow all requirements specified by the law.

65. In the Olomega Complex (Figure 4), the MUPA will protect dry forests of the Olomeguita Island and Tierra Blanca, which provide habitat to multiple animal and plant species. In addition, the MUPA will protect some of the last remnants of freshwater mangroves in the country and other seasonally saturated forests present in the northeastern portion of the Olomega Complex in the localities of the La Chiricana or San Antonio Silva. Because of its landscape values and low number of visitors; the area is ideal for ecological restoration, scientific research, and environmental education.³⁷ The project will support all necessary legal and technical studies for the creation of the MUPA.

Table 3 – New protected wetlands of El Salvador.

Location	New MUPAs	Area (ha)
Jiquilisco Bay PWII	8 islands in Jucuarán	4.2
	9 islands in San Dionisio	821.17
	3 islands in Usulután	180.39
	4 islands in Puerto El Triunfo	465.37
	16 islands in Jiquilisco	246.61
	Surface waters surrounding the islands	12,205.63
	Marine waters of the Jiquilisco Bay PWII	19,381.88
Subtotal		33,305.25
Golfo de Fonseca Islands PWII	Martín Pérez Island	146.51
	Pirigallo or Meanguerita Island	36.00
	Ilca Island	11.00
	Periquito Island	6.00
	Surface waters surrounding the Meanguera Island	85.7
Subtotal		285.21
Olomega Complex PWII	Olomeguita Island	4.2
	Tierra Blanca	174.8
	La Chiricana or San Antonio Silva	196

³⁷ MARN/AECID. 2003. Plan de Manejo del Área Natural Protegida Complejo El Jocotal. Borrador Final. El Salvador

	Surface waters and herbaceous wetlands	3,744.00
Subtotal		4,119.00
Total		37,709.46

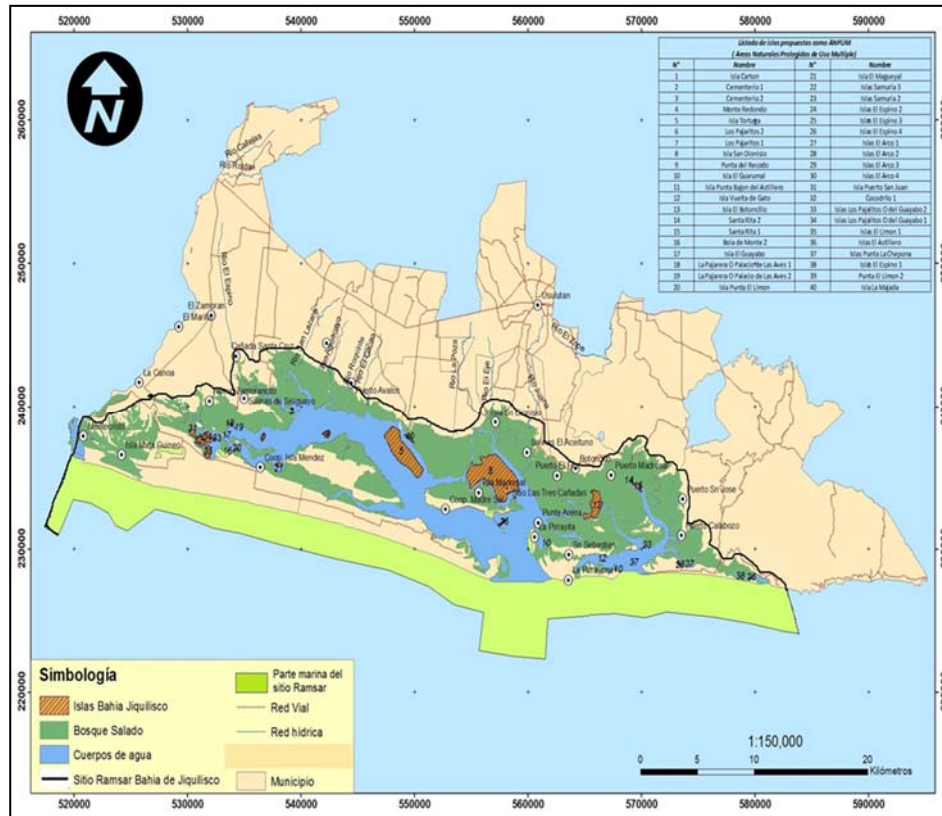


Figure 2 – Proposed MUPA: Jiquilisco Bay wetlands.

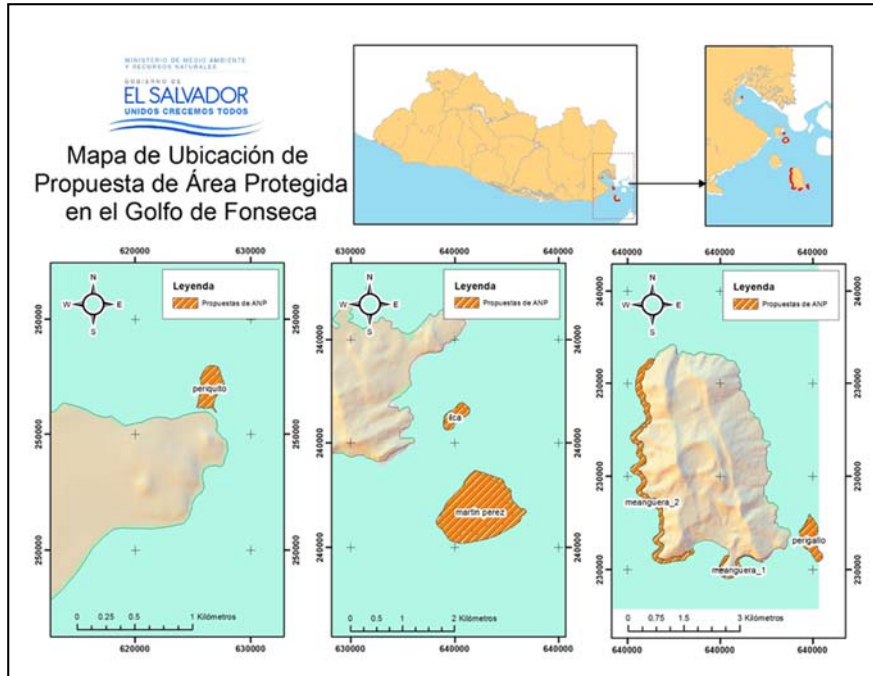


Figure 3 – Proposed MUPA: Golfo de Fonseca wetlands.

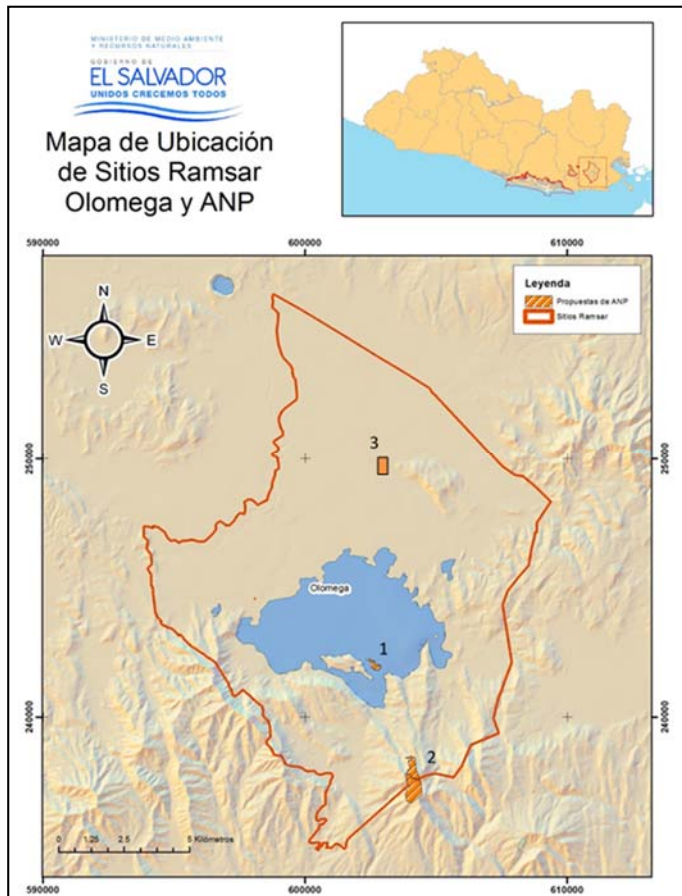


Figure 4 – Proposed MUPA: Olomega Complex wetlands.

Output 1.2 – Management plans for up to three (3) PWIIs updated or developed

66. The project will update or develop the management plans for three PWIIs (Jiquilisco Bay Complex, Jaltepeque Complex, and Gulf of Fonseca Islands) under the coordination of the MARN and following its technical guidelines for management plan development. The management plans will serve as the governing documents for biodiversity conservation, land use planning and management, threats reduction (including contamination and presence of invasive species), and natural resources use for the PWIIs and their associated PAs. The management plans will outline the general conservation objectives of the PWIIs, as well as considerations regarding their public use. The development of the management plans will include: a) integration of the planning team consisting technical staff with experience in various disciplines (biodiversity conservation, land use planning, geographic information system [GIS] mapping, and social participation, among others); b) drafting of the updated management plan into five components to facilitate its implementation; and c) presenting and discussing with key stakeholders and interest groups the updated management plans. The five components are: i) Descriptive Component: describes the biodiversity and cultural values and attributes of the PWIIs and the associated PAs; ii) Management Component: outlines the PWII and the associated PAs' primary conservation objectives, determines threats and conflicts, and establishes the allowed land uses in the area; iii) Operational Component: establishes the management actions, including administrative aspects, social and community participation, environmental education and awareness program, public use program, research program, and reduction of threats including climate change; iv) Regulatory Component: defines the regulatory aspects of the PWIIs and the associated PAs; and v) Follow-up and Evaluation Component.

67. The development of the management plans will be a participatory process during which the local communities, farmers living around the PWIIs, municipal governments, and other local and regional stakeholders present their viewpoints and define the criteria for developing a proposal with ecological, socioeconomic, cultural relevance, and taking into account the interests and different needs of men and women. For this purpose, workshops and meetings will be held and informational booklets will be printed summarizing the PWII management plans once these are agreed upon and approved.

Output 1.3 – Wetlands inventory for El Salvador is updated

68. Using as a basis the existing National Wetland Inventory of El Salvador, and other wetland assessment reports, the project will update the wetland inventory. The specific activities to be implement include: a) perform a detailed review of the available information about the wetlands of El Salvador and identify gaps regarding the countries wetlands; b) assess and adopt a wetland classification system (e.g., Cowardin et al., 1979³⁸; Bravo and Windexvohel, 1997³⁹) and considering the Maps Catalogue of Critical Areas in Ramsar Sites of El Salvador⁴⁰; c) identify and classify wetlands from aerial imagery to be provided through co-financing (i.e., satellite images); d) gather field data and develop maps; d) record the inventory findings and develop final geospatial data (digital maps); d) make the wetlands inventory available through a Web-based platform (e.g., MARN's web site) for decision-makers and stakeholders to view and/or download data, as well as in hard copy; and d) establish and provide training to MARN wetland staff to support the management and use of a national wetland inventory. The new National Wetland Inventory will be completed by the end of the second year of project implementation.

Output 1.4 – The institutional and individual capacities of the MARN and other relevant institutions within the National System of Environmental Management (SIMANA; municipalities and Ministry of Agriculture [MAG]) strengthened, contributing to the sustainable management of PWIIs.

³⁸ Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79/31.

³⁹ Bravo, J. y Windevoxel, N. 1997. Manual para la Identificación y Clasificación de Humedales en Costa Rica. UICN.

⁴⁰ MARN, 2012. Catálogo de Mapas de Zonas Críticas Prioritarias en Humedales Ramsar de El Salvador. 50 p.

69. The project will build the capacity of key stakeholders in the conservation and sustainable management of PWIIs. The project will work to enhance MARN officials' ability to effectively manage the PWII and their associated PAs as well as to coordinate actions with local stakeholders for the sustainable use of resources and enforce regulations in buffer areas to reduce threats originating outside the PWII (e.g., contamination from and solid wastes and agrochemicals and presence of invasive species). The project will support building the capacity of 20 MARN staff, including women, both at the MARN headquarters in San Salvador and at the PWIIs (Jocotal Lagoon, Jiquilisco Bay Complex, Olomega Lake, and the Cerrón Grande Reservoir) levels. The project will also facilitate exchange visits between staff of different PWIIs to promote learning and sharing of BMPs. The capacity of other relevant institutions within the SIMANA (municipalities and MAG) will also be strengthened, with at least 22 staff, including women, benefiting from project training activities. Training modules and materials will be developed emphasizing information on CBD and the Ramsar Convention, as they pertain to wetlands, wetland management and conservation, threats reduction, sustainable resource use, local community participation, and mainstreaming gender into biodiversity conservation, among other topics.

70. In addition to the training activities, a review of the institutional procedures and personnel roles within the MARN for the management of the wetlands will be completed so that the necessary adjustments can be made to the existing institutional systems to achieve an effective effort, as well as to strengthen the implementation of the National Program for Wetlands Improvement (PNMH). This will include an evaluation of the logistical needs to facilitate management and monitoring activities within the PWII and the associated PAs and their buffer areas.

71. The impact of capacity development activities will be assessed through interviews and follow-up conducted in the field regarding what was learned and the application of the UNDP Capacity Development Scorecard (the scorecard will be applied twice more during the life of the project: at the mid-point and finalization).

Output 1.5 – Properly equipped wetland staff and volunteers enable the timely detection and notification of floods and landslides associated with climate change in three PWIIs.

72. The project will enable PWII staff and local volunteers (including women) to timely detect and notify about floods and landslides associated with climate change that may impact the wetlands and the population living within their surroundings by: a) updating the Natural Hazards Atlas with information available at the scale of the PWIIs; b) by enhancing coordination with the national civil protection system and expanding the volunteer network; c) strengthening local capacities for early detection and notification of floods and landslides, including simulations and drills to test preparedness plans; and d) strengthening networks and communication mechanisms for early warning, including the equipment of PWII staff and local volunteers with radios and other equipment.

Output 1.6 – Local governance program empowers local communities and municipal authorities to sustainably manage the PWIIs.

73. The project will develop a local environmental governance and awareness program for the sustainable management of biodiversity in PWIIs, and in which the municipalities, local communities and organizations, NGOs, and the private sector (e.g., agriculture, cattle ranching, and urban development) will participate. The local environmental governance will be built around a detailed training needs assessment to be conducted during the first six months of project implementation and building on the capacity development assessment completed during the PPG (UNDP-GEF Capacity Development Scorecard baseline). Training needs and training delivery will be defined jointly with the interested local stakeholders and will include the development of skills for the sustainable use of biodiversity, the reduction of threats, PA planning and management, and monitoring and biodiversity. Training modules and materials will be designed related to the topics mentioned and will be trained will be delivered workshops, seminars, and field visits to the PWIIs, among other means. The impact of the training program will be assessed through interviews and follow-up conducted in the field regarding what was

learned and the application of the UNDP Capacity Development Scorecard (the scorecard will be applied twice more during the life of the project: at the mid-point and finalization).

Output 1.7 – Economic environmental compensation from local development projects that alter the surrounding environment support PWII management.

74. PPG activities indicated that currently environmental compensation is the only mechanism available in El Salvador to restore or rehabilitate areas where unavoidable impacts of development activities have occurred or may occur. The Environmental Law states that compensation must be made at the site of impact, or in neighboring areas that are conducive to its replacement or in other recovery areas. Thus, economic environmental compensation is a feasible mechanism for mobilizing resources that can be directed to support biodiversity conservation. Although this mechanism is regulated through a Special Rule for Environmental Compensation, the rule does not specify the procedure for identifying and quantifying the amount of compensation and the type of activities needed to offset the loss of biodiversity. Onsite environmental compensation should be made effective through an Environmental Compensation Program (ECP), an additional requirement to the environmental management programs contained in an EIA. In addition, environmental compensation program is subject to environmental enforcement and to sanctions in case of noncompliance.

75. The project will make use of this environmental compensation mechanism for development projects to increase the funding for the PWIIs. As a first step, a protocol for economic valuation of wetlands good and services will be developed in order to have a solid basis for quantifying the amount of compensation and type of activity that will need to be implemented when compensation is required. Different valuation methodologies will be considered and recommendations will be made to include wetlands good and services valuation as part of the existing environmental compensation process. Second, the planned development projects that may affect the three prioritized PWIIs will be identified and the potential impacts will be assessed. Third, economic environmental compensation will be requested by the MARN and as specified in the Environment Law and following EIA guidelines for El Salvador. The project team and the MARN will provide technical assistance to ensure that the ECP for each development project includes economic compensation to support PWII management (e.g., rehabilitation of degraded areas, ecosystem conservation, enhancement of ecosystem connectivity, reduction of contamination, control of invasive species, etc.). A portfolio of sites for compensation within the PWIIs will be developed and linked with the information monitoring system that will facilitate decision-making to reduce threats to the three prioritized PWIIs (Output 2.5). The ECP will include monitoring activities and specified indicators to assess the progress and impact of compensation.

76. The management of the compensation funds will be done using the FIAES mechanism and within the framework of the Ministerial Agreement No 31, signed between the MARN and FIAES in 2014 for the implementation of the environmental compensation mechanism. Once the compensation funds are transferred to FIAS, specific agreements will be signed between FIAES and CSOs (e.g., NGOs or Community Development Associations [ADESCOs]) for the implementation of onsite compensation activities under the supervision of the MARN. Lessons learned from the environmental compensation initiatives will be documented and used to make adjustments to and for the replication of economic environmental compensation to support PWII management.

Output 1.8 – Business plans for new and existing wetland PAs developed.

77. The project will develop business plans for four existing PAs (Jocotal Lagoon, Chaguantique, Normadía, and Isla San Sebastián) and the three new PAs to be established by the project (Output 1.1). The business plans will include: a) an evaluation of the specific financial needs for each PA (i.e., basic and optimum cost analyses) using as reference their management plans; b) an evaluation of external funding (government and private sources) and potential revenue generation sources for each PA (e.g., compensation mechanisms, visitors fees, payment for environmental services, etc.); c) cost vs. revenue analysis; and d) development of long-term financial plans (5 to 10 years) considering the cost-revenue

analysis. The financial plans will include at least two financial scenarios (low risk and medium risk) to facilitate the adaptive management of PAs.

78. Business plans for MPAs will be developed in coordination with MARN officials and the support of a PA financial expert. In addition, it will include visits to the PAs and consultation with key local stakeholders (i.e., municipalities, local communities, the private sector, and environmental NGOs), and drafting of the business plans, their approval by the MARN, and publishing.

Output 1.9 – Financial mechanisms are validated onsite and serve to increase the level of funding for three PWII: a) visitor entrance fee scheme piloted and revenues channelized into existing wetland PAs, and b) PPP increases revenues from tourism in wetland PAs.

79. Visitor entrance fee schemes. A visitor entrance fee scheme will be piloted in the Jiquilisco Bay Complex PWII and the Jocotal Lagoon PWII where tourism is active. The project will take advantage of the fact the Ministry of Finance has already approved visitor fees for these PWIIs upon recommendation from the MARN; however, visitor fees are not currently being collected. In the Jiquilisco Bay Complex, the visitor entrance fee scheme will be implemented in the Nancuchiname (797 ha) and Chaguantique (53.8 ha) PAs, as well as in the Normandía area (495.3 ha) that is in the process of being established as a PA. These PAs have some basic infrastructure (i.e., ranger office, control/access points, nature trail, and watch and fire control towers) that will be improved by the project to provide better services to visitors and to improve management. In addition, visitor welcome centers in the Jiquilisco Bay Complex PWII and the Jocotal Lagoon PWII will be constructed. Agreements for the management of visitor-related activities will be established with CSOs that already have experience co-managing the PAs (i.e., Asociación de Desarrollo Comunal Bosque Nancuchiname [ADESCOBAN], Nancuchiname PA; Centro de Cooperación Integral sobre Tecnologías Alternativas [CENCITA], Normandía PA; and Asociación Coordinadora Nacional de la Mujer Salvadoreña (CONAMUS), Chuaguantique PA). The MARN's regional offices will provide technical and logistical support and cooperation agreements will be established with MITUR and the Salvadoran Tourism Corporation (CORSATUR) to promote the PWII as a tourist destination. More detailed assessments of the PAs' ecotourism potential and their visitor capacities will be conducted.

80. The Jocotal Lagoon PA has an abundance of natural attractions to make it a top ecotourism destination in El Salvador; however, the PA's visitor infrastructure is not well developed although it has an information center (that is currently not equipped to receive visitors). The project will overcome these barriers and provide the PN staff with the necessary training, information tools, and improved infrastructure and services to better serve visitors. In addition, visitor fees will be collected (the PA already has one staff member to fulfill this responsibility) and agreements will be established with local community members for their participation in this pilot initiative, particularly members of the community of El Borbollón, who, because of its location, are better positioned to participate in the program (the PA office is located in this community). Local community members participating in the program will receive training to provide ecotourism services and in biodiversity conservation. A nature trail will be developed that will include informational/educational signs so that visitors may learn about the area's biodiversity. Cooperation agreements will also be established with MITUR and CORSATUR to promote the PWII as a tourism destination. In addition, technical and financial support from MITUR and CORSATUR will be requested to prepare local communities to provide basic services to visitors (e.g., lodging, touring, and restaurant services). More detailed assessments of the PA's ecotourism potential and the carrying capacity of the area will be conducted, including an assessment of the feasibility for establishing multiple tourism routes, such as the following: a) boat tours of the lagoon to observe waterfowl and other wildlife; b) hikes and/or horseback rides within the forests surrounding the lagoon; c) hikes to the Aguas Calientes Lagoon; and d) hikes to the Chaparrastique volcano.

