



Agricultura
Secretaría de Agricultura
y Desarrollo Rural



United Nations Development Programme

Project title: Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions		
Country: Mexico	Implementing Partner (GEF Executing Entity): Ministry of Agriculture and Rural Development (AGRICULTURA)	Execution Modality National Implementation (NIM)
Contributing Outcome (UNSDCF/CPD, RPD, GPD): Cooperation Framework Outcome 6. By 2025, the Mexican State implements policies, strategies, and programmes that allow moving towards a green economy that promotes the mitigation of climate change and the strengthening of the institutional framework, taking into consideration energy efficiency, promotion of clean and renewable energy, production, consumption, transportation, cities, and sustainable agriculture, with a focus on health, human rights, gender, interculturality, life cycle, and territory.		
UNDP Social and Environmental Screening Category: Moderate		UNDP Gender Marker: GEN2 (Gender equality as a significant objective): 2
Quantum Award ID: 1377327		Quantum Project ID: 01003814
UNDP PIMS ID number: 9744		GEF Project ID number: 11360
LPAC meeting date: 3 September 2025		
Last possible date to submit to GEF: 09 February 2025		
Latest possible CEO endorsement date: 09 August 2025		
Project duration in months: 60		
Planned start date: 09 February 2026		Planned completion date: 08 February 2031
Expected date of Mid-Term Review (MTR) submission to the GEF: 09 August 2028		Expected date of Terminal evaluation (TE) submission to the GEF: 08 August 2031
Expected Operational Closure Date: 08 November 2031		Expected Financial Closure Date: 08 May 2032
Brief project description: The GEF-8 Clean and Healthy Ocean Integrated Program (CHOIP) targets nitrogen, phosphorus, and organic matter released by agri-food (crops, livestock, poultry and aquaculture) and industrial and municipal systems,		

as nutrient pollutants generated by these sectors are the primary agents causing harmful algal blooms (HAB) and eutrophication that leads to hypoxia. The overall goal of the CHO IP, to which the “Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions” contributes, is to address marine hypoxic zones by curbing coastal pollution from agriculture, industrial and municipal sources through policy and regulatory measures and infrastructure investments combined with nature-based solutions. The CHO IP consists of 15 Child Projects, 1 Global Coordination Project (GCP) and 14 Country Projects (CP) spanning Latin America, Africa, Asia and the Middle East (Maldives, Thailand, Sri Lanka, Vietnam, Venezuela, Mexico, Trinidad and Tobago, Panama, St. Kitts and Nevis, Grenada, Jordan, Moldova, Peru, Madagascar), which altogether are included within 9 LMEs. The Mexican Child Project focuses on the southern states of Mexico, particularly the Isthmus of Tehuantepec, the Gulf of Mexico coastal plain, and the Yucatán Peninsula, are bordered by three major Large Marine Ecosystems (LMEs): the Gulf of Mexico (GoM), the Caribbean (CLME), and the Pacific Central-American (PACA). These LMEs face significant threats from agricultural runoff, improper disposal of municipal and industrial waste, leading to eutrophication, dead zones, harmful algal blooms, and habitat degradation. The Mexico Child Project aims to reduce marine hypoxia and coastal pollution from these sources by implementing integrated watershed management measures, including policy coherence, infrastructure investments, and nature-based solutions (NbS) in three specific landscapes and coastal zones: the Isthmus of Tehuantepec Lagoon System (PACA), the Río Hondo watershed/Chetumal Bay and Bacalar Lagoon (CLME), and the Sontecomapan Lagoon Landscape (GoM). Mexico's project aligns with GEF-8 CHO IP goals by addressing coastal pollution from agricultural runoff, municipal wastewater, and industrial sources. It emphasizes enhanced governance, policy coherence, investment, and nature-based solutions (NbS). Component 1 focuses on improving access to technical and scientific information at subnational and national levels to support decision-making and collaborative action against water pollution and marine hypoxia. Key actions include an assessment of water quality and pollution sources (municipal, agricultural, aquaculture, industrial), establishing an inter-institutional system to share knowledge on basin management and ocean health, and conducting inclusive campaigns to promote pollution reduction in three LMEs: Gulf of Mexico, Caribbean Sea, and Pacific Central American Coastal. Component 2 aims to enhance regional and national governance for water pollution reduction through NbS and foster an environment conducive to investment. Key actions include the operationalization and strengthening of inclusive multi-stakeholder governance mechanisms to improve the integrated management of watersheds and marine-coastal zones, the development of policy and regulatory frameworks that align with pollution mitigation goals, and enabling an investment environment that support sustainable practices. Component 3 strengthens the capacities of local organizations to implement land-based water pollution reduction measures, promoting good practices and NbS. A capacity-building program will support BMPs and NbS in the three target landscapes, focusing on gender inclusion and access to financing; in addition, support will be provided for municipal projects, feasibility studies, and pilot demonstrations of low-carbon water treatment technologies, as well as to local organizations and Indigenous Peoples to adopt BMPs and NbS (targeting pollution from agriculture, aquaculture, and domestic sources) and to participate in conservation and restoration efforts in watersheds and marine zones and in community and citizen science monitoring. Finally, Component 4 supports management, learning, communication, gender mainstreaming, and stakeholder engagement, ensuring programmatic coherence and effective project objectives. Key actions include documenting and sharing lessons learned and best practices regarding the reduction of nutrient water pollution and marine hypoxia, participation of stakeholders in training actions and other learning activities sponsored by the CHO IP and GCP, the develop knowledge products that will be shared with multiple stakeholders, and contributing to IW:LEARN activities. As part of the GEF-8 Clean and Healthy Ocean Integrated Program (CHO IP), the project addresses barriers such as: insufficient data and water quality monitoring at state and municipal levels; lack of policy coherence among federal, state, and municipal governments; limited financing and private sector participation in NbS; insufficient investment in integrated watershed management and wastewater treatment; and weak institutional capacity and low social awareness for ecosystem-based approaches. The project GEBs include 11,000 ha of land and ecosystems under restoration, 211,277 ha of landscapes under improved practices,

590,377 ha of marine habitat under improved practices, and 5,994,766 tCO₂e of GHG emissions mitigated, and three shared water ecosystems with improved management with reduced pollution and hypoxia. In addition, 67,065 people (50% women) will benefit from the GEF investment over five years, with a total investment of USD 97,423,367, including USD 13,461,469 from the GEF.

FINANCING PLAN

GEF Trust Fund grant	USD 13,461,469
UNDP TRAC resources	USD 0
Confirmed cash co-financing to be administered by UNDP	USD 0
Total Budget administered by UNDP	USD 13,461,469
Total confirmed co-financing to this project not administered by UNDP	USD 83,961,898
Grand-Total Project Financing (1)+(2)	USD 97,423,367

SIGNATURES:

Signature:  Alejandra Del Moral Vela, Directora Ejecutiva, Agencia Mexicana de Cooperación Internacional al Desarrollo (AMEXCID)	Agreed by Government Development Coordination Authority Mexican Agency for International Development Cooperation	Date/Month/Year:
Signature:  Julio Berdegue Sancristan, Secretario de Agricultura y Desarrollo Rural (AGRICULTURA)	Agreed by Implementing Partner Ministry of Agriculture and Rural Development	Date/Month/Year: 09 de Febrero de 2026
Signature:  Silvia Morimoto, Representante Residente, PNUD en México	Agreed by UNDP United Nations Development Programme Country Office	Date/Month/Year:  17-Dic-2025

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LIST OF ACRONYMS

AVLI	Academia Veracruzana de Lenguas Indígenas (Veracruz Academy of Indigenous Languages)
AFD	French Cooperation Agency (Agencia Francesa de Cooperación)
AWP/B	Annual work-plan and budget
BID	Inter-American Development Bank (Banco Interamericano de Desarrollo)
BMP	Best Management Practices
BBNJ	Biodiversity Beyond National Jurisdiction
BPPS NCE	Bureau for Policy and Programme Support, Nature, Climate and Energy
BUR 3	Biennial Update Report
CAEV	Water Commission of the State of Veracruz (Comisión del Agua del Estado de Veracruz)
CAF	Development Bank of Latin America and the Caribbean (Banco de Desarrollo de América Latina y el Caribe)
CBD	Convention on Biological Diversity
CCCO	Oaxaca Coastal Watershed Council (Consejo de Cuenca de la Costa de Oaxaca)
CCNSA	National Advisory Council for the Environmental Sector (Consejo Consultivo Nacional del Sector Ambiental)
CEABIEN	State Water Commission for Well-being (Comisión Estatal del Agua para el Bienestar, Oaxaca)
CETMAR	Centers of Technological Studies of the Sea (Centros de Estudios Tecnológicos del Mar)
CHO IP	Clean and Healthy Oceans Integrated Programme (Programa Integrado para los Océanos Limpios y Saludables)
CHO TAG	CHO IP Technical Advisory Group
CI México	Conservation International Mexico
CIIDIR Oaxaca	Interdisciplinary Research Center for Integral Regional Development, Oaxaca Unit. National Polytechnic Institute (Centro Interdisciplinario de Investigación para el Desarrollo Integral Regional, Unidad Oaxaca. Instituto Politécnico Nacional)
CIIT	Interoceanic Corridor-Isthmus of Tehuantepec (Corredor Interoceánico del Istmo de Tehuantepec)
CLME	Caribbean Large Marine Ecosystem
COBAO	Oaxaca College of Baccalaureate (Colegio de Bachilleres de Oaxaca)
COCITEI	Oaxacan Council of Science, Technology, and Innovation (Consejo Oaxaqueño de Ciencia, Tecnología e Innovación)
COESFO	State Forestry Commission (Comisión Estatal Forestal, Oaxaca)

COFEPRIS	Federal Commission for the Protection against Sanitary Risks (Comisión Federal para la Protección contra Riesgos Sanitarios)
COLPOS	Graduate School (Colegio de Postgraduados)
CONABIO	National Commission for the Knowledge and Use of Biodiversity (Comisión Nacional para el Conocimiento y Uso de la Biodiversidad)
CONAFOR	National Forestry Commission (Comisión Nacional Forestal)
CONAGUA	National Water Commission (Comisión Nacional del Agua)
CONAMER	National Commission for Regulatory Improvement (Comisión Nacional de Mejora Regulatoria)
CONANP	National Commission of Natural Protected Areas (Comisión Nacional de Áreas Naturales Protegidas)
CONAPESCA	National Commission of Fisheries (Comisión Nacional de Pesca)
CoPs	Communities of Practice
CNPI	National Council of Indigenous Peoples (Consejo Nacional de los Pueblos Indígenas del INPI)
CP	Country Project
CSO	Civil Society Organization
DO	Development Objective
EbA	Ecosystem-based Adaptation
ECOSUR	The College of the Southern Border (El Colegio de la Frontera Sur)
ENCC	National Climate Action Strategy
ESMF	Environmental and Social Management Framework
FAIS	Social Infrastructure Support Fund (Fondo de Apoyo a la Infraestructura Social)
FAO	Food and Agriculture Organization of the United Nations
FARM+	Financing Agrochemical Reduction and Management Plus
FIRCO	Risk Sharing Trust (Fideicomiso de Riesgo Compartido)
FIRA	Agricultural Trust Funds (Fideicomisos Instituidos en Relación con la Agricultura)
FLACSO	Latin American Faculty of Social Sciences (Facultad Latinoamericana de Ciencias Sociales)
FMCN	Mexican Fund for the Conservation of Nature (Fondo Mexicano para la Conservación de la Naturaleza)
FSP	Full Sized Project
FOCIR	Rural Sector Capitalization and Investment Fund (Fondo de Capitalización e Inversión del Sector Rural)
FPIC	Free, Prior, and Informed Consent
GAP	Gender Analysis and Gender Action Plan

GBF	Global Biodiversity Framework
GCF	Green Climate Fund
GCP	Global Coordination Project
GEBS	Global Environmental Benefits
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
GGGI	Global Ghost Gear Initiative
GHG	Greenhouse gas
GIZ	German Corporation for International Cooperation (Cooperación Técnica Alemana)
GoM	Gulf of Mexico Large Marine Ecosystem
HAC	High Ambition Coalition for Nature and People
ICAPET	Institute of Training and Productivity for Work (Instituto de Capacitación y Productividad para el Trabajo)
ICOAST	Integrated Collaborative Approaches to Sustainable Tourism
ILO	International Labor Organization
IMIPAS	Mexican Institute for Research in Sustainable Fisheries and Aquaculture (Instituto Mexicano de Investigación en Pesca y Acuicultura Sustentables)
IMTA	Mexican Institute of Water Technology (Instituto Mexicano de Tecnología del Agua)
INAES	National Institute of Social Economy (Instituto Nacional de la Economía Social)
INCA Rural	National Institute for the Development of Rural Sector Capacities (Instituto Nacional para el Desarrollo de Capacidades del Sector Rural)
INECC	National Institute for Climate Change (Instituto Nacional de Cambio Climático)
INEGI	National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía)
INIFAP	National Institute of Forestry, Agricultural and Livestock Research (Instituto Nacional de Investigaciones Forestales Agrícolas y Pecuarias)
INMUJERES	National Institute of Women (Instituto Nacional de las Mujeres)
INMS	International Nitrogen Management System
IOC	Intergovernmental Oceanographic Commission
INPI	National Institute for Indigenous People (Instituto Nacional de los Pueblos Indígenas)
IPLC	Indigenous Peoples and Local Communities
INPLAN	Institute of Planning for Welfare (Instituto de Planeación para el Bienestar, Oaxaca)
IPN	National Polytechnic Institute (Instituto Politécnico Nacional)

IPP	Indigenous Peoples Plans
IPPF	Indigenous Peoples Planning Framework
IW:LEARN	International Waters Learning Exchange and Resource Network
KAP	Knowledge, Attitude and Practice
KML	Knowledge Management and Learning
LME	Large Marine Ecosystems
LoA	Letter of Agreement
LULUCF	Land Use, Land Use Change and Forestry
MAR	Mesoamerican Reef
MEA	Multilateral Environmental Agreement
M&E	Monitoring and Evaluation
MTR	Mid-term Review
NAFIN SF	National Finance Sustainable Fund (Nacional Financiera Fondo Sostenible)
NbS	Nature-based Solutions
NDC	Nationally Determined Contribution (under UNFCCC)
NGO	Non-governmental organization
NPD	National Project Director
OFP	Operational Focal Point
OSSE	Organizations of the Social Sector of the Economy
PACA	Pacific Central American Large Marine Ecosystem
PCAT	Partners Capacity Assessment Tool
PAMIC	Action Plans for Integrated Watershed Management (Planes de Acción para el Manejo Integral de Cuencas)
PCC	Program Coordination Committee
PEMEX	Mexican Petroleum (Petróleos Mexicanos)
PFD	Program Framework Document
PIR	Project Implementation Review (GEF)
PLECCA	Strategic Climate Change Plan for the Agri-Food Sector
PMU	Project Management Unit
POPP	Program and Operations Policies and Procedures
PPG	Project Preparation Grant
PRF	Project Results Framework
PPR	Project Progress Report
PROFEPA	Federal Attorney for Environmental Protection (Procuraduría Federal de Protección al Ambiente)