81. PPP. A PPP will be established with local communities in the Jiquilisco Bay Complex PWII, which already has a well-developed community-based ecotourism program. Two CSOs were identified during

the PPG as potential partners: Asociación Mangle (the coordinating entity between Bajo Lempa and Bahía de Jiquilisco) and Asociación Intercomunal de Comunidades Unidas para el Desarrollo Económico y Social del Bajo Lempa (ACUDESBAL). Collaboration with local governments will also be sought, in particular with the Asociación Intermunicipal de la Bahía de Jiquilisco (ASIBAHIA). This PPP will allow the MARN to grant contracts for tourism services such as lodging, restaurant services, and the operation of souvenir shops within the PWII. To establish the PPP, the project will perform the following: a) assess the institutional needs of each party (MARN, CSOs, and municipal governments) and strengthen their capacities to ensure effective inter-institutional cooperation; b) assess the PWII's financial needs, tourism potential, and define a plan and schedule; c) sign long-term concession agreements/contracts (for at least 10 years); d) establish an advisory group for conflict resolution and ensure the sustainability of institutional arrangements; and e) define a monitoring system, including quantifiable indicators for measuring progress in achieving financial and conservation goals.

Component 2 – Addressing threats to biodiversity, including the presence of invasive species and solid wastes and agrochemicals originating in the buffer areas of the PWIIs.

82. Component 2 will deliver multiple global environmental benefits through the implementation of specific actions to reduce threats, focusing on two PWIIs, the Jiquilisco Bay Complex and the Jocotal Lagoon in the lower Río Grande de San Miguel watershed. Actions will include the establishment six (6) inter-institutional cooperation agreements among government authorities and municipalities related to the PAs located at the Jiquilisco Bay, the Jocotal Lagoon, and the Olomega Lake PWII. The agreements will include joint conservation/management committees to supervise the conservation efforts and management effectiveness of the PAs, as well as following up on the reduction of solid wastes and control of the use of agrochemicals in the PAs' buffer areas. The agreements will be complemented by the implementation of a program to prevent, reduce, and control contamination stemming from agricultural activities, in particular the excessive use of agrochemicals and mismanagement of manure, as well as the wastes created by human settlements surrounding the wetlands. An incentives program will provide benefits to wetland users and promote the use of biodiversity-friendly agricultural and livestock management practices in the buffer areas of the PAs. This will include green certification, particularly for the reduced use of agrochemicals and the sustainable management of manure to reduce pollution, training, technical assistance, among other incentives. The incentives program will be strengthened through actions directed towards raising awareness about the value of biodiversity and the ecosystem services of the prioritized wetlands and the country's wetlands in general among the different stakeholders. The project will use key indicators for the ecological conditions of the wetlands to assess the impact of the project and determine the global environmental benefits.

83. The project will also reduce the contamination derived from agrochemicals, livestock wastes, and household and urban solid wastes in three PWIIs. This will include the development of tools for management and decision-making: first, a regulatory framework that regulates human activities within the PWIIs and the buffer; second, a monitoring information system to monitor biodiversity in the three prioritized PWIIs and facilitate decision-making to reduce the existing threats; and third, a protocol to reduce the threats to biodiversity in PWII, including contamination from agrochemicals, livestock wastes, and household and urban solid wastes. The project will define a set of related indicators that will be integrated into the MARN's Environmental Information System (SIA), which will facilitate decision-making for the effective conservation of biodiversity associated with the wetlands. In addition, strategies to control water hyacinth (*Eichornia crassipes*) and the Neotropic cormorant (*Phalacrocorax brasilianus*) will be developed and piloted to reduce the threat of these invasive species in the Jiquilisco Bay Complex, the Olomega Lake, and the Jocotal Lagoon PWII and their buffer areas. This will include physical and mechanical control, reduction of contamination sources, and increased awareness among local wetland users about the threat to biodiversity by these invasive species. The project will also promote the conservation of 18,720 ha of mangroves through the design and implementation of a participatory plan for the sustainable use of these ecosystems in the Jiquilisco Bay and the associated

continental wetlands (Jocotal Lagoon and Olomega Lake). Finally, at least 500 ha of dry forest that serve as key habitat for migratory birds and other species associated with the mangroves will be rehabilitated, leading to the restoration of the ecologic functions of the degraded forests and increasing the productivity of the ecosystems to benefit the local human populations.

84. After 4 years, the project's outcomes will include:

- a. Presence of key indicator species in four PAs in the Jiquilisco Bay Complex and Jocotal Lagoon PWIIs in the lower watershed of the San Miguel Río Grande: i) Normandía and Chaguantique PA: *Amazona auropalliata*, *Ateles geoffroyi*; ii) El Tercio PA: *Crocodylus acutus*; iii) Jiquilisco Bay Area (includes San Sebastián Island): *Andara grandis*, *Amazona auropalliata*, *Eretmochelys imbricata* and *Crocodylus acutus*; and iv) Jocotal Lagoon Area: *Amazona auropalliata*, *Crocodylus acutus*.
- b. Pollution derived from agrochemicals, livestock wastes, and household and urban solid wastes reduced by 50% in three PWIIs by the end of the project.
- c. Reduced presence of two invasive species (water hyacinth [*Eichornia crassipes*] and the Neotropic cormorant [*Phalacrocorax brasilianus*]) in the Olomega Lake, the Jocotal Lagoon, and the Jiquilisco Bay PWIIs: i) 2,000 tons/year per wetland of water hyacinth (*Eichornia crassipes*) removed from the Olomega Lake and Jocotal Lagoon PWIIs; and ii) Abundance (number of individuals) of the cormorant duck (*Phalacrocorax brasilianus*) in the Olomega Lake, the Jocotal Lagoon, and the Jiquilisco Bay PWIIs (baseline and target will be established during the first year of the project).
- d. Sustainable use and extraction of resources contribute to the conservation of 18,720 ha of mangroves in the Jiquilisco Bay PWII and associated freshwater lagoons.

Output 2.1 – Six (6) inter-institutional cooperation agreements (MARN, MAG, CEL, MOP, and the municipalities) established, including conservation and management committees for monitoring the conservation and sustainable use of biodiversity in at least three PAs of the Jocotal Lagoon and the Jiquilisco Bay PWIIs, as well as their buffer areas.

85. The project will establish and put into operation six (6) inter-institutional cooperation agreements to address threats in the PWIIs. The multi-sectoral collaborative agreements will be established between the MARN, other ministries (MAG, CEL, and MOP), and local governments (El Carmen, Chirilagua, and San Miguel), and will include the creation of conservation and management committees for monitoring the conservation and sustainable use of biodiversity in at least three PAs of the Jocotal Lagoon and the Jiquilisco Bay PWIIs and their buffer areas. The specific activities to be developed are: a) hold bilateral meetings between the ministries and municipalities to establish common ground and agree on the scope and terms of the inter-institutional cooperation agreements, as well as to discuss all roles and responsibilities and agree on conflict resolution mechanisms; b) draft cooperation agreements between: MARN and MOP, MARN and MAG, and MARN and CEL. The agreements will be drafted using as basis the pre-existing agreements and will include workshops and discussion meetings to determine and agree specific interventions, particularly in regards to the reduction of threat to biodiversity, including the reduction of agrochemicals originating in the buffer areas of the PWIIs; c) review and adjust the pre-existing agreements with the municipalities of El Carmen, Chirilagua, and San Miguel, including workshops and discussion meetings to determine and agree on specific interventions, particularly with regard to the reduction of solid wastes originating in the buffer areas of the PWIIs; d) legal review of agreements in each ministry and municipalities; and e) sign and implement the agreements.

Output 2.2 – Program for the prevention, reduction, and control of contamination stemming from agricultural activities (e.g., agrochemicals and manure) and human settlements (solid wastes) in two

PWIs (Jiquilisco Bay and Jocotal Lagoon) and their buffer areas defined jointly with the municipalities, local communities, and the private sector.

86. Contamination stemming from agricultural activities: Technical staff from the MARN's Ecosystem and Landscapes Restoration Program (PREP) indicated during the PPG that sugar cane production is the principal agricultural activity contaminating the Jiquilisco Bay, the Jocotal Lagoon, and the Olomega Complex PWIs. Of the approximate 105 sugar cane producers from the surroundings of the PWIs, about 60 of them will participate in a program for the prevention, reduction, and control of contamination. To address issues relate to the reduction of contamination by agrochemicals and the adoption of BMPs, roundtables will be established with the participation of the sugar cane producers and representatives of relevant institutions including MARN, MAG, and municipal authorities. Activities will also include the official publication of the Best Practices Handbook, which is currently under development with the support of the Sugar Foundation of El Salvador. The handbook includes: a) guidelines for the reduction in the use of agrochemicals; b) establishing buffer areas of at least 50 meters and 25 meters in width surrounding water bodies and rivers, respectively, which are aligned with the national forest laws for the conservation of natural resources (water and soil); c) integrated crop disease management; d) and compliance with environmental requirements when requesting permission to expand new areas of for sugar cane cultivation. In addition, GEF funding will incorporate the guidelines regarding the elimination of sugar cane burns as part of the production process. The project team jointly with MARN technical staff will provide technical support to the sugar cane producers for the implementation of BMPs as outlined in the handbook. Agreements between the sugar cane producers and the MARN will be signed indicating the commitments and responsibilities of all parts participating in the project. In addition, the MARN will provide follow-up to BMP implementation; results and lessons learned will be included as part of the information monitoring system that will created (Output 2.5) to support decision making for threats reduction in the three prioritized PWIs.

87. Contamination stemming from cattle ranching: Technical staff from the MARN's PREP estimated during the PPG that there are about 50 medium-size cattle ranchers (10- to 100-ha-size farms) that pollute the Jiquilisco Bay, Lake Olomega, and Jocotal Lagoon PWIs with livestock wastes. The project will work with 20 of these cattle ranchers as part of a program for the prevention, reduction, and control of contamination and for the adoption of biodiversity-friendly production practices. These best practices will include: a) the stabling of cattle; b) raising awareness about existing problem of PWII contamination and training to adopt BMPs; c) the use of cattle waste for producing methane gas for cooking; and d) the adoption of silvopastoral practices and the use of fodder banks. Together these activities will contribute to prevent that cattle feed and drop their organic wastes within the protected areas. Agreements between the cattle ranchers and the MARN will be signed indicating the commitments and responsibilities of all parts participating in the project, and which will be agreed upon through local roundtables that will be established for this purpose and to follow-up on the implementation of BMPs. Local roundtables will include the MARN, cattle ranchers (men and women), MAG, municipalities, and interested community representatives (men and women); they will also serve to discuss the management of municipal slaughterhouses, which will be proposed to be privately operated by cattle ranchers. Experiences and lessons learned will be included as part of the information monitoring system that will created to support decision-making for threats reduction in the three prioritized PWIs (Output 2.5).

88. Contamination stemming from human settlements (solid wastes): Water contamination is widespread in Jiquilisco Bay. One of the main sources of solid waste contamination is at the mouth of the Rio Grande de San Miguel, although poor management of solid wastes is common throughout the bay, particularly in communities that cannot be accessed by land (Pirrayita and Jobal Rancho Viejo) or that have a large influx of tourism (El Espino). The project will support solid waste collection activities in the Jiquilisco Bay area, particularly in the lagoon where boats are used. Solid waste collection activities will be carried out twice a month during the rainy season and once a month during the dry season. Collection centers for solid wastes (inorganic and organic) will be established, and composting activities will be implemented

as part of organic waste management, with the equal participation of men and women. These activities will include the active participation of the local communities and the municipalities within the Jiquilisco Bay (San Dionisio, Jiquilisco, Usulután, Puerto El Triunfo Concepción Batres, and Jucuarán). An environmental education/awareness raising program targeting the upstream local communities will contribute to reduce the inappropriate disposal of solid wastes that end up in the bay area.

Output 2.3 – Incentives program, including green certification for reduced use of agrochemicals in sugar cane cultivation and sustainable livestock management promotes biodiversity-friendly agricultural practices and water-related resource use in the buffer areas of four PAs of the Jocotal Lagoon and the Jiquilisco Bay PWIIs.

89. To encourage the adoption of BMPs by the agricultural sector and other users of the wetlands and their associated biodiversity, the project will implement an incentives program that includes green seals and the certification of sustainable production process. Green seals and the certification of sustainable production processes will allow to differentiate products and influence consumer-purchasing decisions with potential economic benefits for the producers that adopt BMPs. In particular, the incentives program will promote the use of biodiversity-friendly agricultural and livestock management practices in the buffer areas of the PAs for the reduced use of agrochemicals and the sustainable management of manure to reduce the contamination of PWIIs. The incentives program will consist of two strategies as follows.

90. Green Seal for small- to medium-scale agriculture producers and cattle ranchers. This incentive scheme is aimed at promoting the reduction of contamination from agricultural and livestock production by encouraging the use of biodiversity-friendly technologies and the promotion of the efficient use of fertilizers and pesticides. It will provide incentives to producers that take into account the protection of soil, vegetative cover, and biodiversity. The main beneficiaries of the program are farmers, including women, who have plots of more than 5 ha in size. Beneficiaries will also include larger farm owners so arrangements will involve both tenants and owners. The incentive is based on three strategies: a) training and extension; b) delivery of incentives; and c) organizational strengthening. In addition to reducing the degradation of natural resources in the buffer areas of the PWIIs, the incentives program will improve the livelihood of the rural communities with low incomes. The Green Seal certification incentive will be binding with the development of a “farm plan” that the farmer shall implement with technical assistance and extension services provided by the project and with the support of the MARN and MAG. The farm plan and extension services will emphasize soil conservation, agroforestry, and agricultural diversification. In addition, the incentives program will be strengthened through actions directed towards raising awareness about the value of biodiversity and the ecosystem services of the PWII among farmers. It will also be used as a way for the beneficiary farmers to establish synergies with local institutions and community organizations, and will contribute to strengthening local processes for land use planning under the ADESCOs.

91. Specific activities to be developed under the Green Seal program for small- to medium-scale agricultural producers and cattle ranchers include: a) communication and participation activities ensuring the equal participation of men and women and cooperatives through a dialog platform for producers and wetland managers and direct and open communication between all interested parties; b) training in sustainable agricultural production, including visits to demonstration farms, workshops and meetings, development of sustainable production protocols, and certification and marketing; and c) certification after ensuring compliance of farm plans and the implementation of biodiversity-friendly production practices. The MARN will define the criteria and procedures for granting accreditation and registration of national and international Green Seal certifying bodies as required by the Environmental Law. The project will facilitate the certification process favoring simplified and group certifications to reduce certification costs. Finally, the project will establish a network of pilot farms for biodiversity-friendly agricultural production and sustainable water-related resource use that will facilitate replication of BMPs in other wetland areas around the country.

92. Certification of biodiversity-friendly sugar cane cultivation. The project will implement a certification program for sustainable sugar cane cultivation in the buffer areas of the prioritized PWIIs. The program will include the provision of technical assistance and extension services, and documentation of lessons learned and best practices. Beneficiaries of the program are small (1 to 10 ha), medium (10 to 100 ha), and large (more than 100 ha) producers.⁴¹ A first phase of the certification process will aim at compliance with good agricultural practices (GAPs) during the cultivation process, including during site selection for new crops, planting, germination and establishment, tilling and growth, in preparation for the harvest, and during green harvesting. The program will also include the implementation of that occupational safety and health (OSH) measures and will guarantee adequate working conditions and fair treatment of both men and women. Farms that comply with GAPs will have the option to be granted a Green Seal certification granted by the MARN, and after an evaluation process of the economic, social, legal, and environmental impacts as specified in the General Regulation of the Environmental Law (Article 55). During a second phase, the farms will be selected to initiate a process of certification by an internationally recognized agency such as Rainforest Alliance⁴² or Bonsucro⁴³. The project will provide technical assistance to the selected farms and support their contribution in reducing the negative impacts of farming on biodiversity in the PWII prioritized by the project, and to promote a more rational use of land and water. To this end, agreements will be established with national research centers (e.g., CENTA) and universities (e.g., University of El Salvador) to support the process of implementing best practices and demonstrating biodiversity benefits. In addition, the project will establish synergies with CASSA, which provides assistance for sugar cane production and processing as part of the certification process. The agency will also provide credit for producers to invest in improvements at the farm level.

Output 2.4 – Standards in place to regulate human activities that affect the PWIIs.

93. The project will develop a regulatory framework to regulate human activities that affect the PWIIs and their buffer areas. Using existing environmental legislation as its basis, the project will develop proposals of specific norms, including a proposal for a new agricultural law or policy, to regulate the management and use of wetlands' natural resources. Specific norms will focus on the regulation of human activities, including the use of agrochemicals (insecticides and pesticides), the restoration of ecotonal ecosystems (e.g., gallery forest and dry and "salt" forests), the sustainable use of natural resources (including fish resources), and the development of infrastructure. Drafts of the specific norms will be developed and discussed with national (e.g., MAG and MOP) and local (municipal governments and CSOs) stakeholders. Once approved, the activities will be implemented to raise awareness and inform the general public about the new regulations.

Output 2.5 – Information monitoring system in place facilitates decision making to reduce the threats to three (3) PWIIs and articulated with the Environmental Information System (EIS) of the MARN.

94. The project will develop an information monitoring system to monitor the reduction of threats to the Jiquilisco Bay PWII, the Jocotal Lagoon PWII, and the Olomega Lake PWII, as a result of the implementation of inter-institutional cooperation agreements (Output 2) and a program for the prevention, reduction, and control of contamination stemming from agricultural and human settlements (Output 2.2), among other project actions. The development of the information monitoring systems will include: a) detailed assessment and mapping of threats; b) design and set up of the monitoring mechanisms following existing national and project protocols for data-gathering, in particular for water and soil quality; c) assess equipment needs and train MARN and municipal staff in data-gathering, database management, and reporting; d) conduct periodic data-gathering in the three PWIIs, emphasizing water and soil quality (physical, chemical, and biological parameters), and presence of invasive species

⁴¹ There are a total of 105 producers located in the buffer areas of the three PWII; about 90% fall in the range of small to medium size producers.

⁴² In El Salvador, certification of sugar cane cultivation by Rainforest Alliance is done through the NGO SalvaNATURA.

⁴³ Bonsucro is a global non-profit, multi-stakeholder organization established in 2008 fostering the sustainability of the sugar cane sector.

with emphasis on water hyacinth (*Eichornia crassipes*) and the Neotropic cormorant (*Phalacrocorax brasilianus*); e) analyze information jointly with the MARN's wetland technical staff and municipal environmental authorities; and f) report the results to the various local stakeholders and regional stakeholders, particularly those participating in the implementation of inter-institutional cooperation agreements (Output 2.1), a program for the prevention, reduction, and control of contamination (Output 2.2), and strategies for controlling invasive species (Output 2.7). The indicators to be used for information monitoring system will include those defined in the Strategic Results Framework (see Section 3.2 of this Project Document) to facilitate project monitoring and assess the overall impact of the project. The MARN, through the Wetlands Unit, will provide technical support to ensure that monitoring protocols are followed and data systems are articulated with the EIS.

Output 2.6 – Protocol developed to reduce the threats to biodiversity in PWIIs, including contamination from agrochemicals, livestock waste, and household and urban solid wastes.

95. The development of a protocol to reduce the threats to biodiversity in PWIIs, including contamination from agrochemicals, livestock waste, and household and urban solid waste will be coordinated by the MARN and will include the participation of other national government agencies (e.g., MOP, MAG, and CEL), municipal authorities (10 municipalities), representatives of local communities (including women's groups), and the private sector (e.g., agriculture, urban development and tourism). The MARN, in coordination with other ministries, will provide technical support so that protocol is in line with national guidelines for the protection of the environment and the national wetlands. As a first activity, a draft of the protocol for to reduce the threats to biodiversity in PWII will be developed in a participatory manner using as a basis the detailed assessment and mapping of threats developed as part of the design of the information monitoring system to monitor the reduction of threats to the Jiquilisco Bay PWII, the Jocotal Lagoon PWII, and the Olomega Lake PWII (Output 2.5) and local knowledge about threats to these wetlands. Second, workshops will be held in each prioritized PWII to validate the draft of the protocol locally. Finally, meetings will to evaluate the results of the local validation process, to discuss and make decisions about eventual changes, which once approved will allow their adoption by the municipal and national environmental authorities, local communities, and the private sector. The protocols will be published digitally and on hard copy and will be available to the general public and interested parties.

*Output 2.7 – Strategies for controlling invasive species (water hyacinth [*Eichornia crassipes*] and the Neotropic cormorant [*Phalacrocorax brasilianus*]) piloted in three PWIIs and their buffer areas: Jiquilisco Bay Complex, Olomega Lake, and Jocotal Lagoon.*

96. Strategies to control water hyacinth and the Neotropic cormorant will be piloted to reduce the threat of these invasive species in the Jiquilisco Bay Complex, the Olomega Lake, and the Jocotal Lagoon PWIIs and their buffer areas. The specific action to be implemented by the project are: a) verification of baseline information for both invasive species and establish current status of their populations and their distribution in each PWII; b) draft and implement a control and management plan for each invasive species, in consultation and with the participation of the local communities and municipal authorities; c) inform and build awareness among the general public and local wetland users about the control and management strategy and about the threat to biodiversity posed by these invasive species; and d) monitor the status of the population of each species and systematize results in the information monitoring system (Output 2.5) to support decision-making. Specific indicators related to the invasive species have been included in the Results Framework (Section 3.2) to in order to assess the impact of the project in reducing this threat.