PROPAEO	Office of the Attorney General for Environmental Protection of the State of Oaxaca (Procuraduría de Protección al Ambiente del Estado de Oaxaca)
PSC	Project Steering Committee
PTAR	Wastewater Treatment Plants (Plantas de tratamiento de aguas residuales)
RIOS	River Restoration for Climate Change Adaptation
SADER	Ministry of Agriculture and Rural Development (Secretaría de Agricultura y Desarrollo Rural)
SDGs	Sustainable Development Goals
SEAP	Sustainable Energy Action Plan
SE	Ministry of Economy (Secretaría de Economía)
SEBIEN	Ministry of Welfare (Secretaría de Bienestar)
SECTUR	Ministry of Tourism (Secretaría de Turismo)
SEDARPA	Ministry of Agricultural, Rural and Fisheries Development, Veracruz (Secretaría de Desarrollo Agropecuario, Rural y Pesca, Veracruz)
SEDATU	Ministry of Agrarian, Territorial and Urban Development (Secretaría de Desarrollo Agrario, Territorial y Urbano)
SEDECOP	Ministry of Economic and Port Development (Secretaría de Desarrollo Económico y Portuario)
SEDEMA	Ministry Secretary of the Environment, Veracruz (Secretaría de Medio Ambiente, Veracruz)
SEFADER	Ministry of Agri-Food Development and Rural Development, Oaxaca (Secretaría de Fomento Agroalimentario y Desarrollo Rural, Oaxaca)
SEGOB	Ministry of the Interior (Secretaría de Gobernación)
SEMAR	Ministry of the Navy (Secretaría de Marina)
SEMAEDES	Ministry of the Environment, Biodiversity, Energy and Sustainability, Oaxaca (Secretaría de Medio Ambiente, Biodiversidad, Energías y Sostenibilidad)
SEMARNAT	Ministry of Environment and Natural Resources (Secretaría de Medio Ambiente y Recursos Naturales)
SENASICA	National Service of Health, Safety and Agri-food Quality (Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria)
SENDAS	Pathways and Encounters for Sustainable Autonomous Development, A.C. (Senderos y Encuentros para un Desarrollo Autónomo Sustentable, A.C)
SEP	Ministry of Public Education (Secretaría de Educación Pública, Oaxaca)
SES	Social and Environmental Standards
SESA	Strategic Environmental and Social Assessments
SESP	Social and Environmental Screening Procedure
SEV	Ministry of Education, Veracruz (Secretaría de Educación, Veracruz)
SHCP	Ministry of Finance and Public Credit (Secretaría de Hacienda y Crédito Público)

SIC	Ministry of Infrastructures and Communications (Secretaría de Infraestructuras y Comunicaciones, Oaxaca)
SIPCIA	Ministry of Interculturality, Indigenous and Afro-Mexican Peoples and Communities (Secretaría de Interculturalidad, Pueblos y Comunidades Indígenas y Afromexicanas, Oaxaca)
SSC/TrC	South-South and Triangular Cooperation
SRE	Ministry of Foreign Affairs (Secretaría de Relaciones Exteriores)
STAP	GEF Scientific Technical Advisory Panel
TBWP	Total Budget and Work Plan
tCO ₂ eq	Metric tons of carbon dioxide equivalent
TDA-SAP	Transboundary Diagnostic Analysis/Strategic Action Program
TE	Terminal Evaluation
TECNM	National Technological Institute of Mexico (Tecnológico Nacional de México)
TNC	The Nature Conservancy
ToC	Theory of Change
TOR	Terms of Reference
TRL	Technology Readiness Level (Nivel de madurez tecnológica)
UMAR	University of the Sea (Universidad del Mar)
UN	United Nations
UNAM	National Autonomous University of Mexico (Universidad Nacional Autónoma de México)
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	U.S. Agency for International Development
UV	Veracruz University (Universidad de Veracruz)
UVI	Veracruz Intercultural University (Universidad Veracruzana Intercultural)
WB	World Bank
WKKF	W.K. Kellogg Foundation
WRI	World Resources Institute
WTP	Wastewater Treatment Plants
WWF	World Wildlife Fund
WWTP	Waste Water Treatment Plant

DEVELOPMENT CHALLENGE

Global Environmental Problem

1. The southern states of Mexico, particularly around the Isthmus of Tehuantepec, the Gulf of Mexico coastal plain, and the Yucatan Peninsula, share borders with three significant Large Marine Ecosystems (LMEs): the Gulf of Mexico (GoM), Caribbean (CLME), and Pacific Central-American (PACA). These LMEs, central to this project, face threats from human activities, notably agricultural runoff, and improper disposal of municipal and industrial waste. Land-based pollution in Mexico's marine ecosystems stems from untreated agricultural, industrial, and municipal waste in upstream areas. Simultaneously, deforestation due to agriculture, livestock, and urban expansion negatively impacts communities that lack access to clean water, sanitation, and waste management. A lack of social awareness and inclusion, and stakeholder coordination underscores the need for integrated landscape and watershed management strategies to combat these complex challenges effectively.

2. Eutrophication, dead zones, harmful algal blooms, red tides, and habitat loss are escalating concerns across all three LMEs. The GoM LME is particularly affected, being one of the largest human-caused hypoxic zones (Rabalais & Turner, 2019)¹. Moreover, the PACA LME is showing signs of having a thicker and more expansive oxygen deficient zone (ODZ) (Kwiecinski and Babbin (2021)). In the CLME, untreated wastewater is the primary source of pollution (Bradford et al., 2015)², with ocean deoxygenation confirmed as a trend by various localized studies (Altieri et al., 2017; Howard et al., 2023)³⁴. In Mexico, Juárez Silva (2022)⁵ reported dissolved oxygen concentrations ranging from 3 to 5 mg/L at the surface and from 1 to 3.9 mg/L at the bottom of the Sontecomapan Lagoon. Additionally, the National Water Quality Measurement Network (RENAMECA) of the National Water Commission has recorded concerning toxicity levels across the three Large Marine Ecosystems (LMEs), which threaten ecosystems, communities, and local economies. For instance, the toxicity level documented in the Isthmus of Tehuantepec Lagoon System is 7.6 units, while the Sontecomapan Lagoon has a level of 8.9 units, and the Hondo River shows a level of 2 units (CONAGUA, n.d.)⁶. Overexploitation of marine resources, exemplified by dwindling fisheries, compounds the issue. These concerning trends are rapidly intensifying, resulting in severe economic distress and social conflict, thereby endangering coastal economies, livelihoods, and strategic ecosystems within the selected LMEs.

3. Mexico ranks fifth globally in nitrogen input into its coastal waters and anthropogenic nutrient over-enrichment is the main driver of eutrophication and hypoxia along the LME coasts. In GoM and CLME record setting red algal blooms events have become a threat to tourism and fishing activities. Overexploitation of marine resources compounds the issue. These trends are rapidly intensifying, causing severe economic distress and social conflict, placing coastal economies, livelihoods, and ecosystems in the selected LMEs at considerable risk. More specifically, in the Isthmus of Tehuantepec landscape, agriculture and livestock activities—along with the oil industry and both industrial and domestic discharges—are the primary sources of water nutrient pollution. This issue is exacerbated by the presence of eight active Wastewater Treatment Plants (WWTPs) with a total capacity of 249.0 liters per second. The primary pollutants found in water bodies (both surface and groundwater) include nitrites, ammonia nitrogen, nitrates, orthophosphates, and suspended solids (see Annex 12). Hypoxia is also a concern, as the Mexican East Pacific registers areas with oxygen concentrations below 30% saturation (Masque et al., 2019). This landscape is close to the Eastern Pacific Oxygen Minimum Zone off the coast of Mexico, where the dissolved oxygen concentration is just 0.45 mL/L (Margolskee et al., 2018)⁷. The National Water Commission (CONAGUA) and its Water Quality Monitoring National Network (RENAMECA) report that the Isthmus of Tehuantepec Lagoon System recorded dissolved oxygen levels from 2013 to 2020 ranging from above 1 mg/l to 15.8 mg/l. Notably, 20.72% of the records indicate concentrations between 2 mg/l and 5 mg/l, suggesting a trend towards anoxic conditions, while 1.93% of the records fall below 2 mg/l, indicating hypoxia.

4. In the Sontecomapan Lagoon landscape, the dominant productive activities are agriculture, livestock farming, and fishing. The main sources of water and soil pollutants include fertilizers and pesticides, domestic and industrial discharges, the oil industry, agricultural waste, dredging, and land use changes such as deforestation. The region has two active WWTPs, providing a total capacity of 99.0 liters per second. Common pollutants in surface and groundwater include nitrites, ammonium, nitrates, phosphates, and orthophosphates. Records from CONAGUA/RENAMECA from 2013 to 2020 show dissolved oxygen concentrations between 4.2 mg/l and 9.3 mg/l.

Although there are no records indicating anoxic conditions (below 2 mg/l), 3.85% of the records reflect levels between 2 mg/l and 5 mg/l, suggesting a potential trend towards anoxicity. In the Hondo River basin landscape, the main sources of water and soil pollution stem from agricultural and cattle-raising activities, including pesticides, agrochemicals, fertilizers, and those related to sugar production. Additional pollution arises from domestic waste discharges and recreational activities. The region has seven WTPs with a total capacity of 179.0 l/s. 8 Records from CONAGUA/RENAMECA dating from 2012 to 2020, show dissolved oxygen levels between above 1 mg/l and 17.58 mg/l. While most records are above 5 mg/l, 22.43% indicate a trend toward anoxic conditions (values between 2 mg/l and 5 mg/l), and 1.90% refers to hypoxia.

5. The associated drivers that must be addressed to reduce land-based pollution include percolation from open landfills, wastewater discharge from existing and expanding urban zones, fertilizer runoff from agricultural lands and pastures, driven by increased food production needs, and industrial waste. Concurrent deforestation due to agriculture, livestock, and urban growth harms communities, particularly those lacking clean water, sanitation, and waste management. A lack of social awareness and inclusion, and stakeholder coordination underscores the need for integrated landscape and watershed management strategies.

Baseline

6. Promoting a sustainable ocean economy is a top priority for Mexico. In 2018, the country established an Inter-ministerial Commission for the Sustainable Management of Oceans and Coastal Areas and published the Implementation Strategy for a Sustainable Ocean Economy (2021-2024). This strategy aims to outline Mexico's priorities to achieve a sustainable ocean economy based on the five critical areas defined in the "Transformations for a Sustainable Ocean Economy" document by the High-Level Panel for a Sustainable Ocean Economy. Mexico actively participates in the Panel to reinforce its commitment to accelerating efforts to reduce coastal pollution through a strategy that combines climate-smart actions with nature-based solutions.

7. The proposed National Water Plan 2024-2030 (still in the process of being formulated by the new administration) has the following guiding principles: (i) Water policy and national sovereignty; (ii) Mitigation of environmental impact and adaptation to climate change; (iii) Justice and access to water; (iv) Comprehensive and transparent management, which will guide the collaboration of government institutions involved in water management in the following years.

8. The Interoceanic Corridor of the Isthmus of Tehuantepec (CIIT, as per its Spanish acronym) is a federal government development and investment project aimed at fostering regional economic growth within the Isthmus of Tehuantepec region. The proposed project is designed to complement and enhance the investments in CIIT, particularly aligning with one of its five priority objectives: to increase biodiversity and improve the quality of water, soil, and air in a sustainable manner.

9. Existing and planning investments that were mapped total \$113,657,864. This includes national budget allocations for sustainable agricultural production, ecosystem conservation, and sustainable initiatives within the CIIT's influence areas that support key industries for the development poles and in the Rio Hondo watershed. Other investments include the proposed GEF-8 project *Financing Agrochemical Reduction and Management Plus (FARM+) in Mexico* (2024-2030; GEF Project ID 10295), which focuses on increasing the adoption of sustainable and climate resilient agricultural practices in Mexico by unlocking of financial resources and reducing the use of harmful agrochemicals to enhance ecosystems health; and the GEF-8 project ORIGEN: Restoring Watersheds for Ecosystems and Communities (2024-2030; GEF Project ID 11121), which will restore degraded landscapes through an integrated watershed approach, strengthening planning, promoting local restoration actions and mobilizing funding, including the State of Veracruz. It also includes funding through international cooperation, including multiple governmental and non-governmental organizations (NGOs).

10. CIIT's economic activities have environmental impacts on watersheds and coastal lagoon systems within the large marine ecosystems of the Gulf of Mexico (GoM) and the Pacific Central American Coastal (PACA) Large Marine Ecosystems. On the Pacific coast of Oaxaca, the Isthmus of Tehuantepec Lagoon System (Oaxaca), consists of six micro-basins that flow into the Upper and Lower Lagoons, and includes 28 municipalities with a surface of 14,530 square kilometers and a population of 398,479 people. In Veracruz, along the Gulf of Mexico, the Sontecomapan

Lagoon Landscape comprises six micro-basins and encompasses 3 municipalities with a surface of 1,906 square kilometers, housing 229,013 people.

11. Within the Caribbean Sea Large Marine Ecosystem, the Río Hondo watershed drains into Chetumal Bay and Bacalar Lagoon, consisting of two micro-basins located at the southeastern tip of the Yucatán Peninsula. This watershed spans portions of 3 municipalities with a surface of 28,572 square kilometers and a population of 307,116 people and is part of a region experiencing intensified economic activities, which have led to an increase in water pollution.

12. In these three landscapes, land-based pollution from untreated agricultural, industrial, and municipal wastewater in upstream areas negatively impacts the welfare and livelihoods of local communities; this also affects water bodies in the coastal region and contributes to marine hypoxia. Traditional production models for crops, livestock, aquaculture, and fishing not only introduce nutrient contamination but also experience reduced productivity. These models must overcome challenges related to adaptation and innovation in response to the degradation of the resources that form their productive base, and this is exacerbated by the negative effects of climate change.

13. Wastewater treatment plants (PTARs as known by its Spanish acronym) are located in the three landscapes. Municipal wastewater is generated in population centers and collected in urban and rural sewage systems; non-municipal wastewater is generated by other uses, such as self-supplied industry, and is discharged directly into national water bodies without being collected by sewage systems¹. In the Isthmus of Tehuantepec Lagoon System Landscape there are nine Wastewater Treatment Plants (WWTP), with a total installed capacity of 292.2 l/s, of which 88.9% are active, treating a flow of 249.0 l/s. In the Sontecomapan Lagoon Landscape focal site there are two WWTP, with a total installed capacity of 160.0 l/s, both plants are active, treating a flow rate of 99.0 l/s. And in the Río Hondo watershed Landscape focal site there are seven WWTP, with a total installed capacity of 179.0 l/s, and all the plants are active, treating a flow of 102.99 l/s.

Long-term solution

14. Baseline efforts are not enough to reduce nutrient-based pollution and address hypoxia in three critical landscapes/seascapes in the Isthmus of Tehuantepec and the Yucatan Peninsula in Mexico that share borders with three significant LMEs: the GoM, CLME, and PACA. The proposed long-term solution consists of a strategy to improve the evidence base and raising awareness to address nutrient pollution and marine hypoxia, strengthening of policy, regulatory, and investment frameworks to incentivize and finance pollution mitigation, piloting best management practices and investments that showcase innovative solutions to reduce marine hypoxia, and knowledge management and communication to promote learning at the local and subnational levels and the dissemination of information for replication and scaling-up. However, systemic challenges/barriers facing these three LMEs and their associated watersheds, as well as Mexico's response to coastal land-based pollution, persist that hinder achieving this goal: i) Inadequate data on pollution sources and a lack of water quality monitoring at the state and municipal levels, which impede awareness and decision-making; ii) Lack of policy coherence among federal, state, and municipal governments, as well as across different sectors, regarding integrated watershed, landscape, and coastal management; iii) Limited financing and lack of private sector participation in NbS, hindering infrastructure improvements and ecosystem conservation efforts; iv) Insufficient investment in integrated watershed management, wastewater treatment, and NbS; and v) Limited institutional capacities and low social awareness at the state and municipal levels for effectively implementing ecosystem-based approaches.

Contribution to Multilateral Environmental Agreements (MEAs) and National Priorities

15. Mexico is Party to multiple multilateral environmental agreements, including the Convention on Biological Diversity (CBD), which was ratified in December 1993. The country's National Biodiversity Strategy (Estrategia Nacional sobre Biodiversidad de México, ENBioMex²) aligns with global commitments to the CBD and UN Sustainable Development Goals (SDGs). The main objectives of ENBioMex are conserving biodiversity, promoting sustainable use,

¹ Estadísticas del agua en México (EAM) (2021). Evaluación de la calidad del agua. Recovered January 7, 2025 from https://agua.org.mx/wp-content/uploads/2023/10/EAM_2021.pdf

² Mexico's NBSAP abides to CBD guidelines: <https://www.cbd.int/doc/world/mx/mx-nbsap-v2-es.pdf/>.

restoring ecosystems, reducing threats such as deforestation and pollution, and strengthening governance through participatory management. It aims to integrate biodiversity into public policies across sectors and emphasize capacity-building, monitoring, and innovative financing mechanisms like payments for environmental services. This project specifically aligns with Line of Action 3.2 of the National Biodiversity Action Plan for 2016-2030, which focuses on generating, strengthening, and diversifying production and value chains in agriculture, forestry, fisheries, and aquaculture.

16. Mexico also adopted the Kunming-Montreal Global Biodiversity Framework (GBF) in December 2020. The project aligns fully with the GBF and will significantly contribute to targets 2, 7, 10, 21, 22, and 23 (for more details, please refer to the section that discusses Alignment with the GEF focal areas). Moreover, all project activities will promote gender equality in accordance with UNDP gender policies and safeguards.

17. The project also contributes to the achievement of the Sustainable Development Goals (SDGs) by aiming to reduce land-based water pollution and marine hypoxia through Nature-based Solutions (NbS). These NbS offer additional benefits, including reducing the vulnerability of local populations, lowering pollution levels, and decreasing illnesses caused by contamination. Furthermore, the project includes activities designed to strengthen water governance and enhance local capabilities for wastewater treatment. Specifically, the project will support the attainment of the SDGs 1, 3, 6, and 14. For more details, please refer to the section that discusses Alignment with the GEF focal areas.

18. Mexico is also a signatory of the United Nations Framework Convention on Climate Change (UNFCCC) and ratified the Paris agreement in 2015. Mexico has submitted several national communications to the United Nations Framework Convention on Climate Change (UNFCCC). The Biennial Update Report (BUR 3) was submitted in 2022, and the Seventh National Communication (7NC) is currently in preparation³. At the national policy level, Mexico has developed a National Climate Action Strategy (ENCC)⁴, and a Strategic Climate Change Plan for the Agri-Food Sector (PLECCA)⁵, which aims to create a productive, fair, diverse, inclusive, sustainable, low-gas agri-food system that generates low greenhouse gas emissions and is resilient to the impacts of climate change. The updated Nationally Determined Contribution (NDC) for 2022-2030 includes key adaptation components. Among its strategic axes are Axis B, which focuses on resilient productive systems and food security, and Axis C, which emphasizes the conservation, restoration, and sustainable use of biodiversity and ecosystem services. The project results align with several actions outlined in Mexico's Nationally Determined Contribution (NDCs), particularly in Axis D, which focuses on the integrated management of water resources with a focus on climate change. Specifically, the relevant lines of action include D1, which emphasizes the implementation of sustainable practices for the various consumptive uses of water resources while considering the impacts of climate change, and D2, which aims to promote hydrological environmental services through the conservation, protection, and restoration of watersheds, with a special emphasis on nature-based solutions.

19. Mexico's engagement in global efforts to tackle land-based sources of pollution dates back to 1995 when it adopted the Global Program of Action for the Protection of the Marine Environment from Land-Based Activities (GPA). This initiative marked the first step in a worldwide response to the marine pollution crisis.⁶

20. Mexico's involvement in global initiatives such as the High Ambition Coalition for Nature and People (HAC) and the Global Ghost Gear Initiative (GGGI) and collaboration in the Group of Experts on Marine Debris of UNEP underscore its continued dedication to combating international marine pollution. Mexico has also contributed to the UN Decade of Ocean Science for Sustainable Development 2021-2030. It has supported the international legally binding instrument on marine biological diversity in areas beyond national jurisdiction known as Biodiversity Beyond National Jurisdiction (BBNJ). Furthermore, Mexico's participation in Transboundary Diagnostic Analysis/Strategic Action Program (TDA-SAP) processes in key LMEs, along with its collaboration with the High-Level Panel for a Sustainable Ocean Economy (Ocean Panel), aligns with CHO IP's goals and reinforces regional and global collaboration.

³ https://unfccc.int/reports?f%5B0%5D=corporate_author%3A177&f%5B1%5D=document_type%3A626/.

⁴ <https://biblioteca.semarnat.gob.mx/janium/Documentos/Ciga/Libros2011/CD001531.pdf/>.

⁵ https://www.gob.mx/cms/uploads/attachment/file/776923/PLECCA_2022.pdf/.

⁶ Paul, D. 2021. Protecting the Marine Environment from Land-based Activities. Brief #9. IISD Earth Negotiations Bulletin (January): <https://www.iisd.org/system/files/2021-01/still-one-earth-GPA.pdf>

21. Mexico has been a member of the Ramsar Convention on Wetlands since 1986. The project focuses on a variety of wetland habitats, including mangroves, rivers, marshes, lagoons, and estuaries. The following areas are registered as Ramsar Wetlands: Xcalak Reefs National Park, Banco Chinchorro Biosphere Reserve, Bala'an K'aax in Quintana Roo, and Sontecomapan Lagoon Mangroves and Wetlands in Veracruz.

22. Mexico ratified all major multilateral agreements on IPLCs, including the Convention 169 of the International Labor Organization (ILO) on Indigenous and Tribal Peoples in Independent Countries in September 1990.

23. The project builds on past investments such as the GEF-5 Integrated Transboundary Ridges-to-Reef Management of the Mesoamerican Reef - MAR2R (GEF Project ID 5765). Through the Forging Partnerships for the Ocean project, Mexico will contribute to implementing the MAR2R SAP (CCAD, 2023)¹⁰ by strengthening national water quality monitoring programs, fostering multi-stakeholder governance platforms and ensuring economic and sustainable benefits for local communities in the Rio Hondo basin. Additionally, this project will build upon the outcomes of the GEF-5 Catalyzing Implementation of the Strategic Action Programme for the Sustainable Management of Shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+) Project (GEF Project ID 5542) by promoting regional governance frameworks, enhances marine resource management, and encourages sustainable fisheries. Moreover, Mexico is currently participating in the PROCARIBE Project+, that supports the implementation of the 10-year regional CLME+ Strategic Action Programme (CLME+ SAP, 2015-2025).

24. Since March 1983, Mexico has supported the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention) by implementing measures to reduce marine pollution and protect biodiversity. The country actively participates in regional cooperation initiatives, focusing on protocols related to oil spills, protected areas, and land-based pollution.

STRATEGY

25. The Child Project objective (development challenge) is to reduce marine hypoxia and coastal nutrient pollution from agricultural, industrial, and municipal sources associated with three Large Marine Ecosystems (LMEs) in Mexico through integrated watershed management measures that combine policy coherence, infrastructure investments, and nature-based solutions (NbS). The Global Environment Facility (GEF) investment will address the causes of marine hypoxia and coastal pollution in three target landscapes/seascapes: the Isthmus of Tehuantepec Lagoon System, and the Sontecomapan Lagoon in the State of Veracruz, and the Hondo River Basin in the Yucatán Peninsula associated to three LMEs (Annex 3). This will be achieved through the following five interrelated components:

- Component 1: Improving the evidence base and raising awareness to more effectively address nutrient pollution and marine hypoxia.
- Component 2: Supporting the strengthening of policy, regulatory and investment frameworks to incentivize and finance pollution mitigation.
- Component 3: Supporting demonstration of best management practices (BMP) and investments that showcase innovative solutions to reduce marine hypoxia.
- Component 4: Ensuring knowledge management and learning, communication, gender and stakeholder engagement are integrated across the IP, including programmatic coordination and reporting.
- Component 5: Monitoring and evaluation (M&E).

26. Mexico's project aligns with the GEF-8 CHO IP goals by addressing coastal pollution from agricultural runoff, municipal wastewater, and industrial water pollution. In addition is fully integrates the IP's pragmatic approach. This strategy involves enhancing governance, promoting policy coherence and investment, and implementing NbS.

27. **Component 1** (aligned with Component 1 CHO-IP) focuses on increased availability of technical and scientific information at the subnational and national levels to inform decision-making and promote collaborative action to reduce water pollution and marine hypoxia in the project's three target landscapes/seascapes.

28. **Component 2** (aligned with Component 2 of the CHO-IP) aims to improve regional and national governance to reduce water pollution with NbS and to put in place an enabling environment that is conducive to promote investments with water pollution reduction objectives.

29. **Component 3** (aligned with Component 3 of the CHO-IP) emphasizes the strengthening of technical, organizational, and financial capacities of local organizations to promote land-based water pollution reduction measures through good practices and NbS, and the adoption of good practices and NbS to decrease water and coastal pollution and to address marine hypoxia.

30. **Component 4** (aligned with Component 4 of the CHO-IP) contributes to management and learning, communication, gender mainstreaming, and stakeholder engagement to effectively support program and project objectives and fully integrate these across the IP, and to ensure programmatic coordination, coherence, and reporting.

31. In addition, Mexico's project acknowledges the need for a programmatic approach to address marine hypoxia as stated by the CHO IP and summarized below:

i. Brief statement on the need for programmatic approach

Marine hypoxia is a transboundary issue —it is not confined to a single country or a single region but is a global issue with global impacts. Consequently, a programmatic approach that addresses the identification and implementation of collaborative solutions at global, regional, and national levels is the most effective way to address the problem over the long-term. More information on the rationale for a programmatic approach is given in the Program Framework Document (PFD).

ii. Summary of the CHO IP

The GEF-8 Clean and Healthy Ocean Integrated Program (CHO IP) targets nitrogen, phosphorus, and organic matter released by agri-food (crops, livestock, poultry and aquaculture) and industrial and municipal systems, as nutrient pollutants generated by these sectors are the primary agents causing harmful algal blooms (HAB) and eutrophication that leads to hypoxia. The overall goal of the CHO-IP, to which the *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* contributes, is to address marine hypoxic zones by curbing coastal pollution from agriculture, industrial and municipal sources through policy and regulatory measures and infrastructure investments combined with nature-based solutions.⁷ The CHO IP consists of 15 Child Projects,¹ Global Coordination Project (GCP), and 14 Country Projects (CP) spanning Latin America, Africa, Asia and the Middle East (Maldives, Thailand, Sri Lanka, Vietnam, Venezuela, Mexico, Trinidad and Tobago, Panama, St. Kitts and Nevis, Grenada, Jordan, Moldova, Peru, and Madagascar), which altogether are included within 9 LMEs.

iii. Commitments of the individual Child Project

As a participant in the CHO IP, under the overall coordination and support of the Global Coordination Project (GCP), the *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project will contribute to addressing the issues affecting land-based nutrient pollution and marine hypoxia identified in the programmatic Theory of Change and following the PFD (see Figure 1). The *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project agrees to follow principles that will guide their collaboration on Knowledge Management and Learning (KML), communications, gender and stakeholder engagement, and programmatic coordination and reporting, as well as monitoring and

⁷ Please see the GEF-8 programming directions for a full description of this IP: https://www.thegef.org/sites/default/files/2023-01/GEF-8_Programming_Directions.pdf

evaluation (M&E). These principles and reporting frameworks will be defined and agreed upon during the Inception phase of the program.

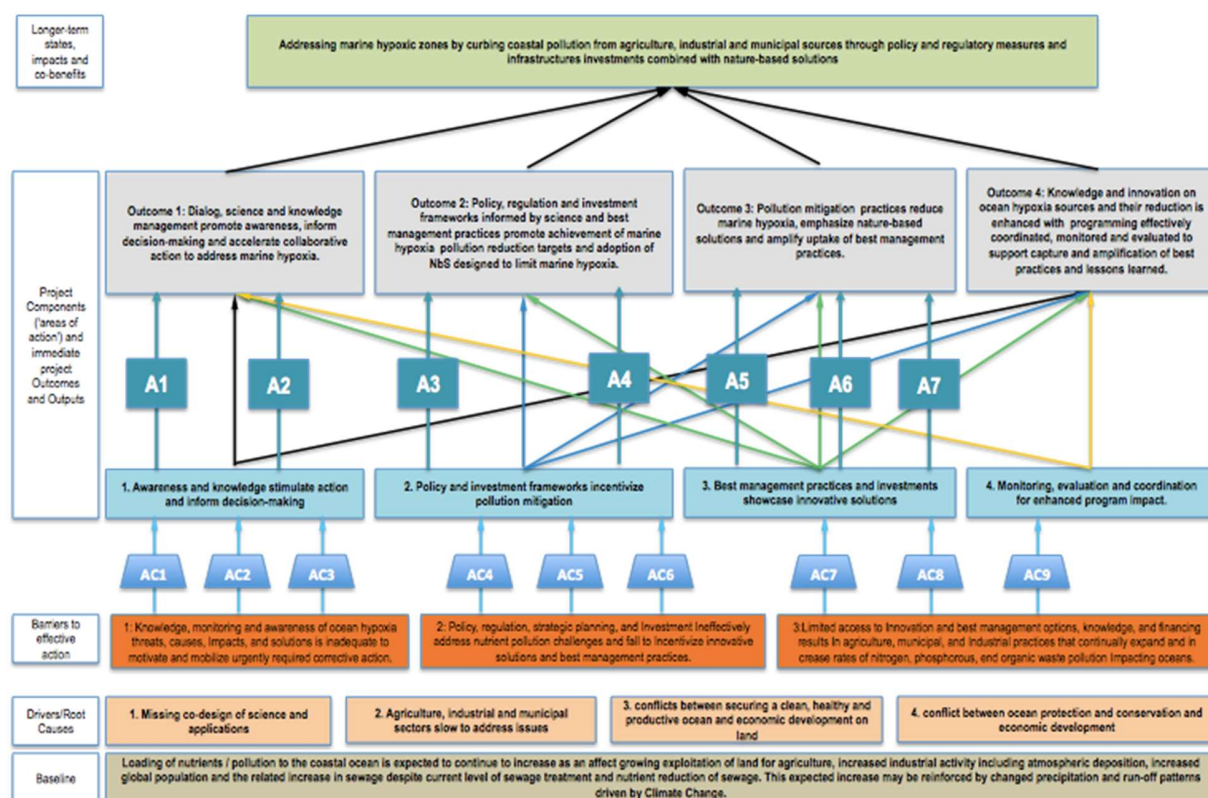
More specifically, the *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project will contribute to and engage with regional and global learning, help build a resource information base and best management practice archive, strengthen scientific monitoring, shared capacity building efforts such as thematic Communities of Practice and other common activities established by the GCP that link and support action on nutrient pollution and marine hypoxia issues at global, LME, and national levels, and in the process help shape a global network of informed stakeholders and countries concerned with and better equipped to address this critical issue.

iv. Benefits from Child Project involvement in Program

As discussed in the PFD, participation of the *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project in the larger CHO IP, provides additional opportunities and resources not available to the *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project itself which will improve the delivery and effectiveness of its results at the national as well as regional and global levels, and deliver impact at a much wider scale than would be possible as a stand-alone project. As a member of the CHO IP, the *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project includes a set of standard activities that will link with activities at the regional and global levels, via the GCP, providing greater connectivity and networking between the Program's Child Projects, and enhanced opportunities for awareness raising and knowledge exchange (particularly technical knowledge), stakeholder dialogue and innovation at scale. Furthermore, participation in the Program offers the *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project the opportunity to access additional targeted technical capacity not available to the project alone, to enhance achievement of project results, such as support through the GCP to guidance on improving financing for investments that include measures to address nutrient pollution and marine hypoxia and technical capacity on monitoring and tracking of nutrient pollution, hypoxia, and coastal health to promote science-based strategic and adaptive management. Participation in the overall Program will also help ensure that the project's activities fully and meaningfully integrate challenges and *opportunities* specific to women, youth and Indigenous peoples, employ common messaging and communications tailored for impact.