97. To reduce the presence of the water hyacinth, the project will build on past initiatives for the control, management, and use of this alien invasive species in the Olomega Lake and the Jocotal Lagoon. The MARN within the framework of the Wetlands National Restoration Plan implemented several activities jointly with local communities, the municipalities and other local organizations for the physical removal

of the water hyacinth, extracting on average 100 m³/year in both the Olomega Lake and the Jocotal Lagoon PWII. Later in 2014, the MARN, with the support of AECID and FIAES and through the Water Fund project, bought a barge that allows the mechanical extraction of water hyacinth. The project will support efforts to continue the physical removal of the water hyacinth using this method, and will provide a vehicle (rent) to facilitate moving the barge between PWII. In addition, the project will pilot small-scale operations for the production of handicrafts (e.g., baskets and furniture) and paper using water hyacinth with the active participation of women from the local communities. Also, due to its high cellulose content, water hyacinth will also be used as feed for livestock as part of a program with cattle ranchers for the prevention, reduction, and control of contamination (Output 2.2).

98. Similarly, the project will build on past initiatives for the control and management of the Neotropic cormorant population in the Cerrón Grande Reservoir PWII led by the MARN and in coordination with the MAG and local fishermen. The impact of the Neotropic cormorant on fishery resources is a major problem in most wetlands around the country; thus, the participation of fishermen in controlling its population is key to its success. The project will support a program for the physical removal of the Neotropic cormorant population in the Jiquilisco Bay Complex, the Olomega Lake, and the Jocotal Lagoon PWIIs and their buffer areas.

99. Output 2.8 – Participatory plans developed for the conservation and sustainable use of mangroves and floodplain forest in the Jiquilisco Bay and associated freshwater lagoons in the lower Rio Grande de San Miguel watershed.

100. The project will promote the participatory conservation and sustainable use of mangroves and floodplain forest in the Jiquilisco Bay and associated freshwater lagoons in the lower Rio Grande de San Miguel watershed. Participatory management plans for the mangroves in the Jiquilisco Bay are key for their conservation, as in the face of great environmental pressure a large percentage of their original coverage has been lost and they continue to be threatened by non-sustainable use and extraction practices. The participatory mangrove management plan will include: a) a description phase in which all related technical and social studies will be completed, including a detailed analysis of threats and trends; b) management considerations, including: i) a training and awareness program, ii) a public participation strategy, and iii) a plan for the sustainable use of aquatic species (shellfish and fish) in freshwater lagoons and firewood from mangroves based on the Local Plan for Sustainable Extraction (PLES) and Agreement 120), and zoning; c) participatory follow-up and evaluation; and d) informing the general public periodically about the progress in the implementation of the participatory plans and the impact on the conservation and sustainable use of the mangroves and their associated freshwater lagoons. Once the plans are defined they will be validated through management committees that will be established under coordination by the MARN and local workshops, and meetings will be held to inform local communities and other stakeholders about the mangrove conservation goals and timelines. The mangroves' participatory plans will be developed simultaneously with the updated management plan for the Jiquilisco Bay Complex PWII (Output 1.2) to ensure that all conservation and management goals are harmonized.

Output 2.9 – Participatory rehabilitation of at least 500 ha of dry forest associated with mangroves allows the protection of key habitat for migratory species.

101. A pilot project for the participatory ecological rehabilitation of at least 500 ha of dry forest associated with mangroves will be implemented in the Jiquilisco Bay Complex PWII. The development of the pilot project involves the following activities: a) historical analysis of the area, including changes in cover and structure of the mangroves and variations in the composition of the associated plant and wildlife species; b) development and implementation of a protocol for the ecological rehabilitation of dry forest associated with the mangroves; and c) participation of local communities, including women, in workshops on environmental education, ecological rehabilitation of dry forest, and their conservation. Specific rehabilitation activities to be implemented with the participation of local communities, including women and women's groups, will include the cleaning and desilting of the "salt forest" and dry forest,

restoring and maintenance of water outcrops and water structures to increase water levels in freshwater lagoons, and reforestation activities. These activities will be key for increasing forest coverage, improving the habitat for wetlands species, and restoring ecosystem functions.

2.5. Key indicators, risks, and assumptions

102. The project's indicators are provided in Table 4. Detailed information on project indicators is included in Section 3: Results Framework of this Project Document. The risks that might prevent the project from being achieved are presented in Table 5.

Table 4 – Project indicators.

Objective / Outcome	Indicators	Goal (5 years)
Objective: Promote the conservation and sustainable use of biodiversity and the maintenance of ecosystem services through the creation of new PWIIs and the improved management of existing protected wetlands.	Coverage (ha) of the NPAS resulting from the creation of three (3) new MUPAs	– From to 95,785.61 ha to 133,495.07 ha (37,709.46 new ha)
	Continued presence of key indicator species in four (4) PAs in the Jiquilisco Bay Complex and the Jocotal Lagoon PWIIs in the lower watershed of the San Miguel Río Grande.	– Normandía and Chaguantique PA: <i>Amazona auropalliata</i> , <i>Ateles geoffroyi</i> – El Tercio PA: <i>Crocodylus acutus</i> – Jiquilisco Bay Area (includes San Sebastián Island): <i>Andara grandis</i> , <i>Amazona auropalliata</i> , <i>Eretmochelys imbricata</i> and <i>Crocodylus acutus</i> – Jocotal Lagoon Area: <i>Amazona auropalliata</i> , <i>Crocodylus acutus</i>
	Change in the management effectiveness of three (3) PWIIs measured through the METT scorecard.	– Jiquilisco Bay PWII: From 49% to 59% – Olomega Lake PWII: From 32% to 42% – Jocotal Lagoon PWII: From 31% to 41%
	Change in the financial sustainability of three (3) PWIIs according to that established through the total average score in the UNDP/GEF Financial Sustainability Scorecard.	– Legal, regulatory, and institutional framework: From 30% to 46% – Business planning and tools for managing cost-effectiveness: From 8% to 42% – Tools for income generation and allocation: From 17% to 34% – Total: From 20% to 41%
Outcome 1: Expanded protected wetland coverage and strengthened institutional and individual capacities for the effective management of PWII.	Representativeness (%) of the wetland ecosystems in the NPAS by wetland type.	– X% (The baseline and target will be determined during the first year of project implementation using LIDAR images obtained as part of the MARN co-financing)
	Number of new wetland PAs that form part of the NPAS.	– Three (3): <u>1. Jiquilisco Bay Islands:</u> 40 islands and the water body surrounding them; <u>2. Olomega Complex:</u> Olomeguita Island, Tierra Blanca, and the La Chiricana or San Antonio Silva area; <u>3. Fonseca Gulf Islands:</u> Four (4) islands (Martín Pérez, Pirigallo or Meanguerita, Ilca, and Isla Periquito islands) and areas surrounding the Meanguera Island
	Change in the capacity development indicators for the sustainable management of the PWIIs according to the total score of the UNDP-GEF Capacity Development Scorecard.	<u>National Government</u> – MARN*: From 45.24% to 66.67% – MAG**: From 54.76% to 66.67% <u>Local Government</u> – Jiquilisco MEU: From 30.95% to 57.14%

		<ul style="list-style-type: none"> - San Dionisio MEU: From 35.71% to 57.14% - Concepción Batres MEU: From 28.57% to 54.76% - Jucuarán MEU: From 28.57% to 57.14% - El Tránsito MEU: From 33.33% to 59.52% - Management of the Inter-municipal Association of Jiquilisco Bay (ASIBAHIA): From 33.33% to 54.76% <p><u>Multi-stakeholder platforms</u></p> <ul style="list-style-type: none"> - Jiquilisco Bay Territorial Action Group (GAT-CBJ): From 40.48% to 57.14% <p>*General Directorate of Ecosystems and Wildlife (DGEVS); Wetlands, Natural Protected Areas, and Biological Corridor Unit; Resources Protection Unit; General Directorate of Environmental Governance (DGGA); Environmental Assessment and Compliance; General Directorate of Citizen and Municipal Services</p> <p>** General Directorate of Forest, Watershed, and Irrigation Planning</p>
	Number of staff from the MARN, municipalities, the MAG, and local organizations, including women, trained in the sustainable management of the PWIIs.	<p><u>National Government</u></p> <ul style="list-style-type: none"> - MARN: 20 - MAG: 6 <p><u>Local Government</u></p> <ul style="list-style-type: none"> - Jiquilisco MEU: 2 - Puerto El Triunfo MEU: 2 - San Dionisio MEU: 2 - Concepción Batres MEU: 2 - Jucuarán MEU: 2 - El Tránsito MEU: 2 - San Miguel MEU: 2 - Chirilagua MEU: 2 - El Carmen MEU: 2 - Local Environmental Police: 10 - Navy: 4 - ASIBAHIA: 2
	Change in the financial gap (USD) to cover the basic management costs of the three (3) PWII.	<ul style="list-style-type: none"> - Jiquilisco Bay PWII: From \$222,160 to \$166,620 - El Jocotal Lagoon PWII: From \$173,199 to \$129,899 - Olomega Lagoon PWII: From \$244,677 to \$183,508 <p>(Reduction of 25% in each of the three cases)</p>
	Number of environmental compensation agreements established.	<ul style="list-style-type: none"> - From 0 to 5
	Total annual revenue generation for three (3) PWIIs disaggregated by source.	<ul style="list-style-type: none"> - Environmental economic compensation: From \$0 to \$100,000 - Entry fees for visitors: From \$0 to \$30,000 - PPP: From \$0 to \$30,000

Outcome 2: Addressing threats to biodiversity, including the presence of invasive species and solid waste and agrochemicals originating in the buffer areas of the PWII.	Number of inter-institutional cooperation agreements established and operating for the management of the PWIIs.	– Three (3) municipal agreements for managing invasive species and solid waste – Three (3) new agreements with MAG, MOP, and CEL
	Number of farms implementing best practices for the management of cattle ranching wastes in three (3) PWIIs, including farms run by women.	– From 0 to 20
	Number of farms implementing best practices for the management of agricultural wastes in three (3) PWIIs, including farms run by women.	– From 0 to 60
	Solid waste accumulated (kg/ha) in the Jiquilisco Bay PWII.	– Baseline - X (a reduction of 50% is estimated; baseline and target will be established during the first year of the project)
	Volume (tons/year) of water hyacinth (<i>Eichornia crassipes</i>) removed from the Olomega Lagoon and Jocotal Lagoon PWIIs.	– 2,000 tons/year per wetland
	Abundance (number of individuals) of the cormorant duck (<i>Phalacrocorax brasilianus</i>) in the Olomega Lagoon, the Jocotal Lagoon, and the Jiquilisco Bay PWIIs.	– Jocotal Lagoon PWII: Baseline - X – Jiquilisco Bay PWII: Baseline - X – Olomega Lagoon PWII: Baseline – X (Baseline and target will be established during the first year of the project)
	Stable coverage of mangroves in the Jiquilisco Bay PWII and associated freshwater lagoons.	– 18,720 ha

Table 5 - Risks facing the project and the risk mitigation strategy.

Risk	Level*	Risk Mitigation Strategy
The sustainable use of biodiversity in wetlands is not a priority for new environmental authorities	L	The project staff will inform the new environmental officials about the project, its objective, progress, and achievements, as well as the project's benefits in terms of the sustainable use of the country's PWIIs and contributions to achieve national and global environmental goals. Different platforms will be used for this, such as the project's steering committee, and learning and knowledge-sharing processes that will be part of the project's monitoring and evaluation plan, site visits to the prioritized PWIIs, among others.
Weak organization and cohesion among public and private stakeholders for the control and management of invasive species	M	With MARN's support, the project will define consultation mechanisms among the sectors and stakeholders responsible for managing invasive species, as well as those who perceive an impact (e.g., fishermen), to jointly define strategies to control and reduce invasive species that affect wetlands. This participatory process will facilitate joint decision-making to reduce the presence of invasive species in the prioritized wetlands and PAs. Initiatives to further promote local involvement in the use and recycling of invasive species will be implemented, such as handicrafts (e.g., baskets and furniture), paper made from the fiber of water hyacinth, and the plant used as feed for livestock. Finally, the project will build upon past successful initiatives for the control, management, and use of this alien invasive species in the project's PWIIs as a way to build confidence among stakeholders and engage them in activities already familiar to them.
Limited interest by the agricultural sector to adopt BMPs for the prevention,	M	To encourage the adoption of BMPs by the agricultural sector to reduce the use of agrochemicals, the project will implement an incentives program consisting of a green seal for small- to medium-scale agriculture producers and cattle ranchers and the certification of biodiversity-friendly sugar cane cultivation. The green seal certification of sustainable production processes will differentiate products and

reduction, and control of contamination (and thereby the reduced use of agrochemicals)		influence consumer purchasing decisions with potential economic benefits for the producers who adopt BMPs. In the case of sugarcane, the project will establish synergies with CASSA, which provides credit for producers to invest in improvements at the farm level. Roundtables will be established with the participation of the producers and producer associations, and representatives of relevant institutions including MARN, MAG, municipal authorities, and community representatives to discuss issues related to the control of contamination and to agree upon the technical assistance needed for the implementation of BMPs. Finally, environmental education/awareness-raising activities will further contribute to show farmers the environmental and economic benefits of implementing BMPs to reduce the contamination of the project's PWIIs.
Limited participation of local communities and municipalities in the prevention, reduction, and control of solid wastes	M	The basis for mitigating this risk will be the implementation of a local environmental governance and awareness program for the sustainable management of biodiversity in PWII, including the reduction of threats (prevention, reduction, and control of solid wastes). More specifically, the project will strengthen the ability and skills of local communities and the municipalities to participate in and have more control over decision-making processes regarding the conservation and the use of natural resources. In addition, the project will establish and put into operation three (3) inter-institutional cooperation agreements with municipalities of the Jiquilisco Bay area to address threats in the PWII, including solid waste management. Traditionally in the Jiquilisco Bay area, local communities have had limited participation in solid waste management. To reverse this, the project will focus on the areas within the Jiquilisco Bay that cannot be accessed by land and that have limited solid waste collection systems. Solid waste collection centers (inorganic and organic) will be established and composting activities will be implemented as part of organic waste management, with equal participation by men and women. Finally, an environmental education/awareness-raising program will contribute to reduce the inappropriate disposal of solid wastes that end up in the bay area.
Climate change effects	M	Through the establishment of three new PAs and the improved management effectiveness of three (3) PWII and their buffer areas, the project will increase protected habitat, providing additional refuge areas for numerous species facing potential events associated with climate change. The protection of mangroves and the development of sustainable use plans will contribute to mitigating the impacts from extreme hydrometeorological events associated with climate change, the reduction of their intensity, and the prevention of erosion with benefits for the wetlands, PAs, and associated biodiversity, as well as neighboring human settlements. The project will establish a climate change monitoring team for the PWIIs, which will develop early warning actions to mitigate impacts from flooding and landslides to the wetlands and the local populations.

*L = Low; M = Medium; H = High

2.6. Financial modality

103. The financial support provided by GEF resources will consist of a grant to cover the incremental costs of the proposed activities. Therefore, GEF resources will be mainly directed toward technical assistance.

104. The project will be executed under National Implementation Modality (NIM) according to the standards and regulations for UNDP cooperation in El Salvador; MARN will be the Executing Entity. The costs of the incremental activities that are required to contribute to global benefits that will be financed by GEF are \$2,191,781 USD. A summary of the project's budget is presented in Table 6.

Table 6 – Total project budget.

Outcome	Budget (USD)	Percentage of Total Budget
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Outcome 1.	500,000	0.23
Outcome 2.	1,587,410	0.72
Project management costs	104,371	0.05
TOTAL	2,191,781	100.00

2.7. Cost-effectiveness

105. The GEF strategy (i.e., GEF alternative scenario) for promoting the conservation and sustainable use of biodiversity and the maintenance of ecosystem services through the creation of new PWII and the improved management effectiveness of existing protected wetlands will be more cost-effective in the short and long terms than the alternative approach (i.e., business-as-usual scenario) in which a weak institutional framework and limited planning and management capacities will prevail, thereby preventing the delivery of global environmental benefits. In line with the GEF Council's guidance on assessing the cost-effectiveness of projects (Cost-Effectiveness Analysis in GEF Projects, GEF/C.25/11, April 29, 2005), a qualitative approach to identifying the alternative with the best value and feasibility for achieving the project objective was used.

106. A strategy to improve management in order to increase the conservation, sustainable use of biodiversity, and maintenance of the ecosystem services of three existing PWII (Component 1) is likely to be far more cost-effective in the long term than the alternative approach that relies on a limited institutional and individual capacity for effective PWII management and for reducing current threats to biodiversity. If this project is not implemented, the scenario that will prevail is one where the expansion of agriculture, cattle-ranching, and other non-sustainable land use practices will continue to contribute to the loss and degradation of the wetlands and associated ecosystems within the PAs. Additionally, the financial sustainability of the PWII will continue to lag behind in conservation and management needs and these will continue to rely mostly on limited government funding. By strengthening the institutional capacity of the MARN through capacity-building for improved PWII management and implementation of planning, monitoring, and enforcement strategies and tools to reduce threats (e.g., habitat loss and ecosystem transformation, contamination [livestock waste, and household and urban solid waste], presence of invasive species, and climate change), the GEF alternative will remove the barriers that limit effective PWII management and the conservation of globally important biodiversity.

107. The project's approach to the financial sustainability of the PWII will include securing new financial support from different sources including economic environmental compensation from local development projects and business plans for new and existing wetland PAs. The project will build on the country's tourism potential by attracting more visitors to the PWII; more specifically, the project will: a) pilot a visitor entrance fee scheme and will channelize revenues into existing wetland PAs; and b) establish PPP to increase revenue from tourism in the PWII. Currently, the MARN is not taking advantage of these financial mechanisms to support PWII management, they are inefficiently implemented, or none exist, such as in the case of PA entry fees. Without the project, it is very likely that this will continue to be the case with limited biodiversity conservation benefits.

108. The strategy to deliver multiple global environmental benefits (Component 2), is cost-effective as it will ensure the effective inter-institutional cooperation between national and local environmental authorities for: a) monitoring the conservation and sustainable use of biodiversity in at least three PAs; b) the reduction of contamination from unsustainable agriculture, cattle ranching, and household and urban sources; and c) the control of invasive species. Under the business-as-usual scenario, the delivery of multiple global environmental benefits (i.e., conservation and sustainable use of biodiversity of global importance) will remain unlikely and will prove to be costly over time, as efforts to reduce threats to PAs and PWII will continue to be isolated efforts.

2.8. Sustainability

Environmental sustainability

109. The ecological sustainability of the project will be achieved through the implementation of actions to enable the effective conservation of coastal and inland PWII and the protection of their associated PAs. This will be achieved by improving the management effectiveness of three PWII and the updating of their management plans with the participation of multiple stakeholders so that their inputs and perspectives regarding the conservation and sustainable use of biodiversity are taken into account, which is a fundamental aspect for the long-term sustainability for the conservation and sustainable use of biodiversity present in the PWII and their associated PAs. Project actions directed to improving the institutional and individual capacities of the MARN and other relevant institutions within the SIMANA (training, equipment, and information monitoring system) will provide them with the tools that will facilitate short- and long-term decision-making for the sustainability of the project's environmental benefits associated with effective PWII and PA management. The ecological sustainability of project actions will be further improved by the participation of local communities and municipal authorities in the management the PWII and for the protection of key habitat through the rehabilitation of at least 500 ha of dry forest associated with the coastal mangroves. Finally, the establishment of at least three long-term inter-institutional cooperation agreements between national and local environmental authorities will enhance surveillance and control and allow the reduction of threat to PAs and biodiversity.

Social sustainability

110. Social sustainability will be achieved through the direct participation of multiple local stakeholders (municipalities, local communities, farmers, and the private sector) in the planning and implementation of biodiversity conservation, PWII planning and management, and the reduction of threats to biodiversity, including the presence of invasive species and solid wastes and agrochemicals originating in the buffer areas of the PWII. Through a local governance program that will empower local communities and municipal authorities, they will become the principal enablers of conservation efforts within the landscapes they inhabit. New knowledge and skills will be developed that will allow local communities and municipal authorities the appropriation of actions and their ability to cooperate and coordinate conservation efforts with other stakeholders beyond project completion. Social sustainability will also be achieved through the long-term economic opportunities (e.g., employment) that result from the tourism-related activities that will be implemented by the project to enhance the financial sustainability. Additionally, the reduction of contamination of the wetlands and the control of invasive species will have a positive over their well-being communities that live within or surrounding the PWII, and the income of local groups that depend of the use of the associated natural resources (e.g., fishermen and craftswomen). Finally, gender aspects have been incorporated into the project design to ensure the equitable distribution of project benefits among men and women.

Institutional sustainability

111. The basis for institutional sustainability will be accomplished through the strengthening of the capacity of MARN staff to improve the management effectiveness of the PWII of El Salvador. This will include improved skills to design, implement, monitor, and enforce biodiversity conservation and protection within the PWII and their associated PAs. MARN's institutional capacity will be strengthened at the headquarter- and PWII levels through training and by providing its staff with specific tools to improve planning, management, and enforcement (e.g., updated management plans for three PWII; wetland staff equipped to face climate change threats; and updated wetlands inventory for El Salvador and information system to support decision-making). Strengthened working relationships through inter-institutional cooperation agreements to reduce threats to biodiversity will provide MARN with the capacity to develop long-term strategies for PWII management and reinforce the agency as the leading national institution for the conservation of biological diversity. At the local level, municipalities (Municipal Environmental Units – MEU) will also be strengthened through skills improvement and

participatory PWII planning and management, and through the availability of tools such as protocol to reduce contamination from agrochemicals, livestock waste, and household and urban solid wastes and standards in place to regulate human activities within their jurisdictions.