Involvement in the wider CHO IP will help maximize the *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project resources and capacity to facilitate and drive transformational change by cohesively and more effectively addressing hypoxia drivers (e.g., agriculture and municipal/industrial wastewater pollution) at scale.

32. The *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project addresses key issues affecting land-based nutrient pollution and marine hypoxia and aligns well with the programmatic Theory of Change (ToC) set out in the CHO IP PFD (Figure 1).



Simplified set of key assumptions and drivers

Assumptions describing the delivering of the IP (A)

A1. Stakeholders will engage in dialogue that will promote science-based decision making because trust will be strengthened by joint monitoring protocols, improved knowledge of hypoxic zones, and agreed targets

A2. The constituency for tackling hypoxia will be expanded because of the awareness raised by the IP, therefore new linkages will be created with heretofore unrelated issues and priorities, including improving global health, nutrition, food security, tourism, etc.

A3. With access to good information, BMP, etc., the knowledge generated by the IP will be applied to inform dialogue and sound decision making.

A4. Governments and other stakeholder will incentivize innovative solutions, BMP and NBS because there will be more bankable project to reduce pollution linked to hypoxia.

A5. Investors will step forward with new investments because the policy environment will be strengthened to incentivize investments- by agreed targets and internalized costs.

A6. Multi-sectoral approaches and an expanded policy constituency will generate more innovative policy and regulation to drive the update of BMP and NBS to reduce hypoxia.

A7. The proof of concept / knowledge shared by piloting / demonstrating BMPs shared globally through KM platforms will trigger more investment in hypoxia prevention and reduction.

Assumption describing the Opportunity for Change (AC)

AC1. Increased the scientific capacity to observe.

AC2. Improved knowledge of the location and condition of hypoxic zones, awareness enhanced, and reduction targets can be proposed.

AC3. With agreed nutrient reduction targets at LME and national levels, science helps to incentivize investments at LME scale.

AC4. Co-designed protocol for measuring relevant data to curb hypoxia caused by pollution, strengthens the trust for agreed targets, and more informed policy dialogue at all levels.

AC5. The right policy framework is created for the market to capture costs and benefits of solutions and internalize costs.

AC6. Targets are translated into regulatory framework to better support planning and investments.

AC7. The creation of more investment opportunities and bankable projects for government and other stakeholders, incentivizes innovation solutions and BMP.

AC8. Successful example of NBS are promoted and documented, incentivizing other to take similar actions.

AC9. The effective monitoring and coordination of the IP allows for effective identification and dissemination of BMP and lessons learned.

Figure 1 – Theory of Change of the Clean and Healthy Ocean Integrated Program (CHO IP).

33. The Child Project's ToC (Figure 2) describes the strategy to deliver global environmental benefits (GEBs) through four impact pathways: a) harmonious coexistence pathway; b) reduction of illegality pathway; c) sustainable life options pathway; and d) intercultural knowledge management pathway. A central aspect to achieving the project objective will be to directly collaborate with key public, private sector, and civil society stakeholders, including women, indigenous peoples, and other local communities. This is an aspect of the project that is embedded all impact pathways and will also be promoted through a Comprehensive Stakeholder Engagement Plan (Annex 8), an Indigenous Peoples Planning Framework (IPPF, which will guide the development of Indigenous Peoples Plans [IPP], in Annex 9.1), and a Gender Action Plan (Annex 10).

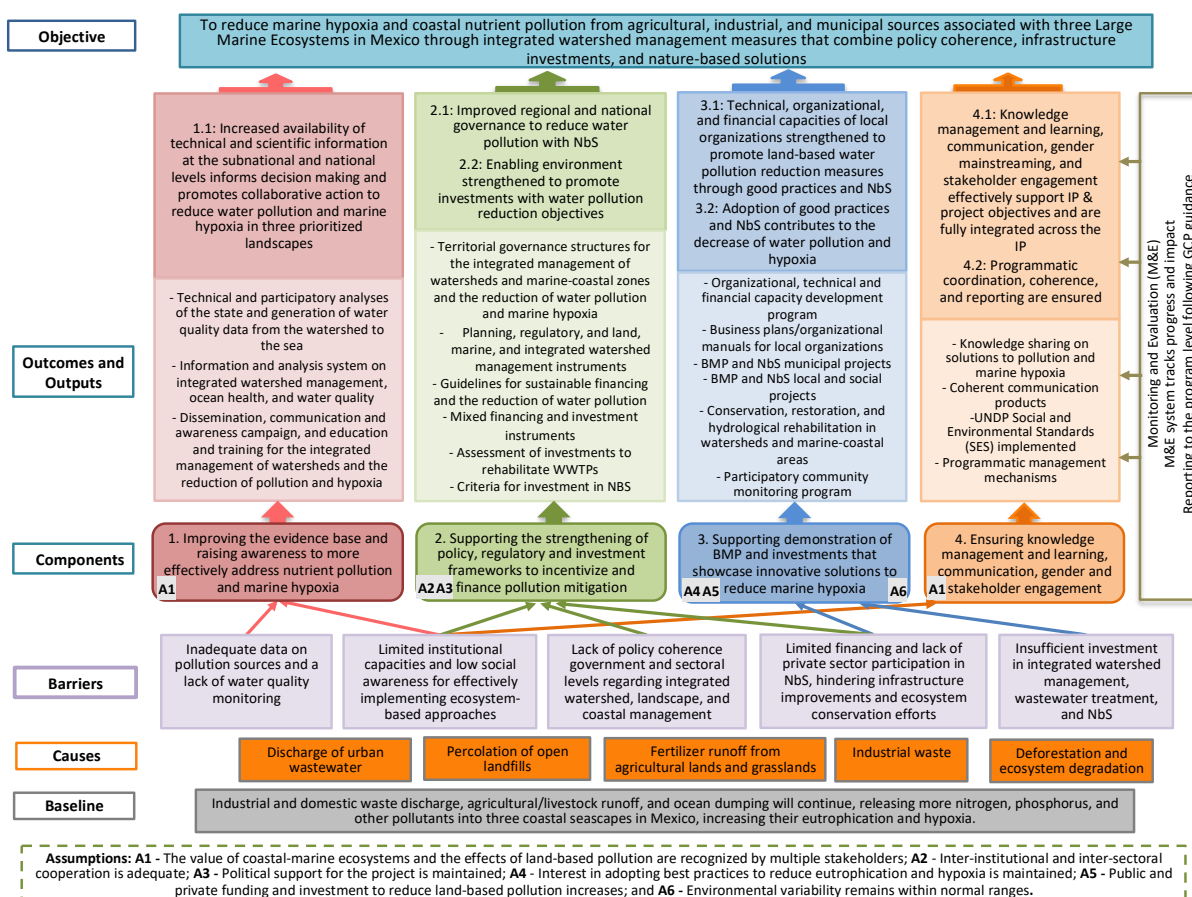


Figure 2. Country Project Theory of Change Diagram.

34. The intended outcomes of Component 1, with a causal pathway for information for decision making and awareness, will result in collaborative action for sharing of data on nutrient, oxygen and marine hypoxia for the three target landscapes/ seascapes and increased awareness locally and among sectors and institutions to promote a behavioral and transformational change to reduce land-based nutrient pollution and marine hypoxia. The related key assumption outlined in Figure 2 is: A1 – The value of coastal-marine ecosystems and the effects of land-based pollution are recognized by multiple stakeholders. These actions will address the barrier of inadequate data on pollution sources and a lack of water quality monitoring at the state and municipal levels, which impede awareness and decision-making; and limited institutional capacities and low social awareness for effectively implementing ecosystem-based approaches.

35. The intended outcomes of Component 2, with a causal pathway to enabling policy, governance, and investment frameworks, will result in strengthened governance structures and available mixed-finance investment mechanisms for the implementation of actions to reduce and mitigate nutrient-based water pollution from agricultural, industrial, and municipal sources. The related key assumptions outlined in Figure 2 are: A2 - Inter-institutional and inter-sectoral cooperation is adequate; and A3 - Political support for the project is maintained. These actions will address the barrier of limited institutional capacities and low social awareness for effectively implementing ecosystem-based approaches; lack of policy coherence among federal, state, and municipal governments, as well as across different sectors, regarding integrated watershed, landscape, and coastal management; and limited financing and lack of private sector participation in NbS, hindering infrastructure improvements and ecosystem conservation efforts.

36. The intended outcomes of Component 3, with a causal pathway of innovative solutions for marine hypoxia, will promote pollution and marine hypoxia reduction and mitigation through BMP and NbS at municipal and rural levels, as well as through restoration and conservation with local participation. The related key assumptions outlined in Figure 2 are: A4 - Interest in adopting best practices to reduce eutrophication and hypoxia is maintained; A5 - Public and private funding and investment to reduce land-based pollution increases; and A6 - Environmental variability, including climate change, remains within normal ranges. These actions will address the barrier of limited financing and lack of private sector participation in NbS, hindering infrastructure improvements and ecosystem conservation efforts; and insufficient investment in integrated watershed management, wastewater treatment, and NbS.

37. The intended outcomes of Component 4, with a causal pathway towards knowledge management and learning, will promote the effective documentation, management, and sharing of knowledge of nutrient pollution and marine hypoxia and innovative solutions at local, subnational, national, and international levels, and communications activities and products for learning and stakeholder engagement. The related key assumption outlined in Figure 2 is: The value of coastal-marine ecosystems and the effects of land-based pollution are recognized by multiple stakeholders. These actions will address the barrier of limited institutional capacities and low social awareness for effectively implementing ecosystem-based approaches.

38. The identified causal pathways are based on the analysis of threats, underlying causes and barriers identified and validated during the Project Preparation Grant (PPG) phase of the project. The supporting outputs and outcomes for each pathway, and the assumptions that they are built upon, will properly address the problems and barriers described above: reducing nutrient-based watershed and coastal pollution and marine hypoxia in three target landscapes/seascapes in southern Mexico. In addition, the project supports transformational change in line with the GEF-8 Policy Directions and Strategic Positioning Frameworks; thus, it considers the four levers of transformation that can support systemic change: governance and policies, financial leverage, multi-stakeholder dialogues, and innovation and learning.

39. The project's ToC considers the active participation of public, private, and civil society stakeholders, as well as actions to contribute to gender equality and the empowerment of women and the active participation of indigenous peoples living in the target landscapes/seascapes. The ToC is a dynamic framework that will be continually managed and appraised during project implementation. This strategy will deliver GEBs as well as social and economic co-benefits at the local level. The interrelated components described above will be the means through which this is achieved.

40. The expected GEBs are:

- 11,000 ha of land and ecosystems under restoration
- 211,277 ha of landscapes under improved practices
- 590,377 ha of marine habitat under improved practices
- 5,994,766 tCO₂e of GHG emissions mitigated
- Three shared water ecosystems with improved management with reduced pollution and hypoxia.
- 67,065 people benefiting from GEF-financed investments (50% women)

41. To achieve these GEBs, the project adopts a dual-pronged approach that combines systemic actions with targeted local interventions. This strategy tackles root causes by integrating policy coherence, regulatory frameworks, and institutional capacity-building with tailored, on-the-ground solutions. At the **systemic level**, *where the majority of GEBs will be realized*, the project strengthens governance and enhances institutional capacities to support integrated watershed management. By embedding NbS into policies and investment frameworks, it promotes sustainable practices and aligns decision-making with long-term pollution reduction objectives. Improved data collection, robust monitoring systems, and inclusive multi-stakeholder collaboration will drive informed action and broad participation. At the **local level**, targeted interventions will pilot innovative solutions and BMPs to address nutrient pollution and foster ecosystem restoration. These initiatives will actively engage local governments, Indigenous Peoples, and communities, leveraging traditional knowledge to design scalable, community-driven solutions. Demonstration projects will generate concrete evidence, build stakeholder trust, and facilitate replication in other regions.

42. The project has been designed to ensure resilience to future changes by addressing the drivers of nutrient pollution and marine hypoxia, in particular wastewater discharge from existing and expanding urban zones, fertilizer runoff from agricultural lands and pastures (driven by increased food production needs), and industrial waste. The project design considers different future scenarios with changes in demand for food production and changes in wastewater treatment strategies. The future with accelerated food production and municipal wastewater discharges with improper treatment is likely to see a significant increase in the use of fertilizers and production of organic matter and other wastes. These changes could undermine government and private sector planning and investment capacity in reducing nutrient pollution and marine hypoxia efforts and to build public awareness about the negative impacts of non-sustainable production practices. This scenario may also result in uncertain livelihoods for local communities due to lack of clean water and sanitation, and loss of economic opportunities due to the degradation of terrestrial and coastal-marine ecosystems on which they depend. A future with food production and wastewater management using BMPs and NbS, along with enhanced information for decision-making and increased financing to support sustainable production and alternative and innovative treatment solutions, will be conducive to increase government and private sector planning and investment capacity to reduce nutrient pollution and marine hypoxia and to develop integrated landscape and watershed management strategies with environmental and socioeconomic benefits. Under this scenario, there will also be greater institutional and public awareness about nutrient pollution and marine hypoxia threats, causes, impacts, and solutions. Finally under this future scenario, there will be healthier coastal-marine ecosystems with benefits for biodiversity and local communities, and that will contribute to mitigate the impacts of climate change and ensuring enduring outcomes.

Alignment with the GEF focal area(s) strategy and/or Impact Program strategies

43. The project is aligned with the GEF-8 Biodiversity Focal Area Strategy, more specifically with Objective 1: To improve conservation, sustainable use, and restoration of natural ecosystems. This is a Child Project under the GEF-8 CHO IP.

44. Mexico's proactive engagement in addressing hypoxic zones within the GoM, CLME, PACA LMEs significantly advances the CHO IP's goal of fostering clean and healthy oceans worldwide. The project places a strong emphasis on aligning with the global and regional framework of the CHO IP, particularly concerning the selected LMEs, which span national borders and necessitate coordinated action across multiple countries. Special attention will be given to continuing national efforts to promote regional cooperation, South-South cooperation, knowledge management, gender transformative measures, and technical exchanges, recognizing their critical role in comprehensive LME management.

45. Focusing on the Isthmus of Tehuantepec and the Yucatan Peninsula region, Mexico's proposal seeks to counter upstream municipal, agricultural, and industrial pollution sources affecting LMEs through enhanced governance and policy frameworks, improved landscape management, deployment of nature-based solutions (NbS), and strategic investments in infrastructure improvement. The proposed project is intended to complement and leverage the investments of the Interoceanic Corridor of the Isthmus of Tehuantepec development project (CIIT, by its acronym in Spanish), which has among its priority objectives to increase biodiversity and improve water, soil, and air quality with a sustainable approach in the region.

46. This proposal aligns with the initial draft of the National Development Plan for 2025-2030, which is currently being prepared. The plan includes General Axis 4: Sustainable Development, featuring two key strategies: "Republic with the Right to Water" and "Republic that Protects the Environment and its Natural Resources." Project partner institutions are expected to adhere to this national plan and to the sectoral policy instruments related to the environment, agriculture, and water, which are still being developed as of early 2025. Additionally, other instruments addressing international commitments remain in effect, such as Mexico's National Biodiversity Strategy and Action Plan 2016-2030 (ENBioMex)⁸, particularly Line of Action 3.2, which focuses on the generation, strengthening, and diversification of agricultural, forestry, fisheries, and aquaculture production and value chains.