Financial sustainability

112. Financial sustainability will be achieved principally through the development of sustainable financial mechanisms to increase the level of funding for three PWII. These will include: a) economic environmental compensation from local development projects that alter the surrounding environment to support PWII management; b) business plans for new and existing wetland PAs; and c) visitor entrance fee scheme and PPP to increase revenues from tourism. This strategy will diversify PWII funding, which currently depends mostly on limited central government budgets, and will contribute to reducing the financial gap of three PWII and providing more stable medium- and long-term financial resources. The financial sustainability of the project also lies in the economic benefits to local farmers as a result of the implementation of BMPs for the management of agricultural wastes in three PWII, including farms that are run by women.

2.9. Replicability

113. The project will have an impact on various levels. At the country level, the project will be replicated in other PWII around the country where biodiversity, including species and ecosystems of global importance, are also under pressure. In particular, the project will generate knowledge and lessons learned regarding PA planning and management, the reduction of contamination, the control of invasive species, and the reduction in habitat degradation. At the municipal level, knowledge and lessons learned regarding the sustainable management of PWII, including participation in inter-institutional agreements for managing invasive species and the development of standards to regulate human activities that affect the PWII (agrochemicals, livestock waste, and household and urban solid wastes) also have the potential to be replicated in other municipalities around the country where PWII are present. At the farm level, best management practices of agricultural and cattle ranching wastes will be documented so that these will be available for other farmers of the prioritized municipalities and other around El Salvador.

114. The project will also have the potential to be replicated and provide lessons learned at the regional level. Similar initiatives are in process in other countries of Latin America and the Caribbean where similar PA projects, including protected wetlands, are being implemented (e.g., Costa Rica and Nicaragua). The project will make use of the tools made available by UNDP-GEF (i.e., information networks, forums, and documentation and publications) for their dissemination. Project costs for disseminating knowledge and lessons learned are \$5,000 USD (an average of \$1,250 per year, including GEF and co-financing funds) and have been properly budgeted as part of the project's monitoring and evaluation (M&E) plan.

3. STRATEGIC RESULTS FRAMEWORK AND GEF INCREMENT

3.1. Incremental Cost Analysis

Global and National objectives

115. The project will contribute to the creation of new PWII and the improved management of existing protected wetlands enhancing the conservation and sustainable use of biodiversity and the maintenance of ecosystem services. Although efforts are currently underway (baseline) to achieve this goal, additional efforts are still required. The institutional and individual capacity and tools to effectively manage PWII will still need to be strengthened, and additional financial resources are required for their sustainability. Under the baseline scenario, PWII will remain threatened and the management effectiveness of the protected wetlands will remain weak. The GEF alternative will: a) mitigate the prevailing threats and ensure the effective conservation and sustainable management of El Salvador's PWII by having in place and expanded protected wetland coverage and strengthened institutional and individual capacities, and b)

address threats to biodiversity, including the presence of invasive species and solid waste and agrochemicals originating in the buffer areas of the PWII.

116. The project will contribute to the protection of globally, regionally, and nationally endangered and vulnerable species. Globally important species include the American crocodile (*Crocodylus acutus*) and sea turtles, including the hawksbill sea turtle (*Eretmochelys imbricata*), the green sea turtle (*Chelonia mydas*), the olive ridley sea turtle (*Lepidochelys olivacea*), and the leatherback sea turtle (*Dermochelys coriacea*). Regionally vulnerable migratory birds include the Buff-breasted Sandpiper (*Tryngites subruficollis*) and the Yellow-naped Parrot (*Amazona auropalliata*). Nationally threatened and endangered species include the snail kite (*Rostrhamus sociabilis*), the wood stork (*Mycteria americana*), the muscovy duck (*Cairina moschata*), the anhinga (*Anhinga anhinga*), the least bittern (*Ixobrychus exilis*), the pinnated bittern (*Botaurus pinnatus*), the cichlid (*Cichlasoma guija*), the frog (*Plectrohyla guatemalensis*), and the spider monkey (*Ateles geoffroyi*), which is the only primate living in El Salvador. Other species include the bivalves *Nephronaias* sp. and *Mycetopoda subsinuata*, as well as mollusks from the Golfo de Fonseca islands, some of which are only found in that part of the country; and the Pacific seahorse (*Hippocampus ingens*), a vulnerable species. The project will contribute to the conservation and sustainable use of tree species such as mahogany (*Swietenia microphylla*), cedar (*Cedrela salvadorensis* and *C. odorata*), mangroves (*Rhizophora mangle*, *Laguncularia racemosa*, and *Avicennia* spp.), and the freshwater mangrove (*Bravaisia integerrima*), a nationally endangered species.

117. The project will also contribute to the protection of habitat for numerous globally important species, including estuarine vegetation and beaches used by sea turtles for nesting, and wetlands and seasonal flooded areas that serve as feeding and resting areas for significant concentrations of migratory and local waterfowl. The Olomega Lake PWII has been reported to serve as habitat for more than 8,000 individuals of waterfowl, most of them belonging to the Anatidae family (e.g., *Dendrocygna autumnalis*, *D. bicolor*, *Anas discors*, *A. clypeata*, *A. americana*, *Aythya affinis*, *Cairina moschata*, and *Oxyura jamaicensis*). In the El Bajon Island, Jiquilisco Bay Complex PWII, the project will contribute to the protection of the only nesting colony of the black skimmer (*Rynchops niger*) in El Salvador; this island also serves as an important site for the reproduction of the American oystercatcher (*Haematopus palliatus*).⁴⁴ Similarly, the project will contribute to the protection of the seasonally saturated forest present in the Normandía PA (Jiquilisco Bay Complex PWII), which serves as the last refuge for the spider monkey (*Ateles geoffroyi*) in the country. In the Jiquilisco Bay Complex PWII, the project will contribute to the conservation and sustainable use of 18,270 ha of mangroves, which provide food, and shelter, and serve as breeding and nurturing area for many species of crustaceans, mollusks, and fish. The mangrove forest contributes to maintaining the productivity of the coastal waters, and to sustaining the industrial and artisanal fisheries of El Salvador.

118. The wetlands function as reservoirs of water and areas of reproduction for numerous fish species, some of which are of significant importance for local economies. Species such as the tilapia (*Oreochromis* spp.), the cichlid (*Parachromis managuense*), the characid (*Astyanax aeneus*), and the catfish (*Arius guatemalensis*) are commonly sold by women in local markets or nearby urban areas.⁴⁵ Finally, the wetlands buffer the effects of aquatic contamination and extreme climatological events, and in the case of the mangroves, they help to control coastal erosion.

119. To assess the project impact on the conservation of biodiversity of global importance, the project design includes the monitoring of key indicator species in four (4) PAs in the Jiquilisco Bay and Jocotal Lagoon HPII Complex, as follows: a) Normandía and Chaguantique PA: *Amazona auropalliata*, *Ateles*

⁴⁴ MARN/AECID. 2004. Complejo Bahía de Jiquilisco. Propuesta de Sitio RAMSAR. El Salvador;

⁴⁵ MARN. 2012. Ficha Informativa de los Humedales RAMSAR: ANP Jocotal. El Salvador.

geoffroyi; b) El Tercio PA: *Crocodylus acutus*; c) San Sebastián Island (Jiquilisco Bay Area): *Andara grandis*, *Amazona auropalliata*, *Eretmochelys imbricata*, and *Crocodylus acutus*; and d) Jocotal Lagoon Area: *Amazona auropalliata* and *Crocodylus acutus*.

120. By project's end the following global environmental benefits will be delivered:

- Three (3) new MUPAs covering 37,709.46 ha.
- Continued presence of key indicator species in four (4) PAs in the Jiquilisco Bay Complex and Jocotal Lagoon PWIIs.
- Reduced threats to the three prioritized PWIIs, including: a) reduction by 50% in the amount of solid waste accumulated in the Jiquilisco Bay PWII; b) removal of 2,000 tons/year-wetland of water hyacinth (*Eichornia crassipes*) from the Olomega Lagoon and Jocotal Lagoon PWII; and c) reduction of the abundance of the cormorant duck (*Phalacrocorax brasilianus*) in the Olomega Lagoon, the Jocotal Lagoon, and the Jiquilisco Bay PWII.
- Stable coverage of mangroves (18,720 ha) in the Jiquilisco Bay PWII and associated freshwater lagoons.
- 500 ha of rehabilitated dry forest that serve as key habitat for migratory birds and other species associated with the mangroves restore ecologic functions and increase ecosystem productivity.

Baseline Scenario

121. Under the “business as usual” scenario, important programs will be developed; however, these programs alone will not overcome the barriers that currently prevent the effective conservation and sustainable use of biodiversity and the maintenance of ecosystem services of the PWII of El Salvador. The baseline programs are divided into two areas, which are in line with the project's two outcomes. These two areas of work are described below and are planned for the 2016-2020 time period.

122. **Protected wetland coverage and PWII management.** Existing and planned investments for baseline programs and activities for the 2016-2020 time period are estimated at \$7,130,666 USD, which includes: a) \$1,130,666 USD (\$282,666.50/year) to cover operational costs (salaries, offices, equipment, other) for the management of the country's PWII through the MARN's Wetlands Unit; and b) \$6,000,000 USD from MITUR as part of a loan from the IADB) that contribute to increasing income and employment generated by the tourism industry in the coastal areas of the La Libertad and Jiquilisco departments.

123. **Addressing threats to biodiversity in PWII.** Existing and planned investments for baseline programs and activities for the 2016-2020 time period are estimated at \$20,000,000 USD. Baseline activities include and investment of \$20,000,000 USD as part of the Fomilenio2 project to be implemented through the STPP.

GEF Alternative to Generate Global Benefits

124. Despite the important contribution of the existing and planned baseline programs and projects, they will not be sufficient for ensure the conservation and sustainable use of biodiversity new and existing PWII. A **GEF alternative scenario** will help to remove the barriers that prevent the effective conservation and sustainable use of biodiversity and the maintenance of ecosystem services through the creation of new PWII and the improved management of existing protected wetlands. A description of the GEF alternative scenario follows.

125. The alternative GEF scenario will **expand protected wetland coverage and will strengthen institutional and individual capacities for the effective management of PWII**. Incremental financing will be in the amount of \$2,250,000 USD; \$500,000 USD will be provided by the GEF and \$1,750,000

USD will be provided by co-financing sources. Co-financing for this project component will be provided by the MARN (\$1,745,250 USD) and UNDP (\$4,750 USD).

126. Additionally, the alternative GEF scenario **will address threats to biodiversity, including the presence of invasive species and solid waste and agrochemicals originating in the buffer areas of the PWII**. Incremental financing will be in the amount of \$8,306,346.55 USD; \$1,587,410 USD will be provided by the GEF and \$6,718,936.55 USD will be provided by co-financing sources. Co-financing for this project component will be provided by FIAES (\$2,707,500 USD), GIZ (\$1,425,000 USD), ISCOS (\$1,520,000 USD), MARN (\$1,061,686.55 USD), and UNDP (\$4,750 USD).

127. Project management costs amount to \$550,101 USD, out of which GEF will provide \$104,371 USD and the co-financing sources will provide \$445,730 USD.

128. System Boundary: The GEF alternative will directly benefit three PWII located on the southeastern coast of the country: the Jocotal Lagoon (4,479 ha), the Jiquilisco Bay Complex (63,500 ha), and the Olomega Lake (7,557 ha). In addition, the project will help protect 37,709.46 new ha of wetlands, increasing the representativeness of the wetland ecosystems in the NPAS. It will also address threats to PWII (e.g., invasive species, climate change, and contamination) and will increase and diversify the resources for their financial sustainable in order to improve management effectiveness and promote their conservation and sustainable use. Finally, by strengthening the institutional and individual capacities of the MARN, MAG, and other national agencies and updating the National Wetlands Inventory, the project will have an impact on all PWII and other wetlands around the country.

129. Incremental costs summary: The incremental cost matrix presented below summarizes baseline costs and incremental activity costs for each project outcome. The total baseline amounts to **\$27,130,666 USD**. The costs of the incremental activities required to contribute to global benefits include **\$2,191,781 USD** to be funded by the GEF and **\$8,914,666.55 USD** to be provided by co-financers, for a total of **\$11,106,447.55 USD**. All project co-financers have stated their commitment to the project through written signed letters.

130. In summary, the GEF Alternative has a total cost of **\$38,237,113.55 USD**, 5.73% of which will be provided by GEF (excluding PPG resources). A summary of the GEF Alternative follows.

	Baseline (US\$)		Alternative		Increment (US\$)			
Outcome 1: Expanded protected wetland coverage and strengthened institutional and individual capacities for the effective management of PWII.	MARN: Wetlands Unit	1,130,666.00	GEF	500,000.00	GEF	500,000.00		
			Co-financing	1,750,000.00	Co-financing	1,750,000.00		
	MITUR: IADB loan	6,000,000.00	MARN	1,745,250.00				
			UNDP	4,750.00				
			Baseline	7,130,666.00				
Subtotal baseline	7,130,666.00	Subtotal alternative	9,380,666.00	Subtotal increment			2,250,000.00	
Outcome 2: Addressing threats to biodiversity, including the presence of invasive species and solid waste and agrochemicals originating in the buffer areas of the PWII.	STPP: Fomilenio2 project	20,000,000.00	GEF	1,587,410.00	GEF	1,587,410.00		
			Co-financing	6,718,936.55	Co-financing	6,718,936.55		
			FIAES	2,707,500.00				
			GIZ	1,425,000.00				
			ISCOS	1,520,000.00				
			MARN	1,061,686.55				
			UNDP	4,750.00				
			Baseline	20,000,000.00				
Subtotal baseline	20,000,000.00	Subtotal alternative	28,306,346.55	Subtotal increment	8,306,346.55			
Project Management	NA		GEF	104,371.00	GEF	104,371.00		
			Co-financing	445,730.00	Co-financing	445,730.00		
					FIAES	142,500.00		
					GIZ	75,000.00		
					ISCOS	80,000.00		
					MARN	147,730.00		
					UNDP	500.00		
					Baseline	0.00		
Subtotal baseline:	0.00	Subtotal alternative	550,101.00	Subtotal increment:	550,101.00			
TOTAL			Total GEF	2,191,781.00	Total GEF	2,191,781.00		
			Total Co-financing	8,914,666.55	Total Co-financing	8,914,666.55		
			Total Baseline	27,130,666.00				

	TOTAL BASELINE	27,130,666.00	TOTAL ALTERNATIVE	38,237,113.55	TOTAL INCREMENT	11,106,447.55
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3.2. Project Results Framework

	Indicator	Baseline	Goal (of the Indicator)	Verification Mechanisms	Risks and Assumptions
<p>Project Objective: Promote the conservation and sustainable use of biodiversity and the maintenance of ecosystem services through the creation of new protected wetlands of international importance (PWII) and the improved management of existing protected wetlands.</p>	Coverage (ha) of the National System of Protected Areas resulting from the creation of three (3) new multiple-use protected areas (MUPAs)	– 95,785.61 ha	– 133,495.07 ha (37,709.46 new ha)	<ul style="list-style-type: none"> – Official gazette – Technical reports and publications of the the MARN – Project monitoring and evaluation reports – National Registration Center (CNR) cadastral records 	<ul style="list-style-type: none"> – There is a local and national commitment to create three new multiple-use PAs – Environmental variability, including climate change within normal ranges – Effective protection and control measures – Sampling efforts are optimal
	Presence of key indicator species in four (4) PAs in the Jiquilisco Bay and Jocotal Lagoon HPPI Complex in the lower watershed of the San Miguel Río Grande	<ul style="list-style-type: none"> – Normandía and Chaguantique PA: <i>Amazona auropalliata</i>, <i>Ateles geoffroyi</i> – El Tercio PA: <i>Crocodylus acutus</i> – Jiquilisco Bay Area (includes San Sebastián Island): <i>Andara grandis</i>, <i>Amazona auropalliata</i>, <i>Eretmochelys imbricata</i> and <i>Crocodylus acutus</i> – Jocotal Lagoon Area: <i>Amazona auropalliata</i>, <i>Crocodylus acutus</i> 	<ul style="list-style-type: none"> – Normandía and Chaguantique PA: <i>Amazona auropalliata</i>, <i>Ateles geoffroyi</i> – El Tercio PA: <i>Crocodylus acutus</i> – Jiquilisco Bay Area (includes San Sebastián Island): <i>Andara grandis</i>, <i>Amazona auropalliata</i>, <i>Eretmochelys imbricata</i> and <i>Crocodylus acutus</i> – Jocotal Lagoon Area: <i>Amazona auropalliata</i>, <i>Crocodylus acutus</i> 	<ul style="list-style-type: none"> – Biological censuses and field notes – Monitoring reports/databases 	
	Change in the management effectiveness of three (3) PWIIs measured through the METT scorecard	<ul style="list-style-type: none"> – Jiquilisco Bay PWII: 49% – Olomega Lake PWII: 33% – Jocotal Lagoon PWII: 31% 	<ul style="list-style-type: none"> – Jiquilisco Bay PWII: 59% – Olomega Lake PWII: 43% – Jocotal Lagoon PWII: 41% 	<ul style="list-style-type: none"> – Updated METT – Project monitoring and evaluation reports: PIR/APR, mid-term and final evaluations 	<ul style="list-style-type: none"> – Interest is maintained by the Government of El Salvador, local stakeholders, and the productive sectors to improve the management of the PAs – Stable national and international economic conditions
	Change in the financial sustainability of three (3) PWIIs according to that established through the total average score in the UNDP/GEF Financial Sustainability Scorecard	<ul style="list-style-type: none"> – Legal, regulatory, and institutional framework: 30% – Business planning and tools for managing cost-effectiveness: 8% – Tools for income generation and allocation: 17% – Total: 20% 	<ul style="list-style-type: none"> – Legal, regulatory, and institutional framework: 46% – Business planning and tools for managing cost-effectiveness: 42% – Tools for income generation and allocation: 34% – Total: 41% 	<ul style="list-style-type: none"> – Updated Financial Sustainability Scorecard – Project monitoring and evaluation reports: PIR/APR, mid-term and final evaluations 	

<p>Outcome 1: Expanded protected wetland coverage and strengthened institutional and individual capacities for the effective management of PWIIs.</p>	<p>Representativeness (%) of the wetland ecosystems in the National System of Natural Protected Areas by wetland type</p>	<p>– X% (The baseline and target will be determined during the first year of project implementation using LIDAR images obtained as part of the MARN cofinancing)</p>	<p>– Baseline + X%</p>	<p>– GIS databases and maps – Technical reports and scientific publications – Executive decrees declaring PAs</p>	<p>– There is willingness by the decision-makers to declare new wetland PAs</p>
	<p>Number of new wetland PAs that form part of the National System of Natural Protected Areas</p>	<p>– Zero (0)</p>	<p>– Three (3): <u>1. Jiquilisco Bay Islands:</u> 40 islands and the water body surrounding them; <u>2. Olomega Complex:</u> Olomeguita Island, Tierra Blanca, and the La Chiricana or San Antonio Silva area; <u>3. Islas del Golfo de Fonseca Gulf Islands:</u> Four (4) islands (Martín Pérez, Pirigallo or Meanguerita, Ilca, and Isla Periquito islands) and areas surrounding the Meanguera Island</p>	<p>– Proposals for the creation of new wetland PAs – Official gazette</p>	
	<p>Change in the capacity development indicators for the sustainable management of the PWIIs according to the total score of the UNDP-GEF Capacity Development Scorecard</p>	<p><u>National Government</u> - MARN*: 45.24% - MAG**: 54.76% <u>Local Government</u> - Jiquilisco MEU: 30.95% - San Dionisio MEU: 35.71% - Concepción Batres MEU: 28.57% - Jucuarán MEU: 28.57% - El Tránsito MEU: 33.33% - ASIBAHIA: 33.33% <u>Multi-stakeholder platforms</u> - Jiquilisco Bay Territorial Action Group (GAT-CBJ): 40.48%</p> <p>*General Directorate of Ecosystems and Wildlife (DGEVS); Wetlands, Natural Protected Areas, and</p>	<p><u>National Government</u> - MARN*: 66.67% - MAG**: 66.67% <u>Local Government</u> - Jiquilisco MEU: 57.14% - San Dionisio MEU: 57.14% - Concepción Batres MEU: 54.76% - Jucuarán MEU: 57.14% - El Tránsito MEU: 59.52% - ASIBAHIA: 54.76% <u>Multi-stakeholder platforms</u> - Jiquilisco Bay Territorial Action Group (GAT-CBJ): 57.14%</p> <p>* DGEVS; Wetlands, Natural Protected Areas, and Biological Corridor Unit; Resources Protection Unit; DGGA; Environmental Assessment and</p>	<p>– Updated Capacity Development Scorecard updated – Project monitoring and evaluation reports: PIR/APR, mid-term and final evaluations</p>	<p>– National technical staff apply new knowledge and skills in an appropriate manner – There is stability in the human resources within the national agencies that benefit from the capacity-building activities</p>

	Biological Corridor Unit; Resources Protection Unit; General Directorate of Environmental Governance (DGGG); Environmental Assessment and Compliance; General Directorate of Citizen and Municipal Services ** General Directorate of Forest, Watershed, and Irrigation Planning	Compliance; General Directorate of Citizen and Municipal Services ** General Directorate of Forest, Watershed, and Irrigation Planning		
Number of staff from the MARN, the municipalities, the MAG, and local organizations, including women, trained in the sustainable management of the PWII	- MARN: 0 - MAG: 0 <u>Local Government</u> - Jiquilisco MEU: 0 - Puerto El Triunfo MEU: 0 - San Dionisio MEU: 0 - Concepción Batres MEU: 0 - Jucuarán MEU: 0 - El Tránsito MEU: 0 - San Miguel MEU: 0 - Chirilagua MEU: 0 - El Carmen MEU: 0 - Local Environmental Police: 10 - Navy: 0 - ASIBAHIA: 0	- MARN: 20 - MAG: 6 <u>Local Government</u> - Jiquilisco MEU: 2 - Puerto El Triunfo MEU: 2 - San Dionisio MEU: 2 - Concepción Batres MEU: 2 - Jucuarán MEU: 2 - El Tránsito MEU: 2 - San Miguel MEU: 2 - Chirilagua MEU: 2 - El Carmen MEU: 2 - Local Environmental Police: 10 - Navy: 4 - ASIBAHIA: 2	- Minutes and databases from project training events - Project monitoring and evaluation reports: PIR/APR, mid-term and final evaluations	
Change in the financial gap (USD) to cover the basic management costs of the three (3) PWII	- Jiquilisco Bay PWII: \$222,160 - El Jocotal Lagoon PWII: \$173,199 - Olomega Lagoon PWII: \$244,677	- Jiquilisco Bay PWII: \$166,620 - HPII Laguna El Jocotal: \$129,899 - Olomega Lagoon PWII: \$183,508 (Reduction of 25% in each of the three cases)	- Updated Financial Sustainability Scorecard - Annual financial balances - Project monitoring and evaluation reports: PIR/APR, mid-term and final evaluations	- Stable national and international economic conditions allow a sustained flow of new resources - Effective capture and channeling of new resources to finance PWII management, including agreement by MARN that new revenues from gate
Number of environmental compensation agreements established	- 0	- 5	- Signed agreements - Execution reports - Technical documents (economic valuations, analysis of protocols)	

	Total annual revenue generation for three (3) PWIIs disaggregated by source	<ul style="list-style-type: none"> - Environmental economic compensation: \$0 - Entry fees for visitors: \$0 - PPP: \$0 	<ul style="list-style-type: none"> - Environmental economic compensation: \$100,000 - Entry fees for visitors: \$30,000 - PPP: \$30,000 	<ul style="list-style-type: none"> - Financial Sustainability Scorecard updated - Annual financial balances - Project monitoring and evaluation reports: PIR/APR, mid-term and financial evaluations 	<ul style="list-style-type: none"> fees and PPPs can be fully retained by the individual PAs in which they are generated. - Income from compensation is also reinvested inside the target PAs and includes sufficient surplus for proactive management of PAs beyond what is needed to prevent negative impacts from new developments.
Outputs:					
<p>1.1. Three (3) new multiple-use PAs gazetted: a) Jiquilisco Bay wetland (40 islands and surrounding waters); b) Islas de Golfo de Fonseca (Martín Pérez Island, Pirigallo or Meanguerita Island, Ilca Island, Periquito Island and part of the surroundings of Meangueta Island); c) Olomega Complex (Olomeguita Island, Tierra Blanca, and sectors of the La Chiricana or San Antonio Silva).</p> <p>1.2. Management plans for up to three (3) PWIIs updated or developed.</p> <p>1.3. Wetlands inventory for El Salvador is updated.</p> <p>1.4. The institutional and individual capacities of the MARN and other relevant institutions within the SIMANA (municipalities and the MAG) strengthened, contributing to the sustainable management of the PWIIs.</p> <p>1.5. Properly equipped wetland staff and volunteers enable the timely detection and notification of floods and landslides associated with climate change in three (3) PWIIs.</p> <p>1.6. Local governance program empowers local communities and municipal authorities to sustainably manage the PWIIs.</p> <p>1.7. Economic environmental compensation from local development projects that alter the surrounding environment support PWII management.</p> <p>1.8. Business plans for new and existing wetland PAs developed.</p> <p>1.9. Financial mechanisms are validated onsite and serve to increase the level of funding for three (3) PWIIs:</p> <ul style="list-style-type: none"> • Visitor entrance fee scheme piloted and revenues channelized into existing wetland PAs. • PPP increases revenues from tourism in wetland PAs. 					
Outcome 2: Addressing threats to biodiversity, including the presence of invasive species and solid waste and agrochemicals originating in the	Number of inter-institutional cooperation agreements established and operating for the management of the PWIIs.	<ul style="list-style-type: none"> - Three (3) municipal agreements for managing invasive species. 	<ul style="list-style-type: none"> - Three (3) municipal agreements for managing invasive species and solid waste. - Three (3) new agreements with MAG, MOP, and CEL. 	<ul style="list-style-type: none"> - Agreements signed and made official (MARN, MAG, MOP, CEL, and municipalities) - Meeting minutes (attendance list, photographs, and event notes developed) 	<ul style="list-style-type: none"> - There is a will among the parties for inter-institutional cooperation (signing of agreements and implementation) for the management of the PWIIs.

buffer areas of the PWIIs.					– Changes in the municipal administrations involved do not affect the established agreements.
Number of farms implementing best practices for the management of cattle ranching wastes in three (3) PWIIs, including farms run by women.	– 0	– 20		– Reports and field notes/measurements, including information about women’s participation in initiatives to control contamination	– Sampling efforts are optimal
Number of farms implementing best practices for the management of agricultural wastes in three (3) PWIIs, including farms run by women.	– 0	– 60		– Databases of the benefitting farms	– Effective monitoring, control, and surveillance
Solid waste accumulated (kg/ha) in the Jiquilisco Bay PWII	– X (Baseline and target will be established during the first year of the project)	– Baseline - X (a reduction of 50% is estimated)		– Technical reports about the quality of the sites	– Community leaders, NGOs, the private sector, and the municipalities provide support for the control of invasive species
Volume (tons/year) of water hyacinth (<i>Eichornia crassipes</i>) removed from the Olomega Lagoon and Jocotal Lagoon PWIIs	– 0	– 2,000 tons/year per wetland		– Reports and field notes/measurements	– Project annual technical reports
Abundance (number of individuals) of the cormorant duck (<i>Phalacrocorax brasilianus</i>) in the Olomega Lagoon, the Jocotal Lagoon, and the Jiquilisco Bay PWIIs	– Jocotal Lagoon PWII: X – Jiquilisco Bay PWII: X – Olomega Lagoon PWII: X (Baseline and target will be established during the first year of the project)	– Jocotal Lagoon PWII: Baseline - X – Jiquilisco Bay PWII: Baseline - X – Olomega Lagoon PWII: Baseline - X		– Reports and field notes/measurements	– Databases – Project technical reports

	Coverage of mangroves in the Jiquilisco Bay PWII and associated freshwater lagoons	– 18,720 ha	– 18,720 ha	<ul style="list-style-type: none"> – Remote sensing data – Maps – Technical documents (FIR) 	<ul style="list-style-type: none"> – There is a commitment at the local level and by the productive sectors for the conservation and sustainable use of mangroves in the Jiquilisco Bay PWII and associated freshwater lagoons – Environmental variability, including climate change, is within the normal range – Effective control and surveillance
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- Outputs:**
- 2.1. Six (6) inter-institutional cooperation agreements (MARN, MAG, CEL, MOP, and the municipalities) established, including conservation and management committees for monitoring the conservation and sustainable use of biodiversity in at least three (3) PAs of the Jocotal and the Jiquilisco Bay PWIIs.
 - 2.2. Program for the prevention, reduction, and control of contamination stemming from agricultural activities (e.g., agrochemicals and manure) and human settlements (solid wastes) in two PWIIs (Jiquilisco Bay and Jocotal Lagoon) and their buffer areas defined jointly with the municipalities, local communities, and the private sector.
 - 2.3. Incentives program, including green certification for reduced use of agrochemicals in sugar cane cultivation and sustainable livestock management, promotes biodiversity-friendly agricultural practices and water-related resource use in the buffer areas of five (5) PAs of the Jocotal Lagoon and the Jiquilisco Bay PWIIs.
 - 2.4. Standards in place to regulate human activities that affect the PWIIs.
 - 2.5. Information monitoring system in place facilitates decision making to reduce the threats to three (3) PWIIs and articulated with the EIS of the MARN.
 - 2.6. Protocol developed to reduce the threats to biodiversity in PWIIs, including contamination from agrochemicals, livestock waste, and household and urban solid waste.
 - 2.7. Strategies for controlling invasive species (water hyacinth [*Eichornia crassipes*] and the Neotropic cormorant [*Phalacrocorax brasilianus*]) piloted in three (3) PWIIs and their buffer areas: Jiquilisco Bay Complex, the Olomega Lake, and the Jocotal Lagoon.
 - 2.8. Participatory plans developed for the conservation and sustainable use of mangroves and floodplain forest in the Jiquilisco Bay and associated freshwater lagoons in the lower Rio Grande de San Miguel watershed.
 - 2.9. Participatory rehabilitation of at least 500 ha of dry forest associated with mangroves allows the protection of key habitat for migratory species.

4. TOTAL BUDGET AND WORKPLAN

Award ID:	00088358	Project ID(s):	00095068
Award Title:	El Salvador: Conservation, sustainable use of biodiversity, and maintenance of ecosystem services in protected wetlands of international importance.		
Business Unit:	El Salvador		
Project Title:	Conservation, sustainable use of biodiversity, and maintenance of ecosystem services in protected wetlands of international importance.		
PIMS no.	5257		
Implementing Partner (Executing Agency)	Ministry of the Environment and Natural Resources (MARN)		

GEF Outcome/Atlas Activity	Responsible Party/Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Total (USD)	See Budget Note:
COMPONENT 1:	MARN	62000	GEFTF	71300	Local Consultants	37,350	37,350	19,800		94,500	1
				71400	Contractual Services Individuals	13,440	13,440	13,440	13,440	53,760	2
				71600	Travel	4,750	4,750	4,750	4,750	19,000	3
				72100	Contractual Services Companies	46,250	46,250	11,250	11,250	115,000	4
				72200	Equipment and Furniture	28,500				28,500	5
				72300	Materials & Goods	10,250	10,250	10,250	10,250	41,000	6
				72400	Communic. & Audio Visual Equip	2,000	2,000	2,000	2,000	8,000	7
				72500	Supplies	2,310	2,310	2,310	2,310	9,240	8
				74200	Audio Visual & Print Production Cost	2,500	2,500	15,500	2,500	23,000	9
				75700	Training, Workshops and Confer	43,000	43,000	12,500	9,500	108,000	10
								Total Component 1	190,350	161,850	91,800
COMPONENT 2 (INCLUDES MONITORING AND EVALUATION COSTS)	MARN	62000	GEFTF	71300	Local Consultants	103,120	103,120	79,320	61,120	346,680	11
				71400	Contractual Services Individuals	37,380	37,380	37,380	37,380	149,520	12
				71600	Travel	18,500	18,500	18,500	18,500	74,000	13
				72100	Contractual Services Companies	35,000	25,000	12,500	12,500	85,000	14
				72200	Equipment and Furniture	70,000				70,000	15

				72300	Materials & Goods	120,000	120,000	120,000	120,000	480,000	16
				72400	Communic. & Audio Visual Equip	3,750	3,750	3,750	3,750	15,000	17
				72500	Supplies	5,000	5,000	5,000	5,000	20,000	18
				72800	IT Equipment	49,400				49,400	19
				73400	Rental & Maintenance of other Equipment	1,800	1,800	1,800	1,800	7,200	20
				74200	Audio Visual & Print Production Cost	15,000	37,500	2,500	2,500	57,500	21
				74500	Miscellaneous Expenses	1,921	1,921	1,921	1,922	7,685	22
				75700	Training, Workshops and Confer	50,500	50,500	25,500	25,500	152,000	23
					Sub-Total Component 2	511,371	404,471	308,171	289,972	1,513,985	
				71200	International Consultants		11,550		14,700	26,250	24
				71300	Local Consultants	1,750	8,050	1,750	10,325	21,875	25
				71600	Travel		5,200		5,250	10,450	26
				72500	Supplies		50		50	100	27
				74100	Professional Services	2,740	2,740	2,740	2,740	10,960	28
				75700	Training, Workshops and Confer	1,385	885	385	1,135	3,790	29
					Sub-Total M&E	5,875	28,475	4,875	34,200	73,425	
					Total Component 2	517,246	432,946	313,046	324,172	1,587,410	
PROJECT MANAGEMENT	MARN	62000	GEFTF	71400	Contractual Services Individuals	14,700	14,700	14,700	14,700	58,800	30
				72200	Equipment and Furniture	4,000	350	350	350	5,050	31
				72400	Communic. & Audio Visual Equip	950	950	950	950	3,800	32
				72500	Supplies	430	430	430	431	1,721	33
				74598	Direct Project Costs (DPC)	8,750	8,750	8,750	8,750	35,000	34
					Total Project Management	28,830	25,180	25,180	25,181	104,371	
				PROJECT TOTAL		736,426	619,976	430,026	405,353	2,191,781	

Total Budget Summary

Donor Name	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Total (USD)
GEF	736,426.00	619,976.00	430,026.00	405,353.00	2,191,781.00
FIAES	712,500.00	712,500.00	712,500.00	712,500.00	2,850,000.00
GIZ	500,000.00	500,000.00	500,000.00		1,500,000.00
ISCOS	533,333.33	533,333.33	533,333.34		1,600,000.00
MARN	738,666.64	738,666.64	738,666.63	738,666.64	2,954,666.55
UNDP	2,500.00	2,500.00	2,500.00	2,500.00	10,000.00
TOTAL	3,223,425.97	3,106,975.97	2,917,025.97	1,859,019.64	11,106,447.55

Project Budget Notes

Atlas Category	Atlas Code	Budget Notes
Outcome 1. Expanded protected wetland coverage and strengthened institutional and individual capacities for the effective management of PWII.		
1. Local Consultants	71300	<p>a) Social/Policy Expert: design and provide technical support to a local governance program to empower local communities and municipal authorities to sustainably manage the PWII. Total cost: \$17,550; 26 weeks at \$675/week (years 1 and 2)</p> <p>b) PA Finance Expert: develop procedures and provide technical support for ensuring the economic environmental compensation from local development projects support PWII management. Total cost: \$12,150; 18 weeks at \$675/week (years 1-3).</p> <p>c) Legal Expert. Provide legal support to ensure that economic environmental compensation from local development projects support PWII management. Total cost: \$12,150; 18 weeks at \$675/week (years 1-3)</p> <p>d) PA Finance Expert: develop business plans for new (3) and existing (4) wetland PAs. Total cost: \$17,550; 26 weeks at \$675/week (years 1 and 2).</p> <p>e) PA Finance Expert: design pilot visitor entrance fee scheme and provide technical support for the channelization of revenues into existing wetland Pas provide technical support. Total cost: \$17,550; 26 weeks at \$675/week (years 1-3).</p> <p>f) PA Financial/Tourism Expert: Establish PPP to increase revenues from tourism in wetland PAs. Total cost: \$17,550; 26 weeks at \$675/week (years 1-3).</p>
2. Contractual Services - Individuals	71800	<p>a) PA Planning Expert/Technical Project Coordinator. Support to expanding protected wetland coverage and strengthening institutional/individual capacities for the effective management of PWII. Total cost: \$42,000; 12 months at \$3,500/month.</p> <p>b) Accounting-Finance Specialist. Responsible for financial management of the project, accounting, purchasing, and reporting. Total cost: \$11,760; 6 months at \$1,960/month.</p>
3. Travel	72300	<p>a) DSA for PA Planning Expert/Technical Project Coordinator. Total cost: \$9,000; \$75/day (120 days during 4 years).</p> <p>b) Travel costs related to expanding protected wetland coverage and strengthening institutional/individual capacities for the effective PWII management. Total cost: \$10,000; \$2,500/year (years 1-4).</p>
4. Contractual Services - Companies	72100	<p>a) Update the wetlands inventory for El Salvador (includes publication). Total cost: \$70,000 (years 1 and 2).</p> <p>b) Strengthen institutional and individual capacities of the MARN and other relevant institutions of the SIMANA. Total cost:</p>

		\$45,000 (years 1-4).
5. Equipment and Furniture	72200	a) Equipment for wetland staff and volunteers to face climate change in three (3) PWII. Total cost: \$28,500, \$9,500/PWII (year 1).
6. Materials & Goods	72300	a) Material and goods for the piloting of a visitor entrance fee scheme, including the construction of two visitor welcome centers: Jiquilisco Bay Complex PWII and the Jocotal Lagoon PWII. Total cost: \$41,000; \$10,250/year for 4 years.
7. Communic. & Audio Visual Equip	72400	a) Communications related to expanding protected wetland coverage and strengthening institutional/individual capacities for the effective PWII management. Total cost: \$8,000; \$2,000/year for 4 years.
8. Supplies	72500	a) Office and field supplies related to expanding protected wetland coverage and strengthening institutional/individual capacities for the effective PWII management. Total cost \$9,240; \$2,310/year for 4 years.
9. Audiovisual & Print Production Cost	74200	a) Publications of updated management plan for three (3) PWII. Total cost: \$6,000; \$2,000/plan (year 3). b) Training materials related to a local governance program to empower local communities and municipal authorities to sustainably manage the PWII. Total cost: \$10,000/year; \$2,500/year (year 1-4). c) Publications of business plan for new (3) and existing (4) wetland PAs. Total cost: \$7,000; \$1,000/plan (year 3).
10. Training, Workshops and Confer	75700	a) Workshops and meetings for the creation of three new MUPAs. Total cost: \$18,000, \$9,000/year (years 1 and 2). a) Workshops and meetings for the participatory update of management plans for up to three (3) PWII. Total cost: \$18,000, \$9,000/year (years 1 and 2). b) Training events for wetland staff and volunteers to timely detect and notify about floods/landslides associated with climate change in three (3) PWII. Total cost: \$10,000, \$5,000/year (years 1 and 2). c) Training workshops and meetings and consultations related to a local governance program to empower local communities and municipal authorities to sustainably manage the PWII. Total cost: \$38,000; \$9,500/year (years 1-4). d) Workshops and meetings related to the development of business plans for new (3) and existing (4) wetland PAs. Total cost: \$15,000; \$7,500/year (years 1 and 2). d) Workshops and meetings related to establishing PPP to support PWII management. Total cost: \$9,000; \$3,000/year (years 1-3).
Outcome 2. Addressing threats to biodiversity, including the presence of invasive species and solid waste and agrochemicals originating in the buffer areas of the PWII.		
11. Local Consultants	71300	a) Environmental Expert: Support to the development of a program for the prevention, reduction, and control of contamination in two PWII and their buffer areas. Total cost: \$54,600; 78 weeks at \$700/week (years 1-3). b) Environmental Monitoring Expert: periodic data gathering in the three PWIIs (water and soil quality and presence of invasive species). Total cost: \$33,600; 48 weeks at \$700/week (years 1-4) c) Field Assistants (2 per PWII): periodic data gathering in the three PWIIs (water and soil quality and presence of invasive species). Total cost: \$66,240; each of the 6 Field Assistants for 48 weeks at \$230/week (years 1-4) d) Invasive Species Expert: Technical support for the control of invasive species (water hyacinth and the Neotropic cormorant) in three (3) PWII and buffer areas; draft a control and management plan. Total cost: \$44,800; 64 weeks at \$700/week (years 1-4). e) Field Assistants (2 per PWII): control of invasive species (water hyacinth and the Neotropic cormorant) in three (3) PWII and buffer areas. Total cost: \$66,240; each of the 6 Field Assistants for 48 weeks at \$230/week (years 1-4) f) Wetland Conservation Expert: technical support for the development of participatory plans for the conservation and sustainable use of mangroves and floodplain forest. Total cost: \$22,400; 32 weeks at \$700/week (years 1 and 2) g) Ecological Restoration Expert: Technical support for rehabilitation of dry forest associated with mangroves. Total cost: \$33,600; 48 weeks at \$700/year (years 1-4).

		h) GIS Mapping Expert: historical analysis of changes in cover of mangroves and PWII/PA mapping. Total cost: \$25,200; 36 weeks at \$700/week (year 1-2).
12. Contractual Services Individuals	71800	a) PA Planning Expert/Technical Project Coordinator: Address threats to biodiversity, including the presence of invasive species and solid waste and agrochemicals. Total cost: \$126,000; 36 months at \$3,500/month. b) Accounting-Finance Specialist. Responsible for financial management of the project, accounting, purchasing, and reporting. Total cost: \$23,520; 12 months at \$1,960/month.
13. Travel	71600	a) DSA for PA Planning Expert/Technical Project Coordinator. Total cost: \$18,000; \$75/day (240 days during 4 years). b) Travel costs related to addressing threats to biodiversity in PWII. Total cost: \$20,000; \$5,000/year (years 1-4). c) Maintenance (including gas) & Insurance of boats. Total cost: \$36,000; \$9,000/year during 4 years.
14. Contractual Services - Companies	72100	a) Development of an incentives program, including green certification for reduced use of agrochemicals in sugarcane cultivation and sustainable livestock management. Total cost: \$50,000 for 4 years. b) Design an information monitoring system to facilitate decision making to reduce the threats to three (3) PWII. Total cost: \$25,000 (years 1 and 2). c) Construction of covered shelter (hangar) for a barge for the mechanical control of the water hyacinth. Total cost: \$10,000 (year 1).
15. Equipment and Furniture	72200	a) Boat (2). Total cost: \$40,000; \$20,000/unit (year 1). b) Equipment (shotguns and ammunition) for the physical removal of Neotropic cormorant. Total cost: \$30,000 (year 1).
16. Materials & Goods	72300	a) Material and goods for the reduction of contamination stemming from agricultural activities. Total cost: \$60,000; \$15,000/year for 4 years. b) Material and goods for the reduction of contamination stemming from cattle ranching. Total cost: \$60,000; \$15,000/year for 4 years. c) Material and goods for the reduction of contamination stemming from human settlements (solid wastes). Total cost: \$60,000; \$15,000/year for 4 years. d) Material and goods for monitoring of threats to PWIIs. Total cost: \$30,000; \$7,500/year for 4 years. e) Material and goods to support pilot small-scale operations for the production of handicrafts (e.g., baskets and furniture) and paper using water hyacinth. Total cost: \$20,000; \$5,000/year for 4 years. f) Material and goods for the rehabilitation of 500 ha of dry forest associated with mangroves. Total cost: \$250,000; \$62,500/year for 4 years.
17. Communication and audiovisual equipment	72400	a) Communications related to addressing threats to biodiversity in PWIIs. Total cost: \$15,000; \$3,750/year for 4 years.
18. Supplies	72500	a) Office and field supplies related to addressing threats to biodiversity in PWIIs. Total cost \$20,000; \$5,000/year for 4 years.
19. IT Equipment	72800	a) Computer equipment for three (3) PWII. Total cost: \$3,900, \$1,300/unit. b) Printers for three (3) PWII. Total cost: \$1,500, \$500/unit. c) Software for or three (3) PWII. Total cost: \$6,000; \$2,000/PWII. d) Computer equipment for 10 municipalities (information monitoring system). Total cost: \$13,000, \$1,300/unit. e) Printers for 10 municipalities (information monitoring system). Total cost: \$5,000, \$500/unit. f) Software for 10 municipalities (information monitoring system). Total cost: \$20,000, \$2,000/unit.
20. Rental & Maintenance of other Equipment.	73400	Rental of truck in support of reduction of threats to PWII (removal of water hyacinth; six events per year). Total cost: 7,200, \$300/event during four years (includes gas and insurance).
21. Audiovisual & Print Production Cost	74200	a) Publication of the Best Practices Handbook related to contamination stemming from agricultural activities. Total cost: \$10,000 (year 2).