47. The project aims to restore landscapes, with a primary focus on reducing excess nutrient runoff into the environment. It promotes the adoption of best management practices (BMPs) in urban and rural production units and enhances access to knowledge in line with CHO-IP's guidelines. Additionally, the project ensures the participation of women, youth, Indigenous Peoples, and local communities in decision-making processes related to its objectives. By adhering to UNDP safeguards, the project also upholds gender equality. These efforts contribute to the Kunming-Montreal Global Biodiversity Framework, as described below:

- Target 2: Restore 30% of All Degraded Ecosystems. The project will invest in restoring degraded terrestrial, marine, and coastal ecosystems within the three prioritized landscapes.
- Target 7: Reduce Pollution to Levels That Are Not Harmful to Biodiversity. The project focuses on pollution prevention and reduction by promoting the adoption of Best Management Practices (BMPs) and Nature-based Solutions (NbS). It aims to mitigate excess nutrient runoff into the environment.
- Target 10: Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries, and Forestry. This project promotes sustainable practices in agriculture, forestry, and fisheries by encouraging the adoption of BMPs and NbS in rural production units located within prioritized intervention sites.
- Target 21: Ensure That Knowledge Is Available and Accessible to Guide Biodiversity Action. Project activities will include developing an inclusive participatory community monitoring plan for biodiversity and water quality in river basins and marine-coastal areas. Additionally, the project will enhance access to knowledge by creating an information and analysis system to collect, systematize, and exchange data regarding river basin management, ocean health (including marine hypoxia), and water quality (focusing on nutrient and oxygen levels).
- Target 22: Ensure Participation in Decision-Making and Access to Justice and Information Related to Biodiversity for All. The project will ensure that women, youth, Indigenous Peoples, and local communities are actively involved in all its activities.
- Target 23: Ensure Gender Equality and a Gender-Responsive Approach for Biodiversity Action. All project activities will promote gender equality in alignment with UNDP gender policies and safeguards.

48. The project also contributes to the achievement of the SDGs by aiming to reduce land-based water pollution and marine hypoxia through NbS. These NbS offer additional benefits, including reducing the vulnerability of local populations, lowering pollution levels, and decreasing illnesses caused by contamination. Furthermore, the project

⁸ Mexico's NBSAP abides to CBD guidelines: <https://www.cbd.int/doc/world/mx/mx-nbsap-v2-es.pdf/>.

includes activities designed to strengthen water governance and enhance local capabilities for wastewater treatment. Specifically, the project will support the attainment of the following SDGs:

- SDG 1: End poverty in all its forms everywhere, mainly target 1.5, which focuses on building the resilience of the poor and vulnerable populations. Implementing NbS in watersheds and coastal zones addresses pollution and helps reduce vulnerability to climate-related extreme events and other economic, social, and environmental shocks and disasters.
- SDG 3: Ensure healthy lives and promote well-being for all at all ages, especially target 3.9, which aims to significantly reduce the number of deaths and illnesses caused by hazardous chemicals, as well as by air, water, and soil pollution and contamination. The project's primary objective of water pollution reduction aligns with this goal.
- SDG 6: Ensure availability and sustainable management of water and sanitation for all, particularly targets 6.3 and 6.b. Target 6.3 focuses on improving water quality by reducing pollution and decreasing the percentage of untreated wastewater. At the same time, 6.b emphasizes the importance of supporting and strengthening community participation in water and sanitation management. The project includes activities that strengthen water governance and improve local capacities for wastewater treatment.
- SDG 14: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development, mainly targets 14.5, 14.a, and 14.b. Target 14.5 is dedicated to conserving coastal and marine areas, while target 14.a highlights the importance of increasing scientific knowledge, and target 14.b emphasizes the need to support small-scale fishers. In alignment with these targets, the project will invest in conserving coastal and marine areas by reducing water pollution and marine hypoxia. It will also promote an information system designed to collect, organize, and share knowledge on comprehensive river basin management, ocean health, and water quality. Additionally, the project aims to support small-scale fishers in adopting sustainable fishing practices, which will help to mitigate the effects of hypoxia on fish stocks.

RESULTS AND PARTNERSHIPS

Expected Results:

Component 1. Improving the evidence base and raising awareness to more effectively address nutrient pollution and marine hypoxia.

49. This component enhances the evidence base and awareness to address nutrient pollution and marine hypoxia. It improves scientific data quality and availability at national and subnational levels in three prioritized landscapes. Key actions include diagnosing water quality and pollution sources (municipal, agricultural, aquaculture, industrial), establishing an inter-institutional system to share knowledge on basin management and ocean health, and conducting inclusive campaigns to promote pollution reduction in three LMEs: Gulf of Mexico, Caribbean Sea, and Pacific Central American Coastal.

Outcome 1.1. The quality, management, and availability of scientific and technical data required by decision-makers to address nutrient pollution and marine hypoxia are improved at the subnational and national levels, in particular, in three prioritized landscapes.

Output 1.1.1. Technical and participatory assessments of the status of water quality data from source-to-sea (water pollution and marine hypoxia) in three target landscapes, including monitoring of water pollution and marine hypoxia from four sources (municipal, agricultural, aquaculture and industrial), based on historical information.

50. The output focuses on diagnosing water quality and pollution in three prioritized landscapes through a comprehensive inventory of pollution sources and infrastructure, conducted with local authorities and key

stakeholders. The inventory will be validated through participatory activities, with a gender perspective and inclusive language. A monitoring strategy will guide participatory community efforts, citizen science approaches, and data contributions to UNESCO-IOC assessments. Capacity-building activities include technical training, international workshops, and participation in nitrogen flow analysis and data-sharing initiatives, ensuring robust monitoring and improved understanding of nutrient pollution and marine hypoxia. The following activities will be implemented:

- 1.1.1.1. Conduct an inventory of pollution sources and associated infrastructure within watersheds in the three target landscapes based on documentary information and field verification with local authorities and citizen participation. This inventory must consider the participation of SADER, SEMAR, CIIT, CONABIO, CONAGUA, CONAPESCA, CONANP, INECC, and IMIPAS. It will also be important to consider the installed capacities of academic institutions, the Ministry of Health and the Federal Commission for the Protection against Sanitary Risks (COFEPRIS), particularly state water quality laboratories.
- 1.1.1.2. Draft a report of the participatory activities for the validation of the inventory, including recommendations to fill the information gaps, which is prepared with citizens, with inclusive language and with a gender perspective.
- 1.1.1.3. Develop an inclusive monitoring strategy that provides guidelines for the participatory community monitoring plan (Output 3.2.4), which considers existing sources of information on monitoring water quality and hypoxia.
- 1.1.1.4. Contribute to inputs related to citizen science approaches addressing national needs and capabilities provided by GCP.
- 1.1.1.5. Implement the participatory monitoring strategy for water quality from source-to-sea (water pollution and marine hypoxia) (Output 3.2.4), following the Standardized Water Quality Data Collection Protocol to be developed by project.
- 1.1.1.6. Participate in UNESCO's Intergovernmental Oceanographic Commission (IOC) organized technical training courses online and in person.
- 1.1.1.7. Contribute to the assessment conducted by IOC to evaluate capacities and gaps of participating countries to collect, monitor and track and report on oxygen and nutrient (nitrogen and phosphorus) concentrations in year 1, 3, and 5 of project implementation.
- 1.1.1.8. Support the attendance of at least one national expert to attend the international summer schools in 2027 (venue to be confirmed) sponsored by IOC.
- 1.1.1.9. Participate in data collection and comparative analysis of nitrogen flows and budgets across IP countries, led by the International Nitrogen Management System (INMS), and associated training and data sharing events.

Output 1.1.2. Information and analysis system to collect, systematize and exchange knowledge on comprehensive river basin management, ocean health (marine hypoxia) and water quality (including nutrient and oxygen data) at a subnational level in operation, managed inter-institutionally, with assured interoperability, and accessible to different audiences.

51. The project will establish an inter-institutional system including participation from academic institutions to share open data on water quality, nutrient pollution, and marine hypoxia, integrating contributions from key organizations and GEF projects in three priority LMEs. A web platform will host field, satellite, and Source-to-Sea data, with tools for analysis, early warnings, and periodic reporting. The system will incorporate citizen science, develop indicators with a research group, and align with IOC and FAO to create a national ocean oxygen and nutrient data strategy. Data will support global repositories and reports, with inclusive outreach and training to encourage usage. The following activities will be conducted:

- 1.1.2.1. Establish inter-institutional agreements to share data for the integration of an information system; for example, between CONAGUA, SEMAR and CONABIO, and with the agencies implementing GEF projects related to the three priority LMEs: (i) "Improve water quality, rehabilitate the coastal and marine ecosystems, and avoid depletion of marine resources in the Gulf of Mexico Large Marine

Ecosystem (GoM-LME)”⁹, (ii) “Integrated Transboundary Ridges-to-Reef Management of the Mesoamerican Reef” in the Caribbean Sea LME¹⁰ and (iii) “Towards Joint Integrated, Ecosystem-based Management of the Pacific Central American Coastal Large Marine Ecosystem (PACA)”¹¹. In addition, the institution that will host the system will be defined (for example, SIMAR-CONABIO), and will guarantee the technological capabilities.

- 1.1.2.2. Provide data and information available for the development for the regional Source-to-Sea (S2S) assessments under CHO IP’s coordination.
- 1.1.2.3. Develop an information and analysis system based on a web platform (explorer) that includes open data from all parties involved (CONABIO, CONAGUA, CONANP, CIIT, SEMAR, IMIPAS, INECC, state and municipal governments, as well as civil society Source-to-Sea organizations [Ocean Foundation and Global Water Watch] and academic institutions [Universidad del Mar, Ecosur Chetumal, Universidad Veracruzana, Tecnológico de Boca del Río, among others]), with field, satellite and Source-to-Sea numerical models of water quality including analysis tools, early warning systems and periodic reporting.
- 1.1.2.4. Establish a research and development group (with the participation of the institutions mentioned above) to evaluate the existing indices and define indicators and implement them in the system.
- 1.1.2.5. Share the information generated by citizen science through the participatory community monitoring plan (refer to Output 3.2.4).
- 1.1.2.6. Participate in coordination meetings and related activities to ensure that environmental data obtained during the project period is available to be included in GO2DAT (Global Ocean Oxygen Database and Atlas).
- 1.1.2.7. Develop, in collaboration with IOC and FAO, a national strategy for ocean oxygen and nutrient data management.
- 1.1.2.8. Contribute available ocean oxygen and nutrient data to relevant data repositories for global and IP assessments.
- 1.1.2.9. Contribute to the State of the Ocean Report led by IOC in 2026 and 2028 (GCP Output 2.1.1.).
- 1.1.2.10. Develop gender responsive outreach and training activities to encourage using the information system in Mexico.

Output 1.1.3. Broad, permanent, and inclusive outreach, communication and awareness, and education campaigns promote linkages and commitments related to integrated watershed management and pollution and hypoxia reduction in key areas of three large marine ecosystems - LMEs (Gulf of Mexico, Caribbean Sea and Pacific Central American Coastal, PACA).

52. This output promotes awareness of marine hypoxia and nutrient pollution through targeted, inclusive campaigns. Activities include a national baseline assessment, identification of target audiences and key behaviors, and a gender assessment to address gaps and ensure equitable benefits. Culturally tailored campaigns will engage academic institutions, indigenous organizations, and civil society to foster reforestation and pollution reduction efforts. Training will prepare local promoters, including women and indigenous populations, to sustain these initiatives. Partnerships with relevant entities will address gender issues, and campaign effectiveness will be monitored using Knowledge, Attitude, and Practice (KAP) indicators. The following activities will be implemented:

- 1.1.3.1. Develop a landscape baseline assessment on awareness of marine hypoxia and nutrient pollution.
- 1.1.3.2. Identify target audiences (for example, Organizations of the Social Sector of the Economy [OSSE]¹², farmer associations, chambers of industry/trade/commerce/fisheries, local educational

⁹ GEF Project 6952: Improve water quality, rehabilitate the coastal and marine ecosystems, and avoid depletion of marine resources in the Gulf of Mexico Large Marine Ecosystem (GoM-LME).

¹⁰ GEF Project 5765: Integrated Transboundary Ridges-to-Reef Management of the Mesoamerican Reef (Caribbean Sea LME).

¹¹ GEF Project 10076: Towards Joint Integrated, Ecosystem-based Management of the Pacific Central American Coastal Large Marine Ecosystem (PACA)

¹² According to the Law of the Social and Solidarity Economy of Mexico, the Organizations of the Social Sector of the Economy (OSSE) are ejidos, communities, worker organizations, cooperative societies, companies that belong mainly or exclusively to the workers and, in general, all forms of social organization for the production, distribution and consumption of socially necessary goods, and services.

institutions, civil society organizations, among others), as well as issues and behaviors to be addressed in the three prioritized landscapes.

- 1.1.3.3. Conduct a gender/socio-economic assessment to identify gender gaps and assess how women and men are likely to be affected by and benefit from project activities related to integrated watershed management and pollution and hypoxia reduction.
- 1.1.3.4. Design outreach, communication, and awareness gender-sensitive campaigns that are culturally suitable for each target audience, considering the appropriate dissemination channels and media. Academic institutions such as Universidad del Mar, Ecosur Chetumal, and Universidad Veracruzana, Tecnológico de Boca del Río, among others, along with the Veracruz Academy of Indigenous Languages, the Houses of Culture in the State of Veracruz, and SEDEMA Veracruz with its *Fabriquemos Agua* Program, will collaborate in the design and implementation of an awareness campaign related to integrated watershed management and pollution and hypoxia reduction.
- 1.1.3.5. Adapt and disseminate GCP Social Media materials to raise awareness on marine hypoxia and create one annual awareness raising campaign at the landscape level.
- 1.1.3.6. Provide training to both women and men as local promoters (community, teachers, etc.), including the indigenous population, to ensure the sustainability of the awareness campaigns.
- 1.1.3.7. Create formal/informal partnerships with select entities to address gender issues in relation to nutrient pollution and marine hypoxia. Provide support to leaders of relevant women's organizations to participate in leadership meetings or events to share their knowledge, experience and learn from others regarding integrated watershed management and pollution and hypoxia reduction.
- 1.1.3.8. Evaluate the coverage and effectiveness of campaign actions through the use of KAP (Knowledge, Attitude and Practice) indicators, considering OSSE, farmer associations, chambers of industry/trade/commerce/fisheries, local educational institutions, civil society organizations, among others.
- 1.1.3.9. Adapt GCP-produced communication materials to country needs and dissemination. Production of national-level digital and print communication materials, along with the management of national media relationships, to educate and raise awareness about marine hypoxia (GCP Output 1.2.2.).
- 1.1.3.10. Facilitate and engage with national high-profile individuals that could participate in the Goodwill Ambassadors and Testimonial Plan at program level (GCP Output 1.2.2.).
- 1.1.3.11. Disseminate policy briefs and targeted messaging on marine hypoxia and nutrient pollution to strengthen the science-policy interface and influence relevant global and regional processes on a national level (GCP Output 1.2.2.).

Component 2. Supporting the strengthening of policy, regulatory and investment frameworks to incentivize and finance pollution mitigation.

53. This component focuses on strengthening governance structures, policy frameworks, and financial mechanisms to incentivize and implement measures for water pollution reduction and hypoxia mitigation. It promotes enhanced collaboration and coordination among stakeholders at regional and national levels, ensuring the integration of NbS in regulatory and investment frameworks. Key actions include the operationalization and strengthening of inclusive multi-stakeholder governance mechanisms to improve the integrated management of basins and marine-coastal zones, the development of policy and regulatory frameworks that align with pollution mitigation goals, and the facilitation of investment environments that support sustainable practices. This component aims to create a robust institutional foundation that drives the long-term adoption of effective solutions and ensures sustainable management of water resources in alignment with local, national, and regional priorities.

Outcome 2.1 Improved governance at subnational and national levels to reduce water pollution through NbS.

Output 2.1.1. Existing inclusive multi-stakeholder governance structures and mechanisms and others deemed necessary strengthened and in operation to improve the integrated management of watersheds and marine-coastal zones and define goals and strategies to reduce deforestation, water pollution and hypoxia.

54. This output will enhance the capacity of existing governance frameworks by fostering collaboration among key stakeholders, including government agencies, private sector actors, civil society organizations, indigenous communities, and academic institutions. Mechanisms will be developed or reinforced to align basin and marine management strategies with pollution mitigation and hypoxia reduction goals, incorporating NbS and reducing deforestation. Inclusive multi-stakeholder governance structures and mechanisms will support capacity-building activities, including training and knowledge exchange, to promote participatory decision-making and ensure that diverse stakeholder voices are represented. Regular multi-stakeholder dialogues and consultations will provide a platform for monitoring progress, addressing challenges, and updating strategies as needed. This inclusive approach will ensure the development of cohesive and effective frameworks that integrate local, regional, and national priorities to achieve sustainable and measurable outcomes.

55. Some of the structures that can be created or strengthened are: (i) Basin Committees, whose scope of action corresponds to the level of a micro-basin or group of micro-basins of a specific sub-basin (according to Article 13 Bis 1, of the National Water Law); (ii) Intermunicipal Boards, whose existence is provided for in state legislation (Municipal Law of the State of Oaxaca, Article 176; Organic Law of the Free Municipality of the state of Veracruz, Article 35; Law of the Municipalities of the state of Quintana Roo, Article 65); (iii) others, such as groups formed in the formulation of Action Plans for Integrated Watershed Management (PAMIC), according to the methodology proposed by the National Institute of Ecology and Climate Change (INECC). ([Guia_pamic.pdf](#)). The following activities will be conducted:

- 2.1.1.1. Conduct an assessment for each landscape that identifies existing or necessary governance structures. Key aspects include their locations, functions, current activities, involved stakeholders, the participation of women in these structures, and ways to ensure the inclusion of indigenous peoples. They will also define plans, goals, evaluation, etc. Institutions such as SEGOB, SEMARNAT, SADER, municipal agencies and agrarian authorities, as well as women's institutes and the local private sector, will participate in this activity.
- 2.1.1.2. Based on the needs assessment, support establishing and/or strengthening the identified multi-stakeholder governance structures and mechanisms, including their action plans and the participation of women's groups, indigenous peoples, and youth, based on the needs identified in diagnoses and assessments of the current state of these structures and mechanisms. Governance structures identified during the PPG phase are the Regional Economic Councils of Veracruz, the Advisory Council of the Tuxtla Biosphere Reserve and the State Forestry Council, which are linked to the Sontecomapan Lagoon.
- 2.1.1.3. Promote articulation and synergy between consultative and governance (operational) mechanisms at the watershed and/or thematic levels. This will utilize the information gathered through local monitoring based on citizen science (refer to Output 3.2.4).
- 2.1.1.4. Contribute to State of the Ocean report.
- 2.1.1.5. Provide input for the development of the regional level SAEP.
- 2.1.1.6. Provide data and make information available for the development of the regional S2S assessments.

Output 2.1.2. Planning, regulatory, land and/or marine management, and integrated watershed management instruments developed and/or updated with public participation and an inclusive approach, including objectives for the reduction of deforestation and of water pollution through NbS and a gender perspective.

56. This output will strengthen territorial planning and management by updating and developing land and/or marine planning instruments, focused on reducing water pollution and restoring watersheds. Including an integrated watershed perspective in land and/or marine management instruments will ensure the alignment of visions, needs, and perspectives of different sectors and stakeholders, promoting collective benefit, and water and other natural resources governance. Mapping and assessing these instruments at the landscape or watershed level will determine alignment with sustainability objectives and the capacity for inclusive integration, especially for women, youth and indigenous peoples. This product includes the identification and involvement of stakeholders in order to guarantee multicultural and participatory management. The resulting proposals with NbS will be developed with a gender approach and social inclusion criteria. Finally, these proposals will be presented to the relevant authorities, including indigenous communities, for adoption and implementation in the territory. The following activities will be conducted:

- 2.1.2.1. Map the planning, regulatory, land and/or marine zoning and integrated watershed management instruments to determine their alignment at the landscape or watershed levels and assess the feasibility of the inclusive design (women, youth, and indigenous peoples) of new instruments or the strengthening of existing ones for the reduction of deforestation, water pollution, and/or restoration.
- 2.1.2.2. Identify and involve relevant stakeholders who influence the development of planning, regulatory, and management instruments to guarantee a multicultural approach and the participation of women. Institutions involved could include CONAGUA, PROFEPA, IMTA, state and municipal governments, academic institutions, and local stakeholders in the watershed.
- 2.1.2.3. Develop proposals for planning, regulatory, land and/or marine management, and integrated watershed management instruments, including objectives for the reduction of water pollution through NbS, with a gender focus and social inclusion criteria, based on their feasibility analyses (refer to activity 2.1.2.1).
- 2.1.2.4. Submit the proposed planning, regulatory, land and/or marine management, and integrated watershed management instruments to the corresponding authorities, including those of the indigenous peoples, for their consideration and adoption.
- 2.1.2.5. Conduct, in line with the Environmental and Social Management Framework (ESMF; Annex 9), a Strategic Environmental and Social Impact Assessment (ESIA), targeted at impacts associated with “upstream” activities of the project involving regulatory and legislative amendments, and potentially a Livelihood Action Plan (LAP) if restrictions to access resources are identified.

Outcome 2.2. Enabling environment promoted to guide investments with water pollution and marine hypoxia reduction objectives.

Output 2.2.1. Guidelines for sustainable and inclusive financing and reducing water pollution in CIIT’s development hubs (*polos de desarrollo*), the Isthmus of Tehuantepec Lagoon Complex, the Sontecomapan Lagoon, and the Hondo River Basin formulated in participatory manner and disseminated.

57. The guidelines in the context of this project, both public and private, aim to orient productive and financial decisions that support the reduction of marine hypoxia pollution in the selected landscapes. These guidelines will also consider a gender perspective and community well-being. To achieve these objectives, this product includes a series of activities focused on aligning the available financing offer with the knowledge and current state of productive practices and NbS existing in the territory. With a portfolio of NbS and productive projects that indicates the feasibility and viability of local initiatives, funders will be able to select and fund those that are consistent with their objectives, work strategies and sustainable practices. To this end, activities under this output include:

- 2.2.1.1. Conduct a financial needs and opportunities assessment for OSSE and municipal governments, emphasizing gender and social inclusion, particularly for indigenous peoples. Potential financing opportunities may include origination incentives, carbon credits, compensation mechanisms, and others.
- 2.2.1.2. Conduct feasibility and financial viability analysis of water pollution reduction projects through NbS, proposed by OSSEs, including businesses led by women and indigenous people, as well as municipal governments.
- 2.2.1.3. Structure a portfolio of inclusive projects targeting women, youth and indigenous peoples, which identifies sustainable practices that align with institutional taxonomies¹³ (for example, SHCP) and that addresses Technology Readiness Levels (TRL) of NbS, sustainable production practices, and/or water treatment solutions to be implemented in the target landscapes. Potential financing

¹³ A taxonomy for sustainable activities is a classification system that defines the criteria for various economic activities. These taxonomies help financiers, the private sector, and banking entities identify sustainable projects across various thematic areas. In Mexico, there are two noteworthy instruments of this kind: (i) FIRA’s Green Taxonomy guides the funding of projects through its network of affiliated financial institutions. It includes 143 activities or types of projects that can receive support. (ii) SHCP’s Sustainable Taxonomy aims to mobilize funds for 124 sustainable activities across strategic sectors such as agriculture, animal husbandry, construction, energy, manufacturing, and transportation. Each entity, organization, or bank selects activities for financing projects that meet specific criteria, ensuring this financing is deemed sustainable in the Mexican market.

institutions for the project portfolio may include the Ministry of Welfare (SEBIEN), SADER, CONAMER, CONAGUA, FIRA, NAFIN, FIRCO, savings and loan cooperatives, social and development banks, as well as international cooperation entities.

Output 2.2.2. Inclusive, sustainable mixed-financing and investment instruments available for water pollution reduction through public-private dialogues and multi-party collaboration agreements.

58. The activities of this output foresee actions to reduce marine hypoxia pollution that will be financed through mixed solutions, which facilitate the combination of public, private and alternative source funds. These instruments that are developed or redesigned will seek the financing of sustainable practices and NbS, while laying the foundations for long-term funding to flow to these local initiatives. For mixed and long-term financing to occur, the project considers it key to design solutions in a participatory manner and with a multi-stakeholder approach, which guarantees community, gender and economic-financial profitability issues, while encouraging the reengineering of public programs to support sustainable agriculture to mobilize financing to combat marine hypoxia pollution. The following activities will be conducted:

- 2.2.2.1. Identify sources of short-, medium-, and long-term financial resources that address the needs of indigenous communities, women, and youth in rural areas, and other key stakeholders contributing to pollution in adopting sustainable practices and reducing polluting activities.
- 2.2.2.2. Provide technical assistance to help facilitate access to long-term financing incorporating a gender perspective. This assistance should consider sources aimed at social agrarian structures (such as *ejidos* or communities), private organizations, and grassroots organizations that involve the indigenous population.
- 2.2.2.3. Create mixed investment and financing instruments with a gender perspective, for example, by combining public and private sources, and/or adapting existing instruments to reduce water pollution to address the gaps in access to financing faced by IPLCs. This activity should involve collaboration and agreements with SADER, the Ministry of Finance and Public Credit (SHCP), the Ministry of Welfare, and the National Commission for Regulatory Improvement (CONAMER), and the private sector, among others.
- 2.2.2.4. Implement pilot projects or demonstrative cases of BMP and NbS, with a gender focus and social inclusion criteria, as part of the project portfolio of Outputs 2.2.1, 3.2.1 and 3.2.2, which consider the investment and financing sources and instruments identified in the previous activities.

Output 2.2.3. Investment feasibility assessment for rehabilitating wastewater treatment plants (WWTPs) and other effective technologies to reduce water pollution developed (Note: rehabilitation of WWTPs will be done through co-financing and other funding mechanisms).

59. This output aims to invest in assessing the current WWTP situation in the three selected landscapes. The WWTPs in Salina Cruz, San Andrés Tuxtla, and Othón P. Blanco face several issues that limit their effectiveness and contribute to water pollution. Salina Cruz has the highest number of operational WWTPs at 10, followed by Othón P. Blanco with seven and San Andrés Tuxtla with two. Key challenges include outdated infrastructure, inadequate maintenance, limited treatment coverage, lack of financial resources, poor regulation enforcement, and insufficient transparency. Addressing these problems is vital due to the region's significance for national water basins and local socioeconomic development. Investing in rehabilitating underperforming WWTPs can significantly reduce pollution and improve public health.

Additionally, ecotechnologies like artificial wetlands and biofilters can serve as sustainable alternatives, complementing conventional methods to enhance effluent quality and minimize environmental impact. Combining these approaches can lead to more efficient water treatment solutions. The following activities will be implemented:

- 2.2.3.1. Review the inventory of WWTPs and other wastewater treatment solutions in the three prioritized landscapes of the project, published by CONAGUA.
- 2.2.3.2. Assess the current status of WWTPs and other wastewater treatment solutions, identifying gaps and alternative and innovative treatment solutions adapted to local conditions and needs, as well as the investments necessary for their implementation.

- 2.2.3.3. Share the findings from the investment assessment for rehabilitating WWTPs or implementing alternative treatment solutions using appropriate technologies to reduce water pollution among various stakeholders (including CONAGUA, municipalities, territorial and watershed governance structures and other stakeholders).

Output 2.2.4. Recommendations for investing criteria in Nature-based Solutions (NbS) within the operational rules and guidelines of public budgetary programs prepared with a gender perspective and social inclusion criteria.

60. This output aims to identify and prioritize NbS for integration into the operational rules and guidelines of public budgetary programs, focusing on gender perspectives and social inclusion. It will offer recommendations to encourage adoption by key institutions, such as SADER, SHCP, the Secretariat of Welfare, CONAGUA, CONAFOR, and FIRA. This may involve updating the Social Infrastructure Support Fund guidelines for state and municipal participation (*Fondo de Apoyo a la Infraestructura* [FAIS]) and revising the rules governing water operator mechanisms. The following activities will be implemented:

- 2.2.4.1. Identify and prioritize the NbS (based on the catalog of NbS to be developed as part of Output 3.1.1.) that could be incorporated in the operational rules and guidelines of public budgetary programs, with a gender perspective and social inclusion criteria.
- 2.2.4.2. Make recommendations to include the identified and prioritized NbS and promote their adoption by the institutions responsible for the programs (such as SADER, SHCP, Secretariat of Welfare, CONAGUA, CONAFOR, FIRA, among others). This may involve updating the Social Infrastructure Support Fund guidelines for state and municipal participation (*Fondo de Apoyo a la Infraestructura*, FAIS) and the rules governing water operator mechanisms.

Component 3. Supporting demonstration of best management practices (BMPs) and investments that showcase innovative solutions to reduce marine hypoxia.

61. This component strengthens local organizations' capacities to implement BMPs and NbS to reduce water pollution and marine hypoxia. A capacity-building program will support BMPs and NbS in three target landscapes, focusing on gender inclusion and access to financing. Updated plans, business models, and manuals will guide organizations in scaling these practices, while CoPs promote peer learning and stakeholder collaboration.

62. Support will be provided for municipal projects, feasibility studies, and pilot demonstrations of low-carbon water treatment technologies. Grants will help local organizations, Indigenous Peoples, and OSSEs adopt BMPs and NbS, targeting pollution from agriculture, aquaculture, and domestic sources. Conservation and restoration efforts in watersheds and marine zones will involve collaboration with diverse stakeholders. Participatory community and citizen science monitoring will track biodiversity and water quality, fostering awareness, ownership, and informed decision-making.

Outcome 3.1. Strengthened technical, organizational and financial capacities of local organizations to promote measures to reduce land-based water pollution and marine hypoxia through good practices and NbS.

Output 3.1.1. Organizational, technical, and financial capacity-building program to implement BMPs and NbS developed to reduce land-based water pollution and marine hypoxia and facilitate access to financing in the three target landscapes, with gender and social inclusion criteria.

63. The project will support the development and strengthening of critical capacities that will enable community organizations and groups to effectively implement best practices and nature-based solutions in the project landscapes. These capacities will allow strengthening community skills and knowledge for project management, which will contribute to improving their profiles for obtaining financing, whether through traditional sources or through public or private grants, prioritizing the gender approach and local governance. These community organizations and local businesses will be prioritized based on their experience in the project landscapes and their track record in reducing marine hypoxia pollution. Technical, financial and organizational capacities include, among others, project formulation and planning, economic decision-making, business accounting and financial education with a gender perspective. The following activities will be conducted:

- 3.1.1.1. Conduct participatory workshops that incorporate a gender perspective in three target landscapes: Sontecomapan Lagoon (Veracruz), the Isthmus of Tehuantepec Lagoon Complex (Oaxaca), and the Hondo River Basin (Campeche and Quintana Roo). These workshops aim to assess training needs and develop culturally appropriate techniques and mechanisms for training various stakeholders, including municipalities, the OSSEs, local organizations, and indigenous communities.
- 3.1.1.2. Develop a catalog of BMPs and NbS to reduce land-based nutrient pollution and marine hypoxia, involving women, youth, and indigenous peoples, and identify financial mechanisms that align with the identified guidelines and public and private financing options, ensuring that these solutions provide social, gender, and environmental benefits in each prioritized landscape.
- 3.1.1.3. Contribute to the CHO-IP BMPs resource archive with relevant national information using a gender focus.
- 3.1.1.4. Develop a capacity-building curriculum on reducing land-based sources of nutrient pollution and marine hypoxia for various stakeholders and landscapes. This curriculum should include gender-transformative actions and a range of comprehensive activities such as training mechanisms, forums, schools, communities of practice, and field schools; all approached from a culturally sensitive and action-oriented training perspective. The participation of the Universidad Veracruzana Intercultural, Academia Veracruzana de Lenguas Indígenas, the field schools of the Ministry of Agriculture, Rural and Fisheries Development (SEDARPA) of Veracruz, among other relevant actors, should be considered in this initiative.
- 3.1.1.5. Implement the inclusive technical and financial capacity-development program with a gender perspective and through culturally appropriate mechanisms.
- 3.1.1.6. Participate in technical training workshops on “Nutrient Mitigation Opportunities” led by the INMS.
- 3.1.1.7. Evaluate the impact of the capacity-building program.