		<p>b) Training materials related to program for the prevention, reduction, and control of contamination. Total cost: \$10,000 (years 1 and 2).</p> <p>c) Publication of a protocol to reduce the threats to biodiversity in PWI. Total cost: \$10,000 (year 2).</p> <p>d) Training materials related to incentives program for reduced use of agrochemicals in sugarcane cultivation and sustainable livestock management. Total cost: \$5,000 (years 1 and 2).</p> <p>e) Training materials related to data gathering, database management, and reporting. Total cost: \$5,000 (years 1 and 2).</p> <p>f) Materials related to training/awareness for participatory plans for the conservation and sustainable use of mangroves and floodplain forest. Total cost: \$10,000 (years 1 and 2).</p> <p>f) Other technical publications related to addressing threats to biodiversity. Total cost: \$7,500, \$2,500/year (years 2-4).</p>
22. Miscellaneous Expenses	74500	a) Miscellaneous expenses related to addressing threats to biodiversity in PWIIs. Total cost: \$7,685 (years 1-4).
23. Training, Workshops and Confer	75700	<p>a) Meetings for the establishment of at least three (3) inter-institutional cooperation agreements (MARN, MAG, CEL, MOP, and the municipalities). Total cost: \$5,000; \$2,500/year (years 1 and 2).</p> <p>b) Workshops, meetings, and training related to a program for the prevention, reduction, and control of contamination. Total cost: \$30,000; \$7,500/year (years 1-4).</p> <p>c) Workshops and meetings for the development of standards to regulate human activities that affect the PWII. Total cost: \$20,000; \$5,000/year (years 1-4).</p> <p>d) Training related to incentives program for reduced use of agrochemicals in sugarcane cultivation and sustainable livestock management. Total cost: \$15,000; \$7,500/year (years 1 and 2).</p> <p>e) Training of MARN and municipal staff in data gathering, database management, and reporting. Total cost: \$15,000; \$7,500/year (years 1 and 2).</p> <p>f) Workshops and meetings for analysis of monitoring information jointly with the MARN's wetland technical staff and municipal environmental authorities. Total cost: \$20,000; \$5,000/year (years 1-4).</p> <p>g) Workshops and meetings for the development of a protocol to reduce the threats to biodiversity in PWII. Total cost: \$15,000; \$7,500/year (years 1 and 2).</p> <p>h) Workshops and meetings for the development, training/awareness, and follow-up and evaluation of participatory plans for the conservation and sustainable use of mangroves and floodplain forest. Total cost: \$32,000; \$8,000/year (years 1-4).</p>
M&E		
24. International Consultants	71200	<p>a) Mid-term project evaluation. Total cost: \$11,550; 3 weeks at \$3,850/week.</p> <p>b) Final project evaluation. Total cost: \$14,700; 3.5 weeks at \$4,200/week.</p>
25. Local Consultants	71300	<p>a) Mid-term project evaluation: Total cost: \$6,300; 3 weeks at \$2,100/week.</p> <p>b) Final project evaluation. Total cost: \$8,575; 3.5 weeks at \$2,450/week.</p> <p>c) Review and systematization of lessons learned and best practices. Total cost: \$3,000; \$750/yr.</p> <p>d) Technical reports on specific issues or areas of activity of the project. Total cost: \$4,000; \$1,000/yr.</p>
26. Travel	71600	<p>a) Travel costs for mid-term evaluation. Total cost: \$5,200.</p> <p>b) Travel costs for final evaluation: Total cost \$5,250.</p>
27. Supplies	72500	Supplies for mid-term (\$50) and final (\$50) evaluations. Total cost: \$100.
28. Professional Services	74100	a) External audit (5). Total cost: \$10,960, \$2,740/yr.
29. Training, Workshops	75700	a) Project Inception Workshop. Total cost \$1,000.

and Confer		b) Mid-term (\$500) and final evaluation (\$750) related workshops. Total cost: \$1,250. c) Project board meetings. Total cost: \$1,540; \$385/yr.
Project Management		
30. Contractual Services Individuals	71800	a) Accounting-Finance Specialist. Responsible for financial management of the project, accounting, purchasing, and reporting. Total cost: \$58,800; 30 months at \$1,960/month.
31. Equipment and Furniture	72200	a) Video beam. Total cost: \$400 b) Digital camera. Total cost: \$200 c) Two (2) computers. Total cost: \$2,600, \$1,300/unit. d) One (1) printer. Total cost: \$450. e) IT supplies & maintenance. Total cost: \$1,400; \$350/year during 4 years.
32. Communic. & Audio Visual Equip	72400	Communications related to project management. Total cost: \$3,800; \$950/year for 4 years.
33. Supplies	72500	Office supplies related to project management. Total cost: \$1,721.
34. Direct Project Costs (DPC)	74598	Estimated costs of Direct Project Services requested by the Government of El Salvador to UNDP for executing services (e.g., procurement, travel) and as requested by the Government of El Salvador through the Letter of Agreement (Annex 8.7). Direct project service costs will be charged at the end of each year based on the UNDP Universal Pricelist (UPL) or the actual corresponding service cost. The amounts indicated are estimations based on the services indicated in Annex 8.6; however, as part of annual project operational planning, the direct project services to be requested during that calendar year would be defined and the amount included in the yearly budgets. As noted these costs would be charged based on actual services provided at the end of the year and reported to the implementing partners (Government of El Salvador). Total cost: \$35,000.

5. MANAGEMENT ARRANGEMENTS

131. The project will be executed following UNDP guidelines for NIM and is an integral part of the UN Development Action Framework (UNDAF) Action Plan (2016-2020) signed between the Government of El Salvador and the UN in May 20, 2015. The signing of the UNDAF constitutes a legal endorsement by the Government of El Salvador.

132. To ensure UNDP's accountability for programming activities and use of resources while fostering national ownership, the appropriate management arrangements and oversight of UNDP programming activities will be established. The management structure will respond to the project's needs in terms of direction, management, control, and communication. The project's structure will be flexible in order to adjust to potential changes during project execution. The UNDP Project Management structure consists of roles and responsibilities that bring together the various interests and skills involved in, and required by, the project.

133. The UNDP will act as the Implementing Entity for this project. As a part of the Steering Committee (SC), UNDP brings to the table a wealth of experience working with the Government of El Salvador in the area of biodiversity conservation, and is well-positioned to assist in both capacity-building and institutional strengthening. The UNDP Country Office (UNDP CO) and UNDP/GEF Regional Coordination Unit (RCU) in Panama will be responsible for transparent practices, appropriate conduct, and professional auditing. Staff and consultants will be contracted according to the established rules and regulations of the United Nations and all financial transactions and agreements will similarly follow the same rules and regulations.

134. The project will be executed by MARN, as the Implementing Partner. Accordingly, MARN will sign the grant agreement with UNDP on behalf of the Government of El Salvador and will be responsible for the coordination and management of the project and will monitor compliance with Work Plans as the basis for project execution. MARN will coordinate work with other institutions collaborating on this project and will be the sole project manager.

135. The Executive Secretary of MARN will serve as the National Project Director. He/she will be assigned to provide general project oversight to the project and will represent the interest of the Government of El Salvador during project implementation. In addition, the Project Coordinator (PC) and will be responsible for coordinating the interaction between the Project Implementation Unit (PIU) and MARN, and other national institutions. Terms of Reference for the PC are included in Annex 8.2 of this Project Document. In addition, the project will support an Accounting-Finance Specialist. The duration of the project will be four (4) years.

5.1. UNDP Support Services

136. UNDP will provide support to the Project Board by carrying out objective and independent project supervision and follow-up duties. Experts of the Environment Programme at the UNDP Regional Services Centre for Latin America and the Caribbean in Panama will participate when necessary in key project meetings, consultations, events, and analysis of technical reports and others.

137. The fee for General Management Support (GMS) for Global Environment Facility Projects is 9.5%. GMS are services which are not directly attributable to project inputs or activities and is charged in programs funded wholly or partially from Other Resources, GMS encompasses general oversight and management functions of UNDP Headquarter and Country Office units, and include the following specific services:

- Project identification, formulation, and appraisal

- Determination of execution modality and local capacity assessment
- Briefing and de-briefing of project staff and consultants
- General oversight and monitoring, including participation in project reviews
- Receipt, allocation and reporting to the donor of financial resources
- Thematic and technical backstopping through Bureaus
- Systems, IT infrastructure, branding, knowledge transfer

Support services for implementation

138. At the request of the Implementing Partner, UNDP will act as a Responsible Party providing support services to implementation. The services and associated direct costs of providing them are identified in the project budget in a relevant budget line and will be charged periodically. These costs are detailed in Annex 8.6 – Description of UNDP Country Office Support Services. For the provision of such services UNDP will apply its own rules and regulations, policies, and procedures.

139. In its capacity as a Responsible Party, UNDP will report to the Implementing Partner for services rendered and shall be entitled to reimbursement of the costs of providing the service as specified in Annex 8-8 – Standard Letter of Agreement Between UNDP and the Government of El Salvador for the Provision of Support Services. These costs will be reflected in the budgets of the Annual Work Plans (AWPs) and will be credited to the UNDP account in accordance with its policies and procedures.

140. MARN will follow the rules and procedures detailed in the UNDP NIM Manual for program execution. The UNDP will provide support to the National Project Director and the PC, in order to maximize the program’s impact as well as the quality of its products. Moreover, it will be responsible for administering resources in accordance with the specific objectives defined in the program Document, and in keeping with the key principles of transparency, competitiveness, efficiency, and economy. The financial management and accountability for the resources allocated, as well as other activities related to the execution of program activities will be undertaken under the direct supervision of the UNDP Country Office.

5.2. Collaborative arrangements with related projects

141. Steps will be taken by the project’s SC to promote the interaction between the implementation team and Project Coordinators who are managing related projects and ensure the coordination and synchronization of efforts as well as promote cross-fertilization, where possible. Collaborative mechanisms with specific projects were outlined in Section 2.3. *Design principles and strategic considerations* of this Project Document.

5.3. Inputs to be provided by all partners

142. The framework for the administrative, technical, and financial execution of the Project is based on the organizational framework of MARN. The execution of the project will be supported by a Technical Coordination Committee; and, as established by MARN. MARN will be part of the project’s SC and will participate technically and operationally in the development of the two components of the Project.

143. Ownership of equipment, supplies, and other properties financed from the contribution shall vest in UNDP. Matters relating to the transfer of ownership by UNDP shall be determined in accordance with the relevant policies and procedures of UNDP.

5.4. Agreement on intellectual property rights and use of logo on the project’s deliverables

144. In order to accord proper acknowledgement to GEF and UNDP for providing funding, the GEF and UNDP logos should appear on all relevant project publications and project hardware, among other items.

Any citation on publications regarding projects funded by UNDP and GEF should also accord proper acknowledgment to both UNDP and GEF.

145. In accordance with standard UNDP procedures, all resources and equipment gained through project support remain the property of UNDP until project closure, at which time these resources may be transferred to MARN. The PC will supervise the correct use and maintenance of these resources and equipment.

5.5. Roles and responsibilities of the parties involved in project management

146. **The Steering Committee (SC)** is the group responsible for making management decisions for the project by consensus when guidance is required by the PC. Responsibilities of the SC include making recommendations for UNDP/Implementing Partner approval of project plans and revisions. In order to ensure UNDP's ultimate accountability, the SC decisions should be made in accordance with standards that ensure development results, best value for the money, fairness, integrity, transparency, and effective international competition.

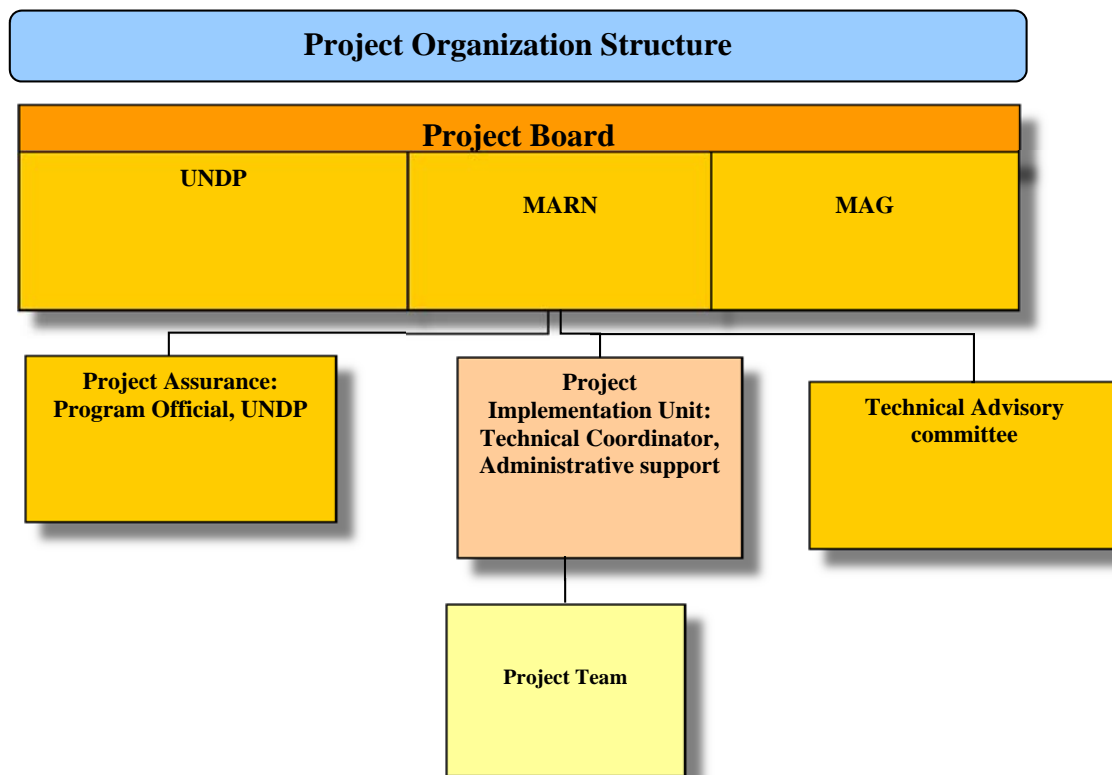
147. The SC is consulted by the PC to make decisions when the PC's tolerances (normally in terms of time and budget) have been exceeded (flexibility). The SC ensures that required resources are committed and arbitrates any conflicts within the project or negotiates a solution to any problems between the project and external entities.

148. The SC will be composed of MARN, UNDP, and MAG. The SC will meet once every six months; however, additional meetings may be scheduled based on the project's needs. The PC and the UNDP CO will be responsible for convening and planning the SC meetings.

149. The **Project Coordinator (PC)** will be contracted by MARN following the principles of transparency and equal opportunities for everybody, and will be financially supported by project funds. The PC will run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints/tolerances laid down by the SC. The PC's prime responsibility is to ensure that the project delivers the outputs specified in this Project Document, to the required standards of quality and within the specified constraints of time and cost. Terms of Reference for the PC are included in Annex 8.2 of this Project Document.

150. The PC will receive support from an Accounting-Finance, which will be financially supported by project funds. Terms of Reference for these support staff are included in Annex 8.2 of this Project Document.

151. **Project Assurance:** Project assurance is the responsibility of each SC member; however, the role can be delegated. The project assurance role supports the SC by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management and that milestones are achieved. Project assurance is independent of the PC; therefore, the SC cannot delegate any of its assurance responsibilities to the PC. The UNDP Environment, Energy, and Risk Management Officer and the UNDP/GEF RCU in Panama will also hold the role of project assurance.



6. MONITORING FRAMEWORK AND EVALUATION

152. Project M&E will be conducted in accordance with the established UNDP and GEF procedures and will be provided by the project team and the UNDP-CO with support from the UNDP/GEF RCU in Panama City. The Project Results Framework in Section 3 provides performance and impact indicators for project implementation along with their corresponding means of verification. The M&E plan includes an inception report, project implementation reviews, annual review reports, mid-term and final evaluations, and audits. The following sections outline the principle components of the M&E plan and indicative cost estimates related to M&E activities. The project's M&E plan will be presented and finalized in the Project Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

Project Inception Phase

153. A **Project Inception Workshop (IW)** will be held within the first three (3) months of project start-up with the full project team, relevant Government of El Salvador counterparts, co-financing partners, the UNDP-CO, and representation from the UNDP-GEF RCU, as well as UNDP-GEF headquarters as appropriate.

154. A fundamental objective of this IW will be to help the project team to understand and take ownership of the project's goal and objectives, as well as finalize preparation of the project's first annual

work plan on the basis of the Project Results Framework and GEF Tracking Tool for Biodiversity (BD-1). This will include reviewing the results framework (indicators, means of verification, and assumptions), imparting additional detail as needed, and on the basis of this exercise, finalizing the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project.

155. Additionally, the purpose and objective of the IW will be to: a) introduce project staff to the UNDP-GEF team that will support the project during its implementation, namely the CO and responsible RCU staff; b) detail the roles, support services, and complementary responsibilities of UNDP-CO and RCU staff in relation to the project team; c) provide a detailed overview of UNDP-GEF reporting and M&E requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), as well as Mid-term and Final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNDP project-related budgetary planning, budget reviews including arrangements for annual audit, and mandatory budget rephasings.

156. The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines and conflict resolution mechanisms. The Terms of Reference (ToR) for project staff and decision-making structures will be discussed, as needed, in order to clarify each party's responsibilities during the project's implementation phase. The IW will also be used to plan and schedule the Tripartite Committee (TC) Reviews.

Monitoring Responsibilities and Events

157. A detailed schedule of project review meetings will be developed by the project management in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: a) tentative timeframes for TC Reviews, SC (or relevant advisory and/or coordination mechanisms); and b) project-related M&E activities.

158. **Day-to-day monitoring** of implementation progress will be the responsibility of the PC based on the project's AWP and its indicators. The PC will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion. The PC will fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the IW with support from UNDP-CO and assisted by the UNDP-GEF RCU. Specific targets for the first-year implementation progress indicators together with their means of verification will be developed at this workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the AWP. Targets and indicators for subsequent years will be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

159. Measurement of impact indicators related to global benefits will occur according to the schedules defined through specific studies that are to form part of the project's activities and specified in the Project Results Framework.

160. **Periodic monitoring** of implementation progress will be undertaken by the UNDP CO through quarterly meetings with the project implementation team, or more frequently as deemed necessary. This will allow parties to take stock of and to troubleshoot any problems pertaining to the project in a timely fashion to ensure the timely implementation of project activities. The UNDP CO and UNDP-GEF RCU, as appropriate, will conduct yearly visits to the project's field sites, or more often based on an agreed upon schedule to be detailed in the project's Inception Report and AWPs to assess first-hand project progress. Any other member of the SC can also take part in these trips, as decided by the SC. A Field

Visit Report will be prepared by the UNDP CO and circulated no less than one month after the visit to the project team, all SC members, and UNDP-GEF.

*161. **Annual monitoring** will occur through the TC Reviews. This is the highest policy-level meeting of the parties directly involved in the implementation of a project. The project will be subject to TC review at least once every year. The first such meeting will be held within the first twelve (12) months of the start of full implementation. The project proponent will prepare an APR and submit it to UNDP CO and the UNDP-GEF regional office at least two weeks prior to the TC for review and comments.*

162. The APR will be used as one of the basic documents for discussions in the TC. The PC will present the APR to the TC, highlighting policy issues and recommendations for the decision of the TC participants. The PC will also inform the participants of any agreement reached by stakeholders during the APR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary. The TC has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks will be developed at the IW, based on delivery rates and qualitative assessments of achievements of outputs.