Output 3.1.2. Plans, business models, and organizational manuals updated or developed for Organizations of the Social Sector of the Economy (OSSE), according to the scale of the project, to transition to best practices and NbS implementation, and facilitate access to financing.

64. The plans, business models and organizational manuals that will be developed through the activities of this product aim to facilitate the transition towards best practices and nature-based solutions by the OSSEs. The definition of the maturity level of the projects for the reduction of pollution, as well as the identification of the actions necessary for their implementation, can contribute to improving access to financing, through the participation of financiers, donors and private actors at different levels of project implementation (pre-feasibility, feasibility, design and implementation of a solution, commercialization, etc.), ensuring that they are scalable, marketable and generators of economic well-being. The following activities will be conducted:

- 3.1.2.1. Develop business plans and/or models, ideation tools (e.g. CANVAS, Technology Readiness Levels —TRL— adapted to NbS), and local organizational manuals (based on Output 3.1.1.), tailored to the needs of each stakeholder. This can include facilitating access to subsidies, liquidity guarantees or collateral for obtaining credit, performance-based payments, and co-investments, among other options.
- 3.1.2.2. Provide technical and financial advice to OSSEs and municipal governments in a culturally appropriate manner, as they formulate plans, business models, and organizational manuals for the transition to inclusive best practices and the adoption of NbS to reduce land-based water pollution and marine hypoxia.
- 3.1.2.3. Build partnerships with local entities, such as technological institutes and universities, to offer technical and financial advice to beneficiary OSSEs, and municipal governments.

Output 3.1.3. Inclusive thematic Communities of Practice (CoPs) promoting BMPs through exchange, peer-to-peer learning and capacity development to strengthen portfolio delivery and wider stakeholder engagement developed and deployed.

65. This output fosters collaboration and capacity building by actively engaging in the CHO-IP thematic CoPs. This includes contributing to workshops that establish learning priorities, governance, and workplans; attending annual CoP meetings; appointing a Gender Focal Point to support gender-focused CoPs; and participating in final workshops to plan sustainable continuity for the CoPs. The following activities will be conducted:

- 3.1.3.1. Participate in the CHO-IP workshop to design the learning priorities, governance structure, and workplan of thematic CoPs.
- 3.1.3.2. Participate in the coordination and capacity-building activities of thematic CoPs and designation of a Gender Focal Point from Mexico to participate in the coordination and capacity-development activities in GCP CHO-IP Gender Community of Practice/Working Group meetings.
- 3.1.3.3. Participate in the annual workshop and governance meeting for thematic CHO-IP CoPs.
- 3.1.3.4. Participate in the CHO IP end-of-project workshop to design the sustainability strategy and the continuation of the thematic CoPs.

Outcome 3.2. The adoption of best practices and NbS contributes to the reduction of water pollution and marine hypoxia.

Output 3.2.1. Inclusive municipal projects in the three prioritized landscapes are supported for the adoption of BMPs and NbS to reduce water pollution and marine hypoxia, including pre-investment activities such as proof of concept, technical feasibility analysis, and environmental impact assessments, as well as pilot and demonstration cases featuring innovative, cost-effective, low-carbon water treatment technologies in prioritized rural and marine-coastal areas.

66. The project will apply BMPs and NbS to mitigate water pollution and marine hypoxia. This includes conducting a gender-sensitive assessment at the municipal level to determine the BMPs, involving communities and key stakeholders in selecting sites for implementation, and designing inclusive pilot projects with technical support. Monitoring and evaluation will engage various groups, including women and indigenous communities. Feasibility studies will assess the potential for replicating and scaling successful projects. The following activities will be conducted:

- 3.2.1.1. Conduct a municipal-level gender-sensitive assessment of BMPs with different scenarios and expert advice to select the most appropriate BMPs based on internationally recognized data, tools, codes of conduct and guidelines. Best practices may include participatory restoration of riverbeds and banks, the establishment of urban and coastal wetlands, the appropriate use of fertilizers, and public engagement initiatives such as river and beach clean-up campaigns.
- 3.2.1.2. Identify sites in each prioritized landscape with the participation of municipalities, communities and key allies, including agrarian authorities and land users, to implement the most suitable BMPs and NbS to effectively reduce water pollution and marine hypoxia.
- 3.2.1.3. Design and implement inclusive pilot and demonstrative cases of best practices and NbS for the reduction of water pollution and marine hypoxia with the participation of municipalities, communities and key allies, with technical advice from partner institutions, such as INCA Rural, IMIPAS, INAES, and IMTA. The catalog of potential interventions is:

Catalogue of Nature-based Solutions for reducing water pollution and marine hypoxia, that will be considered for developing pilot and demonstrative cases of best practices

Nature-based Solutions	Description
Pasture rehabilitation and management	Refers to actions for the rehabilitation and management of land with the capacity to produce fodder for livestock.

Boost permaculture	It refers to a sustainable system where housing and landscape are integrated in a complementary way, while conserving natural resources and water.
Vegetated terraces	It consists of reinforcing benches or steps, in most cases with local plants.
Crop rotation	It consists of the succession of different crops in continuous cycles over a selected area of territory.
Implementation of Wildlife Management Units (WMU)	It consists of properties owned by landowners where the sustainable use of wild species is voluntary.
Green manure	It consists of the practice of sowing a certain plant in the ground, to incorporate it or spread it on the soil during the vegetative development period.
Construction of a watering board and plot of land	It consists of a water reservoir where livestock is hydrated or used for agricultural use, in which the confinement of a volume of water is achieved, this can be built in a natural depression in the ground or artificial.
Rainwater harvesting	It consists of a design system where rainwater is intercepted, collected and stored for potable use, allowing access to vulnerable areas.
Wastewater separation and management	It consists of the separation of the organic load of wastewater, seeking to eliminate as much waste and pollutants as possible.
Dendroenergy plantation	It consists of a cultivation model that seeks the accumulation of biomass in a minimum time.
Best agricultural practices	Promotion of Crop Rotation and Integrated Multitrophic Systems, and Integrated Systems (Polyculture)
Restoration of eroded areas	It consists of recovering the composition and functions of the affected soils.
Reforestation and revegetation of slopes.	It consists of covering forest land or disturbed areas with plants to reverse the effects of human activities, reducing the fragmentation of the landscape.
Restoration of streams and riparian forest with hydroforestry strips	It consists of recovering the original riverbed through planting on the riverbank, based on a barrier that absorbs nutrients from agricultural land, which allows for the reestablishment of plant communities.
Identification and propagation of native plant species	Consists of the use of native species for restoration and rescue of native species.

Corrections for acidic and basic soils	It consists of balancing the soil pH to improve agricultural production and recover the soil organic horizons.
Construction of fajinas, wood and stone dams, and gabion dams	Consists in the construction of soil and sediment retention techniques.
Recovery and conditioning of springs	It consists of rescuing the natural conditions of water bodies that are usually ephemeral or intermittent, increasing their accessibility.
Wastewater treatment with wetlands	Consists of recovering the quantity of water resulting from human use whose quality characteristics are not optimal to be consumed again (potable).
Construction of blind pits, ditches and infiltration curbs	It consists of the construction of techniques for soil moisture retention and recharge of aquifers, mainly surface aquifers.
Revegetation	It consists of taking advantage of native species for the re-establishment of ecosystems, favoring the adaptation of these species to environmental conditions, which reduces maintenance costs such as irrigation and soil fertilization.
Hydrological design in agricultural plots, slopes, and livestock areas	Techniques used to modify the route used by water to descend, avoiding soil erosion.
Phytoremediation of water and soils	Consists of using biological species to improve water and soil quality.
Establish and manage natural protected areas	It consists of generating areas for preservation purposes, protection of soil, watersheds, water and natural resources.
Living barriers	This is a wind erosion control practice in agricultural areas, pastures or areas devoid of vegetation through the alignment of one or more rows of trees or shrubs to generate a high and robust barrier to generate an obstacle to wind and dust.
Payment for environmental services	It consists of an economic incentive for landowners seeking to compensate the cost of conservation and good environmental practices in the territory.
Sustainable tourism	It consists of recreation and tourism activities that in an integral and sustainable manner allow the dissemination of the importance of conservation and preservation of the territory through environmental education.

Community nursery	Consists of areas for the production of plants and trees for the rehabilitation and reforestation of common areas.
Family gardens and farms	It consists of an alternative system of plots adjacent to houses where families cultivate intensively, allowing them to consume plants and vegetables continuously throughout the year.
Beekeeping projects	It consists of the breeding and care of bees, which allows benefits to agriculture and the environment through the pollination process.
Biofactories for agricultural inputs	Facilities that produce agricultural inputs like bio-fertilizers, bio-pesticides, and bio-stimulants using local materials, with low environmental impact.

Catalogue of eco-technologies for reducing water pollution and marine hypoxia, that will be considered for developing pilot and demonstrative cases of best practices.

Eco-technology	Description	Estimated cost per unit (USD)
Dry toilet with two chambers	It is designed to avoid the use of water in a toilet operation by using a drying material (soil mixed with dry leaves, sawdust, lime, ashes, etc.) for the decomposition of fecal matter, as well as the use of a separating cup that avoids the mixing of urine and feces. It has two drying chambers where the fecal matter and the drying material are deposited.	\$3,658.54
School drinking fountain with 3 nozzles	Drinking fountain to improve water quality and accessibility. Its water intake is the supplying network, connected to activated carbon filters and filtration membranes that through a pressurizer come through the supplying nozzles. It also has a drainage system.	\$2,204.59
Biodigester	Sanitation system, ideal for rural homes that do not have sewage services. The system receives domestic wastewater and performs a primary treatment of the water, favoring the care of the environment and avoiding the contamination of groundwater.	\$2,060.98
Collection center for urban waste	Its function is to provide an official place to deposit recoverable waste and later, transfer it to a waste recovery and treatment route for its recovery.	\$16,335.12
Rainwater harvesting system	It collects rainwater that accumulates on the roof, which is transported through gutters and/or pipes to the PVC collector branch and stored in the interceptor tank where the solid waste (leaves and branches) is	\$1,980.49

(SCALL) 1,110 L	separated and the water is filtered to finally reach the cistern.	
Rainwater harvesting system (SCALL) 10,000 L	It collects rainwater that accumulates on the roof, which is transported through gutters and/or pipes to the PVC collector branch and stored in the interceptor tank where the solid waste (leaves and branches) is separated and the water is filtered to finally reach the cistern.	\$9,275.49

- 3.2.1.4. Design and implement an inclusive protocol for monitoring and evaluating the impacts of best practices and NbS, with the participation of women's groups, civil society organizations, schools, universities, technological institutes, state rural committees, OSSEs and indigenous peoples' groups, among others.
- 3.2.1.5. Conduct feasibility analysis for replication and scalability of inclusive pilot projects and demonstrative cases.

Output 3.2.2. Projects with local organizations, Indigenous Peoples, and OSSEs are supported by grants and other financing sources to adopt BMPs and NbS aimed at reducing water pollution from agricultural and livestock production (nutrient runoff), aquaculture and fishing practices, and domestic sources in rural areas, while implementing pilot and demonstrative projects to showcase these practices.

67. The project will also focus on implementing BMPs and Nature-based Solutions (NbS) at the community level. Activities include conducting gender-sensitive assessments to identify the most suitable BMPs for agriculture, livestock, aquaculture, and fisheries, and selecting inclusive proposals for pilot projects and demonstrative cases. These projects will involve women's groups, indigenous peoples, and local producer organizations. The process includes technical support, culturally sensitive guidance during project implementation, and the development of monitoring protocols to assess the effectiveness of BMPs and NbS. Additionally, activities will promote knowledge exchange and lessons learned across the landscapes and with other regional projects. The project will also make use of low-value grants (LVG) following UNDP's Policy on Grants (also see Annex 16). The following activities will be implemented:

- 3.2.2.1. Conduct a gender-sensitive assessment of BMPs at the community or local level, using different scenarios and expert advice, to select the most appropriate BMPs for the agriculture, livestock, aquaculture and fisheries sectors, based on internationally recognized data, tools, codes of conduct, and guidelines.
- 3.2.2.2. Select proposals for pilot projects and demonstrative cases that implement best practices and NbS, such as reduction of synthetic fertilizers and use of bioinputs, to reduce water pollution and marine hypoxia. The selection process should be inclusive, open, participatory, and accessible to indigenous peoples. Proposals may include local small-scale projects supported by small grants or pilot projects and demonstrative cases, and strategic medium-scale projects to address priority issues.
- 3.2.2.3. Conduct a culturally appropriate incubation process to design projects that implement good practices and NbS to reduce water pollution and marine hypoxia with women's groups, social enterprises and indigenous peoples, including local producer organizations such as livestock associations and unions.
- 3.2.2.4. Provide technical advice and support, in a culturally sensitive manner to local organizations, women's groups, indigenous peoples and social enterprises during the implementation of pilot projects and demonstrative cases that apply good practices and NbS (in partnership with technological institutes, local schools and universities, and others).

- 3.2.2.5. Design and implement a protocol to monitor and evaluate the results and impacts of best practices and NbS to reduce water nutrient-based pollution and marine hypoxia. This protocol should promote active participation from indigenous peoples and local communities.
- 3.2.2.6. Organize activities to systematize lessons learned and exchange experiences between project executors in the three landscapes, as well as with similar projects in other regions of the country.

Output 3.2.3. Restoration and hydrological rehabilitation, and improved management to benefit biodiversity interventions in watersheds and marine-coastal zones supported in three target landscapes with collaboration from government institutions, civil society organizations, local organizations, OSSEs, and women's groups through grants and other funding sources.

68. The project aims to conserve, restore, and rehabilitate river basins and marine-coastal areas. This includes identifying key sites and actions that benefit women and indigenous communities, and forming partnerships with local authorities and organizations. Inclusive methods, engaging local communities, women's groups, and academic institutions in implementation will be applied. A monitoring and evaluation protocol will be established to assess the impact of these activities, ensuring active involvement from IPLCs. The project will also make use of LVGs following UNDP's Policy on Grants (also see Annex 16). The following activities will be conducted:

- 3.2.3.1. Identify priority sites for conservation, restoration, and hydrological rehabilitation in the river basins and marine-coastal zones within the three priority landscapes.
- 3.2.3.2. Identify specific actions for conservation, restoration and hydrological rehabilitation in watersheds and marine-coastal areas in the three priority landscapes, including initiatives that directly benefit women and indigenous peoples.
- 3.2.3.3. Work collaboratively to design conservation, restoration, and hydrological rehabilitation actions in watersheds and marine-coastal areas within the three priority landscapes. This process should involve multi-stakeholder partnerships that ensure the effective participation of indigenous authorities (both civil and agrarian), civil society organizations, local organizations, and OSSE.
- 3.2.3.4. Implement conservation, restoration, and hydrological rehabilitation actions in river basins and marine-coastal areas of the three priority landscapes, using various methodologies that involve local organizations and ensure the effective participation of the indigenous population and key allies (for example, women's groups, civil organizations, local authorities, local schools, universities, among others).
- 3.2.3.5. Assess the project's climate change mitigation benefits bi-annually and at mid-point and end of project using FAO's EX-ACT tool.

Output 3.2.4. Participatory community monitoring plan for biodiversity and water quality in river basins and marine-coastal areas designed and implemented, to raise awareness, foster ownership, and support local decision-making.