*163. The **Terminal TC Review** is held in the last month of project operations. The PC is responsible for preparing the Terminal Report and submitting it to UNDP-CO and to UNDP-GEF RCU. It shall be prepared in draft at least two months in advance of the TC meeting in order to allow review, and will serve as the basis for discussions in the TC meeting. The terminal TC review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learned can be captured to feed into other projects being implemented.*

Project Monitoring Reporting

164. The TC, in conjunction with the UNDP-GEF extended team, will be responsible for the preparation and submission of the following reports that form part of the monitoring process and that are mandatory.

*165. A Project **Inception Report** (IR) will be prepared immediately following the IW. It will include a detailed First Year/AWP divided in quarterly timeframes detailing the activities and progress indicators that will guide implementation during the first year of the project. This work plan will include the dates of specific field visits, support missions from the UNDP CO or the RCU or consultants, as well as timeframes for meetings of the project's decision-making structures. The IR will also include the detailed project budget for the first full year of implementation, prepared on the basis of the AWP, and including any M&E requirements to effectively measure project performance during the targeted 12-month timeframe. The IR will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions, and feedback mechanisms of project-related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. When finalized, the IR will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to the IR's circulation, the UNDP CO and UNDP-GEF's RCU will review the document.*

*166. The **Annual Project Report** (APR) is a UNDP requirement and part of UNDP CO central oversight, monitoring, and project management. It is a self-assessment report by the project management to the CO and provides input to the country office reporting process and the Results-Oriented Annual Report (ROAR), as well as forming a key input to the TC Review. An APR will be prepared on an annual basis prior to the TC review, to reflect progress achieved in meeting the project's AWP and assess performance of the project in contributing to intended outcomes through outputs and partnership work.*

The format of the APR is flexible but should include the following sections: a) project risks, issues, and adaptive management; b) project progress against pre-defined indicators and targets, c) outcome performance; and d) lessons learned and best practices.

167. The **Project Implementation Review (PIR)** is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. Once the project has been under implementation for one year, a PIR must be completed by the CO together with the project management. The PIR can be prepared any time during the year and ideally prior to the TC review. The PIR should then be discussed in the TC meeting so that the result would be a PIR that has been agreed upon by the project, the Implementing Partner, UNDP CO, and the RCU in Panama. The individual PIRs are collected, reviewed, and analyzed by the RCU prior to sending them to the focal area clusters at the UNDP-GEF headquarters. In light of the similarities of both APR and PIR, UNDP-GEF has prepared a harmonized format for reference.

168. Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform and the risk log should be regularly updated in ATLAS based on the initial risk analysis included in Annex 8.1.

169. **Specific Thematic Reports** focusing on specific issues or areas of activity will be prepared by the project team when requested by UNDP, UNDP-GEF, or the Implementing Partner. The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learned exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimize its requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparation by the project team.

170. A **Project Terminal Report** will be prepared by the project team during the last three (3) months of the project. This comprehensive report will summarize all activities, achievements, and outputs of the project; lessons learned; objectives met or not achieved; structures and systems implemented, etc.; and will be the definitive statement of the project's activities during its lifetime. It will also layout recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's activities.

171. **Technical Reports** are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the IR, the project team will prepare a draft Reports List detailing the technical reports that are expected to be prepared on key areas of activity during the course of the project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive and specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national, and international levels. Technical Reports have a broader function and the frequency and nature is project-specific.

172. **Project Publications** will form a key method of crystallizing and disseminating the results and achievements of the project. These publications may be scientific or informational texts on the activities and achievements of the project in the form of journal articles or multimedia publications. These publications can be based on Technical Reports, depending upon the relevance and scientific worth of these reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if any of the Technical Reports merit formal publication, and (in

consultation with UNDP, the Government of El Salvador, and other relevant stakeholder groups) will also plan and produce these publications in a consistent and recognizable format. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget

Independent Evaluation

173. The project will be subjected to at least two independent external evaluations as follows:

174. An independent **Mid-Term Evaluation** will be undertaken at exactly the mid-point of the project lifetime. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency, and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation, and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, ToR, and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The ToR for this Mid-Term Evaluation will be prepared by the UNDP-CO based on guidance from the UNDP-GEF RCU. The management response of the evaluation will be uploaded to the UNDP corporate systems, in particular the UNDP Evaluation Resource Center (ERC). All GEF Tracking Tools for the project will also be completed during the mid-term evaluation cycle.

175. An independent **Final Evaluation** will take place three months prior to the terminal Steering Committee meeting, and will focus on the same issues as the Mid-Term Evaluation. The Final Evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities and requires a management response, which should be uploaded to PIMS and to the UNDP ERC. The ToR for this evaluation will be prepared by the UNDP-CO based on guidance from the UNDP-GEF RCU. All GEF Tracking Tools for the project will also be completed during the final evaluation.

Audit Clause

176. The project will be audited in accordance with the UNDP Financial Regulations and Rules and applicable audit policies

Learning and Knowledge Sharing

177. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition, the project will participate, as relevant and appropriate, in UNDP-GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics. UNDP-GEF RCU has established an electronic platform for sharing lessons between the project managers. The project will identify and participate, as relevant and appropriate, in scientific, policy-based, and/or any other networks, which may be of benefit to project implementation through lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identifying and analyzing lessons learned is an ongoing process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every twelve (12) months. UNDP-GEF shall provide a format and assist the project team in categorizing, documenting, and reporting on lessons learned. Specifically, the project will ensure coordination in terms of avoiding overlap, sharing best practices, and generating knowledge products of best practices for biodiversity conservation with the current projects of El Salvador's portfolio.

M&E work plan and budget

Type of M&E activity	Responsible Parties	Budget US\$*	Time frame
Inception Workshop	<ul style="list-style-type: none"> • Project Coordinator • UNDP CO • UNDP GEF 	GEF: \$1,000 COF: \$1,000	Within first two months of project start-up
Inception Report	<ul style="list-style-type: none"> • Project Team • UNDP CO 	None	Immediately following IW
Measurement of Means of Verification of project results	<ul style="list-style-type: none"> • UNDP GEF Regional Technical Advisor/Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members 	To be determined during the initial phase of implementation of the project and the IW.	Start, mid-point, and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	<ul style="list-style-type: none"> • Oversight by Project Coordinator • Project Team 	No separate M&E cost: to be absorbed within salary and travel costs of project staff	Annually prior to ARR/PIR and to the definition of annual work plans
APR and PIR	<ul style="list-style-type: none"> • Project Coordinator and Team • UNDP-CO • UNDP-GEF 	None	Annually
Tripartite Committee Reviews and Reports	<ul style="list-style-type: none"> • Government of El Salvador counterparts • UNDP CO • UNDP GEF RCU 	None	Annually, upon receipt of APR
Project Board Meetings	<ul style="list-style-type: none"> • Project Coordinator • UNCP-CO • Government of El Salvador representatives 	GEF: \$1,540 COF: \$1,540	Two times per year
Quarterly progress reports	<ul style="list-style-type: none"> • Project Coordinator and Team 	None	Quarterly
Technical reports	<ul style="list-style-type: none"> • Project Coordinator and Team • Hired consultants as needed 	GEF: \$4,000 COF: \$4,000	To be determined by Project Team and UNDP-CO
Mid-term Evaluation	<ul style="list-style-type: none"> • Project Coordinator and Team • UNDP- CO • UNDP-GEF RCU • External Consultants (i.e., evaluation team) 	GEF: \$23,600 COF: \$10,000	At the mid-point of project implementation
Final Evaluation	<ul style="list-style-type: none"> • Project Coordinator and Team • UNDP- CO • UNDP-GEF RCU • External Consultants (i.e. evaluation team) 	GEF: \$29,325 COF: \$15,000	At least three months before the end of project implementation
Terminal Report	<ul style="list-style-type: none"> • Project Team • UNDP-CO • Hired consultants as needed 	None	At least three months before the end of the project

Type of M&E activity	Responsible Parties	Budget US\$*		Time frame
Lessons learned	<ul style="list-style-type: none"> Project Coordinator and Team UNDP-GEF RCU (suggested formats for documenting best practices, etc.) 	GEF: \$3,000 COF: \$2,000		Yearly
Audit	<ul style="list-style-type: none"> UNDP-CO Project Coordinator and Team 	GEF: \$10,960 (\$2,740 per year)		Yearly
Visits to field sites	<ul style="list-style-type: none"> UNDP-CO UNDP-GEF RCU (as appropriate) Government of El Salvador representatives 	No separate M&E cost: paid from IA fees and operational budget		Yearly
TOTAL INDICATIVE COST (*Excluding project team staff time and UNDP staff and travel expenses)		GEF	\$73,425	
		Cofinancing	\$33,540	
		Total	\$106,965	

7. LEGAL CONTEXT

178. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement (SBAA) between the Government of El Salvador and the UNDP, signed by the parties on March 21, 1975) and ratified by the Legislative Assembly on May 16, 1975 (Decree No. 261, published in the Official Gazette No. 89, Volume No. 247). The host country-implementing agency shall, for the purpose of the SBAA, refer to the government co-operating agency described in that Agreement.

179. The UNDP Resident Representative in El Salvador is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by the UNDP-GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes: a) revision of, or addition to, any of the annexes to the Project Document; b) revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation; c) mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and d) inclusion of additional annexes and attachments only as set out here in this Project Document.

180. This document, together with the CPAP, which was signed by the Government of El Salvador and UNDP and is incorporated by reference, constitutes a Project Document as referred to in the SBAA. All CPAP provisions apply to this document.

181. Consistent with the Article III of the SBAA, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner.

182. The Implementing Partner shall: a) put into place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried out; and b) assume all risks and liabilities related to the Implementing Partner's security and the full implementation of the security plan.

183. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required herein shall be deemed a breach of this agreement.

184. The Implementing Partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism, and that the recipients of any amounts provided by UNDP herein do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

8. ANNEXES

8.1. Risk Analysis

Project Title: Conservation, sustainable use of biodiversity, and maintenance of ecosystem services in protected wetlands of international importance	Award ID: 00088358	Date: 10/5/2015
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#	Description	Date Identified	Type	Probability and Impact	Countermeasures/ Management Response	Owner	Submitted, Updated By	Last Update	Status
1	The sustainable use of biodiversity in wetlands is not a priority for new environmental authorities	At PIF (March 7, 2014)	Political	Enter probability on a scale from 1 (low) to 5 (high) P = 2 Enter impact on a scale from 1 (low) to 5 (high) I = 2	The project staff will inform the new environmental officials about the project, its objective, progress, and achievements, as well as the project's benefits in terms of the sustainable use of the country's PWII and contributions to achieve national and global environmental goals. Different platforms will be used for this, such as the project's steering committee, and learning and knowledge-sharing processes that will be part of the project's monitoring and evaluation plan, site visits to the prioritized PWII, among others.	MARN	UNDP, MARN	At CEO Endorsement	Risk continues to persist
2	Weak organization and cohesion among public and private stakeholders for the control and management	At PIF (March 7, 2014)	Institutional	Enter probability on a scale from 1 (low) to 5 (high) P = 3 Enter impact on a scale from 1 (low) to 5 (high) I = 2	With MARN's support, the project will define consultation mechanisms among the sectors and stakeholders responsible for managing invasive species, as well as those who perceive an impact (e.g., fishermen), to jointly define strategies to	MARN	UNDP, MARN	At CEO Endorsement	Risk continues to persist

	of invasive species				control and reduce invasive species that affect wetlands. This participatory process will facilitate joint decision-making to reduce the presence of invasive species in the prioritized wetlands and PAs. Initiatives to further promote local involvement in the use and recycling of invasive species will be implemented, such as handicrafts (e.g., baskets and furniture), paper made from the fiber of water hyacinth, and the plant used as feed for livestock. Finally, the project will build upon past successful initiatives for the control, management, and use of this alien invasive species in the project's PWIs as a way to build confidence among stakeholders and engage them in activities already familiar to them.				
3	Limited interest by the agricultural sector to adopt BMPs for the prevention, reduction, and control of contamination (and thereby the reduced use of agrochemicals)	At CEO Endorsement	Economic	Enter probability on a scale from 1 (low) to 5 (high) P = 3 Enter impact on a scale from 1 (low) to 5 (high) I = 3	To encourage the adoption of BMPs by the agricultural sector to reduce the use of agrochemicals, the project will implement an incentives program consisting of a green seal for small- to medium-scale agriculture producers and cattle ranchers and the certification of biodiversity-friendly sugar cane cultivation. The green seal certification of sustainable production processes will differentiate products and	MARN	UNDP, MARN	At CEO Endorsement	Risk continues to persist

					influence consumer purchasing decisions with potential economic benefits for the producers who adopt BMPs. In the case of sugarcane, the project will establish synergies with CASSA, which provides credit for producers to invest in improvements at the farm level. Roundtables will be established with the participation of the producers and producer associations, and representatives of relevant institutions including MARN, MAG, municipal authorities, and community representatives to discuss issues related to the control of contamination and to agree upon the technical assistance needed for the implementation of BMPs. Finally, environmental education/awareness-raising activities will further contribute to show farmers the environmental and economic benefits of implementing BMPs to reduce the contamination of the project's PWIIs.				
4	Limited participation of local communities and municipalities in the	At CEO Endorsement	Governance/ Behavior	Enter probability on a scale from 1 (low) to 5 (high) P = 3 Enter impact on a scale from 1 (low) to 5 (high)	The basis for mitigating this risk will be the implementation of a local environmental governance and awareness program for the sustainable management of biodiversity in PWII,	MARN	UNDP, MARN	At CEO Endorsement	Risk continues to persist

	prevention, reduction, and control of solid wastes		I = 3	<p>including the reduction of threats (prevention, reduction, and control of solid wastes). More specifically, the project will strengthen the ability and skills of local communities and the municipalities to participate in and have more control over decision-making processes regarding the conservation and the use of natural resources. In addition, the project will establish and put into operation three (3) inter-institutional cooperation agreements with municipalities of the Jiquilisco Bay area to address threats in the PWII, including solid waste management. Traditionally in the Jiquilisco Bay area, local communities have had limited participation in solid waste management. To reverse this, the project will focus on the areas within the Jiquilisco Bay that cannot be accessed by land and that have limited solid waste collection systems. Solid waste collection centers (inorganic and organic) will be established and composting activities will be implemented as part of organic waste management, with equal participation by men and women. Finally, an environmental education/awareness-raising</p>				
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					program will contribute to reduce the inappropriate disposal of solid wastes that end up in the bay area.				
5	Climate change effects	At PIF (March 7, 2014)	Environmental	Enter probability on a scale from 1 (low) to 5 (high) P = 3 Enter impact on a scale from 1 (low) to 5 (high) I = 3	Through the establishment of two new PAs and the improved management effectiveness of seven (7) PWII and their buffer areas, the project will increase protected habitat, providing additional refuge areas for numerous species facing potential events associated with CC. The protection of mangroves and the development of sustainable use plans will contribute to mitigating the impacts from extreme hydrometeorological events associated with CC, the reduction of their intensity, and the prevention of erosion with benefits for the wetlands, PAs, and associated biodiversity, as well as neighboring human settlements. The project will establish a network CC monitoring team for the PWII, which will develop early warning actions to mitigate impacts to the wetlands and the local populations.	MARN	UNDP, MARN	At CEO Endorsement	Risk continues to persist

8.2. Terms of Reference for Key Project Staff

The following are the indicative ToR for the project management staff. The PMU will be staffed by a full-time Project Coordinator and a full-time Project Administrator/Finance Assistant, both of which will be nationally-recruited positions paid with GEF funds. ToR for these positions will be further discussed with UNDP's CO and will be fine-tuned during the IW so that roles and responsibilities and UNDP GEF reporting procedures are clearly defined and understood. Also, during the IW the ToR for specific consultants and sub-contractors will be fully discussed and, for those consultancies to be undertaken during the first six months of the project, full ToR will be drafted and selection and hiring procedures will be defined.

Project Coordinator

The project executing agency, MARN, in coordination with the UNDP CO, will hire the Project Coordinator to carry out the duties specified below, and to provide further technical assistance as required by the project team to fulfill the objectives of the project. He/she will be responsible for ensuring that the project meets its obligations to the GEF and the UNDP, with particular regard to the management aspects of the project, including supervision of staff, serving as stakeholder liaison, implementation of activities, and reporting. The Project Coordinator will be responsible for the day-to-day management of project activities and the delivery of its outputs, including the implementation of MARN's quality management system and planning process. The Project Coordinator will support and coordinate the activities of all partners, staff, and consultants as they relate to the execution of the project. The Project Coordinator will report to the Project Director and will be responsible for the following tasks:

Tasks:

- Prepare detailed work plan and budget under the guidance of the SC and MARN.
- Make recommendations for modifications to the project budget and, where relevant, submit proposals for budget revisions to the SC, MARN, and UNDP.
- Facilitate project planning and decision-making sessions.
- Organize the contracting of consultants and experts for the project, including preparing ToR for all technical assistance required, preparation of an action plan for each consultant and expert, supervising their work, and reporting to the Project Director at MARN.
- Provide technical guidance and oversight for all project activities.
- Oversee the progress of the project components conducted by local and international experts, consultants, and cooperating partners.
- Coordinate and oversee the preparation of all outputs of the project.
- Coordinate the preparation and implementation of the Project Inception Workshop and prepare the Project Inception Report.
- Foster, establish, and maintain links with other related national and international programs and national projects, including information dissemination through media such as web page actualization, etc.
- Organize SC meetings at least once every semester as well as annual and final review meetings as required by MARN and UNDP, and act as the secretary of the SC.
- Organize required consultations or meetings with the technical group at MARN, MAG, NGOs, local communities, and other entities, in accordance with the requirements of each project component.
- Coordinate and report the work of all stakeholders under the guidance of MARN.
- Prepare PIRs/APRs in the language required by the GEF and the UNDP's CO and attend annual review meetings.
- Ensure that all relevant information is made available in a timely fashion to MARN regarding activities carried out nationally, including private and public sector activities, which impact the project.

- Prepare and submit quarterly progress and financial reports to MARN and UNDP as required, following the quality management system and internal administrative process at MARN.
- Assist in the development of educational and promotional materials regarding the conservation and sustainable use of internationally important protected wetlands, their biodiversity, and stakeholder communities, the achievements of the project, and other topics relevant to the project.
- Coordinate and participate in M&E exercises to appraise project success and make recommendations for modifications to the project.
- Coordinate the mid-term and final project evaluations in consultation with UNDP and MARN.
- Prepare and submit technical concepts and requirements about the project requested by MARN, the Government of El Salvador, or other external entities.
- Perform other duties related to the project in order to achieve its strategic objectives.
- Ensure the project utilizes best practices and experiences from similar projects.
- Coordinate with other related initiatives to seek complementarities and prevent overlapping of activities.
- Ensure the project utilizes the available financial resources in an efficient and transparent manner.
- Ensure that all project activities are carried out on schedule and within budget to achieve the project outputs.
- Solve all technical and administrative issues that might arise during the project.

Outputs:

- Detailed work plans indicating dates for deliverables and budget.
- Documents required by the control management system of MARN.
- ToR and action plan of the staff and monitoring reports.
- List of names of potential advisors and collaborators and potential institutional links with other related national and international programs and national projects.
- Quarterly reports and financial reports on the consultant's activities, all stakeholders' work, and progress of the project to be presented to MARN and UNDP (in the format specified by UNDP).
- A final report that summarizes the work carried out by consultants and stakeholders during the period of the project, as well as the status of the project outputs at the end of the project.
- Minutes of meetings and/or consultation processes.
- Yearly PIRs/APRs.
- Adaptive management of project.

All documents are to be submitted to the Project Director and UNDP CO in MS Word and in hard copy.

Qualifications (indicative):

- A graduate academic degree in areas relevant to the project (e.g., PAs/wetland management and conservation).
- Minimum 5 years of experience in project management with at least 3 years of experience in PA management and wetlands.
- Experience facilitating consultative processes, preferably in the field of natural resource management.
- Working knowledge of PA management and planning
- Proven ability to promote cooperation between and negotiate with a range of stakeholders, and to organize and coordinate multi-disciplinary teams.
- Strong leadership and team-building skills.
- Self-motivated and ability to work under the pressure.
- Demonstrable ability to organize, facilitate, and mediate technical teams to achieve stated project objectives.

- Familiarity with logical frameworks and strategic planning.
- Strong computer skills.
- Flexible and willing to travel as required.
- Excellent communication and writing skills in Spanish and English.
- Previous experience working with a GEF-supported project is considered an asset.

Project Administrator/Finance Assistant

The Project Administrator/Finance Assistant is responsible for the financial and administrative management of the project activities and assists in the preparation of quarterly and annual work plans and progress reports for review and monitoring by MARN. This position also provides support to the Project Coordinator for the day-to-day management of the project and secretarial or assistance functions. The Project Administrator/Finance Assistant will have the following responsibilities:

Financial management:

- Responsible for providing general financial and administrative support to the project.
- Take own initiative and perform daily work in compliance with annual work schedules.
- Assist project management in performing budget cycle: planning, preparation, revisions, and budget execution.
- Assist the Project Coordinator in all project implementation activities.
- Provide assistance to partner agencies involved in project activities, performing and monitoring general administrative and financial aspects to ensure compliance with budgeted costs in line with UNDP and MARN policies and procedures.
- Monitor project expenditures, ensuring that no expenditure is incurred before it has been authorized.
- Assist project team in drafting quarterly project progress reports concerning financial issues.
- Ensure that UNDP procurement rules are followed during procurement activities that are carried out by the project and maintain responsibility for the inventory of the project assets.
- Perform preparatory work for mandatory and general budget revisions, annual physical inventory and auditing, and assist external evaluators in fulfilling their mission.
- Provide assistance in all logistical arrangements concerning project implementation.
- Prepare all outputs in accordance with the MARN administrative and financial office guidance.

Administrative management:

- Make logistical arrangements for the organization of meetings, consultation processes, and media.
- Provide secretarial support for the project staff.
- Draft contracts for international/local consultants and all project staff, in accordance with instructions by the Contracts Office at MARN.
- Draft agreements for entities related to the project, in accordance with instructions by the Contracts Office at MARN.
- Draft correspondence related to assigned project areas; provide clarification, follow up, and responses to requests for information.
- Assume overall responsibility for administrative matters of a more general nature, such as registry and maintenance of project files.
- Perform all other administrative and financial related duties, upon request.
- Provide support to the Project Coordinator and project staff in the coordination and organization of planned activities and their timely implementation.
- Assist the Project Coordinator in liaising with key stakeholders from the Government of El Salvador counterpart, co-financing agencies, civil society, and NGOs, as required.
- Ensure the proper use and care of the materials and equipment used on the project.

- Ensure the project utilizes the available financial resources in an efficient and transparent manner.
- Ensure that all project financial and administrative activities are carried out on schedule and within budget to achieve the project outputs.
- Resolve all administrative, financial, and support issues that might arise during the project.

Qualifications and skills:

- At least an Associate’s Degree in finance, business sciences, or related fields.
- Experience in administrative work, preferably in an international organization or related to project execution.
- A demonstrated ability in the financial management of development projects and in liaising and cooperating with government officials, NGOs, etc.
- Self-motivated and ability to work under the pressure.
- Team-oriented, possesses a positive attitude, and works well with others.
- Flexible and willing to travel as required.
- Excellent interpersonal skills.
- Excellent verbal and writing communication skills in Spanish and English.
- Good knowledge of Word, Outlook, Excel, and Internet browsers is required.
- Previous experience working with a GEF-supported project is considered an asset.

8.3. Capacity Assessment

The capacity assessment of the Implementing Partner will be completed before project inception.

8.4. Stakeholder Involvement Plan

During the PPG phase of the project, key national and local stakeholders participated in planning and project design workshops and several smaller focus group sessions and meetings. Other participants included the project team, UNDP CO, and staff from the MARN. Descriptions of the PPG phase participatory process are presented below.

PPG Inception Workshop. The Inception Workshop was held on February 17, 2015 in the city of San Salvador, El Salvador. The objectives of this workshop were to: a) help the PPG project team and other stakeholders to understand and take ownership of the project goals and objectives, b) ensure that the project team and other stakeholders have a clear understanding of what the PPG phase seeks to achieve as well as their own roles in successfully carrying out the PPG activities, c) re-build commitment and momentum among key stakeholders (including potential project co-financers) for the PPG phase, and d) validate the PPG Work Plan.

The participants in the PPG Phase Inception Workshop included staff from the MARN, MAG, UNDP CO, and the PPG project team, among other agencies.

Project Results Framework Workshop. The Results Framework Workshop was held in April 7 and 8 of 2015, in the city of San Salvador. The objectives of this workshop were: a) to define the Results Framework, including the revised project outputs, indicators, baseline information, goals, verification mechanisms, and assumptions; b) to develop the preliminary definition of the project’s activities for each outcome/output; c) to define a preliminary budget for the project, including the co-financing; and d) to update the PPG phase Work Plan.

The participants in the Results Framework Workshop included staff from MARN, UNDP CO, and the PPG project team.

Stakeholder Participation Plan for the Project Implementation Phase

Objectives of the Stakeholder Participation Plan: The creation of the stakeholder participation plan had the following objectives: a) to validate with local stakeholders, the proposed project activities, including

the results framework; b) to identify the basic roles and responsibilities of the main participants in the project; c) to ensure full knowledge of those involved concerning the progress and obstacles in project development and to take advantage of the experience and skills of the participants to enhance project activities; and d) to identify key instances in the project cycle where stakeholder involvement would occur. The ultimate purpose of the stakeholder participation plan will be the long-term sustainability of the project outcomes, based on transparency and the effective participation of the key stakeholders.

Organizations consulted during the project design included the following:

Public sector organizations: Local and/or national government entities, such as the MARN, MAG, FIAES, CEL, the Social Investment Fund for Local Development (FISDL), CNR, the MITUR, the Prosecutor General’s Office (FGR), the National Civil Police (PNC), the Ministry of Governance and Land Development, and Local Governments.

Productive sector organizations: Productive/business organizations that may contribute and/or participate in the project, such as sugar cane/agro-industrial business owners, agriculture and fisheries cooperatives, and shrimp and salt producers who are classified as either medium- or small-scale producers.

Nonprofit organizations: Principally nongovernmental organizations (NGOs).

Community organizations: ADESCOs, water management councils, groups of women and children, indigenous associations, etc.

Summary of organizations consulted during the project design.

Public sector organizations	
MARN	General Directorate for Ecosystems and Wildlife (DGEVS) – Wetlands Unit
	General Division for Environmental Governance (DGGGA)
	DGEVS – Natural Protected Areas and Biological Corridor
	General Division for Environmental Cleanup
	Guard Unit – Resources
MAG	General Division for Livestock
	CENDEPESCA
	DGFCR
	Environmental Unit
	CENTA
	DFCR
MITUR	Sectorial Planning and Policy
FIAES	General Management
CEL	Environmental Unit
Maritime Port Authority	
Municipal Mayoral Offices	Concepción Batres MEU
	Puerto El Triunfo MEU
	Jiquilisco MEU
	San Dionisio MEU
	El Tránsito MEU
	Jucuarán MEU
	ASIBAHIA Management
Private sector organizations	
Associations and cooperatives	Agricultural and Fisheries Production Cooperative Association of El Jocotal

	Fisheries Production Cooperative Association of Oro de R.L., Olomega Lagoon
	Association of Artisanal Fishermen of Olomega Lake (APESCAR)
	Association of Artisanal Fishermen of Nuevo Amanecer (APANA), Olomega Lagoon
	Agricultural Association of Árbol de Oro (ACOPAORO), Olomega Lagoon
	Association of Women Merchants of Fisheries Products of El Espino, Olomega Lagoon
	Association of Boaters of Olomega
	Operator of Composting Plant, Olomega
Nonprofit organizations	
NGOs	CESTA: Salvadoran Center of Appropriate Technology
	MSM: Salvadoran Women's Movement
	PROMESA: Health Promotion and Education
	SalvaNATURA
	Solidarity Oikos
	CATIE: Tropical Agronomy Center for Research and Teaching
	FUNDE: National Foundation for Development
	FUNSALPRODESE: Salvadoran Foundation for Social Advancement and Economic Development
	FUNDAMUNI: Foundation for Support of Municipalities of El Salvador
	CRS: Catholic Relief Services
	ECOVIVA: Community-Led Initiatives for a Sustainable Future
AMS: Association for the Self-Determination and Development of the Salvadoran Women	
Universities	José Simeón Cañas Central American University, UCA
Community organizations	
Jiquilisco Inter-community Associations	GAT-CBJ: Land Action Group of the Jiquilisco Bay Watershed
	ACUDESBAL: Inter-communal Association of Communities United for the Economic and Social Development of Lower Lempa
	Puerto Parada Coordinator
	ASIJUCUARAN: Inter-communal Association of the Southern Area of Jucuarán
	ADESCO Z-7
	Mangrove Association
	ASUSCUBAJI: South Usulután Jiquilisco Bay Watersheds Association
Community Development Associations	ADESCO United for Advancement, ADESCOUPRO, El Jocotal Lagoon
	ADESCO El Borbollón, El Jocotal Lagoon
	Maranata Association of Community Development, Olomega Lagoon
	ADESCO Miraflores, Olomega Lagoon
	ADESCO Los Pajaritos, ADESCOLP, Olomega Lagoon
Representatives of indigenous populations	Alianza de Ulúas, Lencas and Nonualcos
	Lencas Jiquilisco

Summary of Stakeholder Roles in Project Implementation:

Stakeholder/	Participation in the design of the	Participation in the execution of the
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Organization	project	project
Public sector organizations		
Ministry of the Environment and Natural Resources (MARN)	Focal Point of the Convention Relative to Wetlands of International Importance (Ramsar) and the CBD; participated in the development of the PIF and the UNDP's Project Document. Provide valuable information and technical support for the final design of the project.	As the Executing Institution of the Project, the MARN will provide the general oversight and coordination for the project. The MARN will serve as the Board Director; a member of the ministry staff will serve as the National Director of the Project and will be responsible for monitoring compliance and achieving the project's objectives. The MARN will also be charged with promoting participation and cooperation among ministries and governmental and nongovernmental "key stakeholders," which includes the development of the three PWII Management Plans, Governance Program, Business Plans, Strategies to Control Invasive Species, and Participatory Plans for the conservation and sustainable use of mangroves, among other actions. In addition, the MARN is responsible for the National System of Natural Protected Areas (NPAs) and will lead the process to create the management plans for selected NPAs and the protocols for implementation of the financial mechanisms in these territories. It will also work jointly with the tourism sector at the national level to confront the problem of financing as a potential path to the sustainable management of wetlands.
Ministry of Agriculture and Livestock (MAG)	Through its different offices, Center for Development of Fisheries and Aquaculture (CENDEPESCA) and the National Center for Agricultural and Forestry Technology (CENTA), the MAG is one of the most important partners in the management and conservation of biodiversity in the wetlands and buffer zones; and in relation to forest resources, the management of agricultural systems and fisheries production. The MAG collaborated extensively in the preparation of the project.	Artisanal fishing is practiced in virtually all of the wetlands, for this reason the MAG-CENDEPESCA is responsible for ensuring the proper management of the fishing resources and protection of the biodiversity. As such, the MAG-CENDEPESCA will play a key role in the implementation of land-based activities for controlling invasive species in the three PWII. In addition, the MAG-CENTA will play a central role in working with the key production sectors (sugar cane, livestock, agriculture) in the design of sustainable practices with regard to reducing the use of agrochemicals, soil and water

		<p>conservation tasks, and the design of agroforestry systems.</p> <p>The MAG will also serve as coordinator of the design of the incentives program that includes green certification for reduced use of agrochemicals in sugar cane cultivation, small- and medium-scale agriculture, sustainable cattle ranching, and responsible fishing in the buffer zones of the five NPAs of the Jocotal Lagoon PWII, Olomega Lagoon PWII, and Jiquilisco Bay Lagoon PWII (Chaguantique, Normandía, and El Tercio).</p>
10 municipalities	<p>The municipalities have been important partners in the environmental management of the wetlands' buffer zones, and in the management and control of threats to biodiversity. They have also participated in activities for the control and eradication of invasive species and in the conservation of mangroves and freshwater forest. They actively participated in the provision of information during the preparatory stages of the project.</p>	<p>The municipalities or municipal associations (ASIBAHIA) and their municipal environmental offices (MEU) will be key collaborators for ensuring that awareness will be raised as well as the participation of local populations in the project activities within the geographic area of the PWII, since they currently participate in and have relationships built with numerous civil society organizations. In addition, the municipalities will be key partners in the development of long-term financing schemes for managing the NPAs in the wetlands, as they have access to various financing sources.</p> <p>The municipalities will also play an important role in representing the interests of the community in the development of protocols to reduce threats to biodiversity, especially in the reduction of solid wastes.</p>
Ministry of Tourism (MITUR)	<p>Drives initiatives of micro-, small-, and medium-scale businesses in the tourism sector. MITUR provided information for the design phase of the project.</p>	<p>During project implementation, MITUR can provide support in the determination of the technical and financial feasibility of public-private initiatives as mechanisms to mobilize resources that contribute to the sustainable development of the NPAs and PWII.</p>
National Registration Center (CNR)	<p>CNR has experience in the delineation process of the NPAs for the PACAP-MARN project, whose results have served to construct the project baseline.</p>	<p>CNR's participation is very relevant for the delineation process and declaration of new NPAs.</p>

<p>Initiative Fund for the Americas El Salvador (FIAES) and Río Lempa Hydroelectric Commission (CEL)</p>	<p>FIAES and CEL are important allies in the provision of financial resources for environmental compensation, given their mandate in the protection of natural resources and biodiversity in wetlands. They participated in providing information for the design phase of the project.</p>	<p>The participation of FIAES and CEL is fundamental in the follow-up and evaluation of the initiatives for validating the mechanisms related to environmental compensation in the framework of the Cooperation Agreements with the MARN.</p>
<p>Prosecutor General's Office (FGR) and National Civil Police (PNC)</p>	<p>FGR and PNC are partners in the processes of investigation, prevention, and compliance with sanctions for illegal environmental land use management.</p>	<p>FGR and PNC should be considered as partners in the design of the governance program, the standards for regulating human activities that affect the PWII, and the design of protocols to reduce threats to biodiversity in the PWII.</p>
<p>Private sector and Civil Society Organization (CSOs)</p>		
<p>Producers' Associations of the sugar cane, agricultural, and fisheries sectors</p>	<p>These associations were consulted regarding their current practices and their willingness to support new protocols and practices for managing biodiversity in the wetlands.</p>	<p>Companies and associations of the cultivation and processing of sugar cane (e.g., CASSA; and the Salvadoran Sugar Association), agriculture, and livestock, and artisanal fishing sectors will be the focuses of the campaigns to raise awareness at the national level (marine-coastal zone) as well as in the PWII. Agricultural producers, cattle ranchers, and companies dedicated to sugar cane cultivation and processing will be involved in the development and application of new protocols for managing their production systems and standards to regulate human activities, particularly for the control of contamination threatening biodiversity. They will be beneficiaries of an incentives program to promote biodiversity-friendly agricultural practices, including the certification of biodiversity-friendly sugar cane cultivation.</p>
<p>Community-Led Initiatives for a Sustainable Future (ECOVIVA)</p>	<p>Key partner in the design of the PPG phase, particularly for providing baseline information with regard to restoration of the mangrove forest.</p>	<p>This NGO will have a principal role in the development of capacities of the community and in environmental education activities in the Jiquilisco Bay Wetland Complex. It will also have a principal role in controlling invasive species and monitoring the status and trend of populations of mangroves in the restoration processes. The Mangrove Association will also be important in procuring financing for continuing the management actions and restoration of</p>

		the mangroves in the future.
Asociación Intercomunal de Comunidades Unidas para el Desarrollo Económico y Social del Bajo Lempa (ACUDESBAL) and other community-level organizations: El Borbollón Municipality in El Jocotal Lagoon and Asociación de Desarrollo Comunal Maranata (ADESCOMAR) Olomega Lagoon	These are key institutions involved in the design of the project as they provided information about the organizational and production situations in the local communities as well as their expectations with regard to the project.	These organizations will be critically important for the technical aspects of biodiversity management practices in the fishing and agricultural sectors, particularly with regard to activities for controlling the use of agrochemicals and the development of local capacity in those areas. The social organizations will participate in the development of the management plans for current and new NPAs and in the development and implementation of activities to control invasive species.
Organizations to encourage the participation of women: Salvadoran Women's Movement (MSM) and Association for the Self-Determination and Development of the Salvadoran Women (AMS)	These are key institutions to mainstream the focus of gender equity into the design of the project. They provided baseline information about the participation of women in the management of biodiversity in wetlands.	Their role is very important to ensure the participation of women in the activities related to the reduction of threats to biodiversity, including the presence of invasive species, and the generation of solid and agrochemical wastes in the buffer zones of the PWII.
Representatives of Indigenous Communities	Indigenous community representatives provided baseline information with regard to indigenous populations in the geographic area of the three PWII.	Their role is important to ensure the participation of the indigenous communities in activities related to the reduction of threats to biodiversity, including the presence of invasive species, and the generation of solid and agrochemical wastes in the buffer zones of the PWII.
Other NGOs	NGOs are important partners given their experience and direct links to the communities and local governments in the management of the NPAs and the wetlands and their buffer areas. During the preparatory process of the project NGOs have been important sources of information for the baseline.	NGOs play a central role in procuring financing for the long-term management of the NPAs and PWII. They also provide technical experience for capacity building in the governance processes and for activities around control of threats to biodiversity in wetlands.

Participation Mechanisms: Three key phases for stakeholders’ participation have been identified for the implementation phase of the project: planning, implementation, and evaluation. **Project planning** will include annual meetings with key stakeholders (local communities, municipal authorities, private sectors, etc.) during which annual goals will be set for each component of the project. These annual planning meetings will also serve to specify the activities that are to be funded through each co-financing source. **Project implementation** will take place according to the annual plans that are approved by the SC, which will be formed by the following agencies: MARN, MAG, and the UNDP CO. The UNDP CO will be the Executing Agency. Local stakeholders (e.g., municipalities; Family, Community, and Life Cabinets; and members of collaborative management committees) will influence the project through their participation in the implementation of specific activities. **Project evaluation** will occur annually with the participation of key stakeholders at the end of each planning year and previous to defining the annual plan for the following year of project implementation. Also, mid-term and final evaluations will be carried out as part of the project cycle. Due to the independent nature of these evaluations, they will be key moments during the project’s life when stakeholders can express their views, concerns, and assess whether the project’s outcomes are being achieved and if necessary, define the course of correction.

8.5. Tracking Tool

The tracking tool related with the project (BD-1) is included in a separate file.

8.6. Description of UNDP Country Office Support Services

1. Reference is made to consultations between the Ministry of Environment and Natural Resources, the institution designated by the Government of El Salvador, and representatives of UNDP regarding the provision of support services by the UNDP CO for the nationally managed programme or project 00095068 “Conservation, sustainable use of biodiversity, and maintenance of ecosystem services in protected wetlands of international importance” (Award 00088358), “the Project.”

2. In accordance with the provisions of the letter of agreement signed on *Date of signature (LOA)* and the project document, the UNDP CO shall provide support services for the Project as described below.

3. Support services to be provided:

Support services* (insert description)	Schedule for the provision of the support services	Cost to UNDP of providing such support services (where appropriate)	Amount and method of reimbursement of UNDP (where appropriate)
1. Payments, disbursements and other financial transactions	During project implementation	Universal Price List	Support Services
2. Recruitment of staff, project personnel, and consultants	During project implementation	Universal Price List	Support Services
3. Procurement of services and equipment, and disposal/sale of equipment	During project implementation	Universal Price List	Support Services
4. Organization of training activities, conferences, and workshops, including fellowships	During project implementation	Universal Price List	Support Services
5. Travel authorizations, visa requests, ticketing, and travel arrangements	During project implementation	Universal Price List	Support Services
6. Shipment, custom clearance, vehicle registration, and accreditation	During project implementation	Universal Price List	Support Services

* UNDP direct project support services will be defined yearly, and for those executed during the period, direct project costs will be charged at the end of each year based on the UNDP Universal Pricelist (UPL) or the actual corresponding service cost.

4. Description of functions and responsibilities of the parties involved:

The project will be conducted through the National Implementation modality of UNDP (NIM). The Ministry of Environment and Natural Resources (hereinafter MARN), will act as the National Implementing Partner⁴⁶ and with the support of UNDP as a GEF Implementing Agency. The MARN will be responsible for directing and managing the project and monitoring compliance with project work plans as a basis for project execution. Within the MARN a Project Execution/Management Unit (PEU) will be created, which will be responsible for the daily implementation of activities, including direct supervision in coordination with UNDP, for all activities that are carried out by the project. The PEU will include a Management Team composed of a National Project Director NPD, Project Coordinator and Project Administrator/Finance Assistant. In addition it will include as consultants for specific components and activities (including training, participation, environmental education, communication, etc.).

To ensure an effective assimilation of the Project in permanent institutional structures, the PMU will convene a Steering Committee (Composed by the Minister of Environment-President, Minister of Agriculture, the GEF Operational Focal Point, the NPD and CTS, and a National Technical Committee (composed by).

UNDP will provide technical and operational support necessary for the implementation of activities and the results of this project, with constant support from the PEU. The UNDP office will ensure that all consultant contracts, purchase orders and contracts for company services are in compliance with UNDP standards and procedures. In those cases in which the UNDP Resident Representative has to sign the contracts mentioned above, UNDP will participate in the processes for selection and recruitment. UNDP will also provide advances payments to the project to make direct payments and maintain accounting and financial control of the project.

The project authorities will carry out the procurement and contracts for all purchases less than USD\$ 2,500. These minor operations shall comply with rules and procedures contained in the National Implementation Manual.

UNDP will assist in the administration of funds provided by GEF and UNDP itself. Contributions will be subject to internal and external audits established in UNDP rules and financial regulations.

8.7. Standard Letter of Agreement Between UNDP and the Government of El Salvador for the Provision of Support Services

Dear Mrs. Lina Polh

- Ministry of Environment and Natural Resources

1. Reference is made to consultations between officials of the Government of El Salvador (hereinafter referred to as “the Government”) and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the relevant programme support document or project document, as described below.

2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the

⁴⁶National Execution partner under new harmonized definition.

capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.

3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the programme/project:

- (a) Identification and/or recruitment of project and programme personnel;
- (b) Identification and facilitation of training activities;
- (c) Procurement of goods and services;

4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the programme support document or project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a programme or project, the annex to the programme support document or project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.

5. The relevant provisions of the Special Standard Agreement between the Government of El Salvador and the United Nations Development Programme signed in San Salvador, in March 21st, 1975 (the “SSA”), including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the programme support document or project document.

6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SSA and the project document.

7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the programme support document or project document.

8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.

9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

10. If you are in agreement with the provisions set forth above, please sign and return to this office three signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,

Signed on behalf of UNDP
Christian Salazar
Resident Representative

For the Government and Natural Resources
Lina Polh
[Date]