69. A community and citizen science-based monitoring plan will be created for biodiversity and water quality in watersheds and marine-coastal areas that ensures women's involvement. The plan will integrate data into the information and analysis system developed by the project. Partnerships will be established to manage monitoring data, and training for community brigades will be provided. Monitoring will be carried out periodically, with findings shared with local communities through appropriate media channels for women and other stakeholders. The following activities will be conducted:

- 3.2.4.1. Design a community and citizen science-based monitoring plan for biodiversity and water quality in watersheds and marine-coastal areas ensuring women's participation. This plan should include protocols and integrate data into the information system established through Output 1.1.2.
- 3.2.4.2. Form alliances to systematize monitoring data collected by local organizations, ensuring active participation from women.
- 3.2.4.3. Provide training for community and citizen science monitoring brigades to implement the community monitoring plan for biodiversity and water quality in watersheds and marine-coastal areas. This training should utilize culturally appropriate methods and may involve various stakeholders, such as surveillance committees (*Comités de vigilancia*), environmental promoters, and Environmental Advisory Councils of SEDEMA (Veracruz).

- 3.2.4.4. Conduct periodic monitoring of biodiversity and water quality at the community level, and of the results and impacts of conservation and restoration practices, with the effective participation of women, indigenous peoples and local communities.
- 3.2.4.5. Report on the results of community and citizen science monitoring of biodiversity and water quality in river basins and marine-coastal areas. These results should be incorporated into the information and analysis system developed by the project (refer to Output 1.1.2).
- 3.2.4.6. Share the findings of community and citizen science monitoring with the local population using culturally appropriate media tailored for each target landscape and considering suitable communication channels for women.

Component 4. Ensuring knowledge management and learning (KML), communication, gender and stakeholder engagement are integrated across the IP, including programmatic coordination and reporting.

70. Knowledge, learning, and communication are critical elements of the project and have a crosscutting effect on all project components. This component constitutes the project's knowledge management strategy that will allow promoting dialogue among various stakeholders at the local, national, and global/IP levels related to the reduction of nutrient water pollution and marine hypoxia and innovative solutions. Participation in various knowledge management activities and platforms will be supported, including those sponsored by the CHO IP and GCP.

Outcome 4.1. Knowledge management and learning, communication, gender mainstreaming, and stakeholder engagement effectively support program and project objectives and are fully integrated across the IP.

Output 4.1.1. Knowledge of nutrient pollution and marine hypoxia and innovative solutions to reduce these effectively documented, managed, and shared nationally and across and beyond the IP.

71. This output will allow documenting and sharing lessons learned and best practices regarding the reduction of nutrient water pollution and marine hypoxia. In addition, the Child Project team, as well as the key stakeholders, will benefit from knowledge management and training actions sponsored by the CHO IP and GCP, and to develop knowledge products that will be shared with multiple stakeholders. The following activities will be conducted:

- 4.1.1.1 Review (by a third party) and synthesize the results and learning of the entire project in policy briefs with a vision for adoption and development of improved national policies on nutrient pollution and marine hypoxia reduction.
- 4.1.1.2 Prepare a conceptual proposal and roadmap for the (gradual) application of the best practices and results and that includes a cost-benefit analysis of their application.
- 4.1.1.3. Develop at¹⁴ case will be developed during the project ¹⁵ each year, starting from the second year of implementation.
- 4.1.1.4. Contribute to IW:LEARN activities, through facilitation by the GCP, including preparation of knowledge products, and participation in other learning opportunities. The Mexico child project will not participate in person in the IWC (GCP Output 4.1.1.).
- 4.1.1.5. Participate in twinnings, learning trips, and other exchanges facilitated by the GCP to foster south-south and north-south knowledge sharing across the CHO regions.
- 4.1.1.6. Contribute to the CHO knowledge portal with regular updates and content production related to project activities in line with the GCP KML and Communications and Outreach Strategies.
- 4.1.1.7. Contribute to the preparation of Clean and Healthy Ocean Knowledge Atlas with inputs as indicated by the GCP.

Output 4.1.2. Coherent communications activities and products (common messages, branding, website, etc.) designed and applied locally and nationally, and contribute to the IP's communication strategy.

72. This output will integrate program-wide communication efforts and will focus on targeted stakeholders nationally and locally. Through communication and outreach plans and different communication methods and products, the project will effectively communicate to target audiences at every level about project implementation

¹⁴ PANORAMA: <https://panorama.solutions/es>

¹⁵ UNDP Exposure: <https://undp-nature.exposure.co/>

progress and key lessons and best practices related to the reduction of nutrient water pollution and marine hypoxia; communication will also promote replication of successful approaches. In addition, it will contribute to stakeholder engagement in line with the Comprehensive Stakeholder Engagement Plan (Annex 8). The specific activities to be implemented are:

- 4.1.2.1. Develop and regularly update Communication and Outreach Plans for the three target landscapes aligned with the GCP Communications and Outreach Strategy.
- 4.1.2.2. Implement the CHO IP Visual Identity in all communication products developed.
- 4.1.2.3. Contribute to global-level communications with project-level materials (e.g., blogs, feature stories, publications, bulletins, social media posts, etc.), in line with the GCP Communications and Outreach Strategy.
- 4.1.2.4. Develop and distribute press releases to announce project launch, achievements, and other important updates.

Output 4.1.3. Environmental and Social Management Plan (ESMP), Gender Action Plan, Comprehensive Stakeholder Participation Plan, and other management plans related to UNDP Social and Environmental Standards (SES) implemented and in line with the IP gender integration and stakeholder participation requirements.

73. Social and environmental safeguards risk management has been incorporated into the project design in line with the risk assessment conducted using UNDP's Social and Environmental Screening Procedure (SESP, Annex 5) and the Environmental and Social Management Framework (ESMF, Annex 9) developed during the PPG. Appropriate risk management measures have been defined and the additional risk assessments needed have been identified in line with UNDP's SES. Consultations were initiated during the PPG and will continue during project implementation with the aim of achieving consent from the specific rights-holders, as needed. Project activities that cannot start until specific risk mitigation measures are in place (e.g., Environmental and Social Impact Assessment [ESIA]/ Environmental and Social Management Plan [ESMP]/Indigenous Peoples Plan [IPP]) and that are required to comply with FPIC and other stakeholder participation requirements have been identified as part of the ESMF and in the Comprehensive Stakeholder Participation Plan (Annex 8) developed during the PPG. These steps will ensure that all activities under Components 1-4 of the project will be in compliance with UNDP and GEF requirements regarding social and environmental safeguards. In addition, the project will seek to reduce gender inequalities in access to and control over resources and the benefits of the project and will ensure that both women and men are able to participate meaningfully and equitably, have equitable access to project resources, and receive comparable social and economic benefits. Gender and stakeholder participation will also consider CHO IP requirements. The following activities will be conducted:

- 4.1.3.1. Review the ESMP annually and update it as necessary.
- 4.1.3.2. Conduct a detailed project-wide cumulative risk assessment under the planning, policy and strategy components (Environmental and Social Impact Assessment, ESIA).
- 4.1.3.3. Develop the ESMP and Indigenous Peoples Plan (IPP) in line with the ESMF and the Indigenous People's Planning Framework (Annex 9).
- 4.1.3.4. Fully design, operationalize and disseminate the project's Grievance Redress Mechanism.
- 4.1.3.5. Conduct and develop Economic Displacement Risk Assessments and Livelihood Action Plans as needed.
- 4.1.3.6. Openly disclose and disseminate the ESMP.
- 4.1.3.7. Periodically monitor and evaluate all risk management measures as part of the Project Monitoring and Evaluation Plan (Section VII).
- 4.1.3.8. Participation of the national project team in gender capacity-building events.
- 4.1.3.9. Provide technical inputs for the development of gender case studies.
- 4.1.3.10. Update the Project's Gender Action Plan (Annex 10) as needed.
- 4.1.3.11. Update the Project's Comprehensive Stakeholder Engagement Plan (Annex 8) as needed.

Outcome 4.2. Programmatic coordination, coherence, and reporting are ensured.

Output 4.2.1. Participation in programmatic management activities facilitated by the GCP.

74. Through this output, the Child Project will contribute to Programmatic Impact. A programmatic approach will be used in line with the CHO IP for addressing the global threat of nutrient pollution and marine hypoxia. Child Project staff and key stakeholders will participate in events and working groups sponsored by the GCP and contribute to portfolio coordination and coherence of program results. The following activities will be conducted:

- 4.2.1.1. Participate in the Program Coordination Committee in line with the agreed institutional arrangements and coordination provided by GCP.
- 4.2.1.2. Participate in the CHO Annual Stocktaking Meetings.
- 4.2.1.3. Contribute to the CHO Annual Programmatic Progress Report with inputs (annual PIRs, project progress reports, MTR and TE with key project documentation, others), following the guidance provided by the GCP.
- 4.2.1.2. Participate in the Thematic Working Groups (WGs) facilitated by the GCP.

Component 5. Monitoring and Evaluation

75. Project monitoring and evaluation (M&E) will be undertaken in compliance with UNDP and GEF requirements. M&E will be used to inform adaptive management and will be done following the Project's M&E Plan included in Section VII of this Project Document. Indicators will be measured to assess the impact of the Child Project, the cumulative impact of Child Project and the catalytic IP effect. In addition, it will contribute to the CHO Annual Programmatic Progress Report with inputs (e.g., annual Project Implementation Reports [PIRs], Mid-term Review [MTR] and Terminal Evaluation [TE] with key project documentation) following guidance provided by the GCP.

Outcome 5.1. Effective project implementation and monitoring based on adaptive management and lessons learned are ensured.

Output 5.1.1. Gender-sensitive project M&E system to track progress on impact developed and implemented.

- 5.1.1.1. Participate in the elaboration of the gender-sensitive program M&E system (inputs and workshop participation) (GCP Output 4.3.1.).
- 5.1.1.2. Collect data on and monitor the gender indicators of the Gender Action Plan as these are provided by the Country Projects on a quarterly basis, to meet reporting requirements of the gender monitoring templates; including annually, for the PIR

Output 5.1.2. Regular reporting to the program level ensured following GCP guidance and agreed reporting frameworks.

76. Child Project monitoring will be guided by the project's M&E Plan included in Section VII of this Project Document and which was developed in compliance with UNDP requirements for project-level M&E. The implementation of the Child Project will be launched through an Inception Workshop with the participation of the key project stakeholders from the national and local government, the private sector, academia, NGOs, and IPLCs, among others. Project results as described in the Project Results Framework (PRF; Section VI) will be monitored annually and periodically evaluated during project implementation to ensure that the project achieves these results, including gender-related indicators. The M&E Plan will inform adaptive management by integrating experiences and lessons learned resulting from the implementation of activities into the annual project programming, including the adaptation of the PRF (including indicators and targets), organizational structure and/or Project Management Unit (PMU), gender and stakeholder participation approach, timelines and work plans, and of priorities as a result of changes in context and needs including evolving and/or new social and environmental risks or other risks.

77. Annual GEF Project Implementation Reports (PIRs) will be delivered, which will allow for periodically monitoring of project progress toward its development objective/outcomes and implementation, including gender mainstreaming. In addition, they will allow identifying difficulties as they arise during implementation and ensuring that the required corrective actions are taken. An independent Mid-term Review (MTR) and an independent Terminal Evaluation (TE) will be conducted at mid-point and end of Child Project implementation, respectively, with all tracking

tools, core indicators, financial indicators, and gender indicators assessed. Project independent evaluations are further described in Section VII: Monitoring and Evaluation (M&E) Plan of this Project Document.

78. Agreement on intellectual property rights and use of the logo on the project's deliverables and disclosure of information: To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed per relevant policies, notably the UNDP Disclosure Policy¹⁶ and the GEF policy on public involvement¹⁷.

Resources required to achieve the expected results.

79. The PMU will consist of a full-time Project Technical Coordinator and Project Manager, an Operations Officer, and a Project Administrator; in addition; to technical staff consisting of a Monitoring and Evaluation Specialist, a Capacity Development Specialist, a Governance and Public Policy Specialist, a Sustainable Finance Specialist, and three Field Officers. Indicative terms of reference (ToR) of the project staff are included in Annex 7. In addition, individual consultants and consulting firms will be contracted to implement specific aspects of the project. The PMU will be housed in Mexico City by SADER. The Total Budget and Work Plan (TBWP; Section X) includes a detailed description of all people, purchases, and expenses needed for the successful implementation of the project. Finally, a procurement plan for the first year of implementation is included as Annex 11, which details a list of goods and services required for implementation and budget; procurement will follow a competitive contracting process as per NAFIN, SADER, and UNDP requirements and standards.

80. UNDP staff time from the country, region, and headquarters (HQ) level will be covered through the Agency Fee. In addition, the Implementing Partner and GEF Operational Focal Point (OFP) have requested UNDP to provide financial and operational support services for the full duration of the project at no cost.

Partnerships:

81. To achieve the planned outputs and outcomes of this Project, it will be necessary to engage various stakeholders and establish multiple partnerships at the national and local levels. The responsibility of these partners in project implementation and their support for the Project's development challenge, including the co-financing contributions of those partners supporting the project financially, are presented below:

Stakeholder	Role in the Project
Ministry of Agriculture and Rural Development (SADER, by its acronym in Spanish)	This is the Project Technical Executing Agency. It will host the Project Coordination Unit and chair the Project Steering Committee.
Interoceanic Corridor of the Isthmus of Tehuantepec (CIIT, by its acronym in Spanish)	Facilitates national and sub-national inter-institutional linkages in two of the landscapes (the Isthmus of Tehuantepec Lagoon Complex in Oaxaca and the Sontecomapan Lagoon in Veracruz) and acts as a voting member of the Project Steering Committee.
Ministry of Internal Affairs (SEGOB, by its acronym in Spanish)	Promotes national and sub-national inter-institutional linkages and serves as a voting member of the Project Steering Committee.
National Water Commission (CONAGUA, by its acronym in Spanish)	Is the national authority responsible for water management, offering technical information on pollution prevention, mitigation solutions, and water quality. It is a voting member of the Project Steering Committee.
National Aquaculture and Fisheries Commission (CONAPESCA, by its acronym in Spanish)	Is the national authority for aquaculture and fisheries, offering technical information on sustainable production practices and facilitating collaboration with fishermen's organizations. It is also a voting member of the Project Steering Committee.

¹⁶ See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

¹⁷ See http://www.thegef.org/gef/policies_guidelines

Stakeholder	Role in the Project
State governments of Campeche, Oaxaca, Veracruz, and Quintana Roo	Each state has designated a focal point for the project, which will be a permanent guest and non-voting member of the Project Steering Committee, possibly from their environment, agriculture, economics, or internal affairs agencies. These state governments will receive technical support for targeted actions to address eutrophication in key watersheds within the three landscapes. Resources will enable them to improve wastewater management, reduce agricultural runoff, and implement policies to prevent nutrient overloading in critical water bodies, thereby enhancing their capacity to address marine hypoxia along coastal areas.
Municipal governments	Local governments will receive resources and training to tackle local environmental challenges effectively and integrate sustainable practices into community planning. These stakeholders will benefit from guidance on monitoring and mitigating water pollution at the watershed level. The resources provided will enable municipalities to implement localized solutions, such as improved wastewater management and eco-friendly agricultural practices. These solutions will help decrease nutrient inflow into rivers and estuaries, contributing to the reduction of marine hypoxia.
Indigenous peoples and local communities	Local communities in the three priority landscapes will receive training and funding to support adopting nature-based solutions (NbS), sustainable production practices, and water treatment solutions to be implemented within the three priority landscapes. Coastal communities will receive education on the impacts of marine hypoxia on fish populations. They will be trained to adopt sustainable practices that minimize ecological disruption and restore oxygen levels in affected marine ecosystems. Community engagement will involve participatory monitoring of water quality and biodiversity through citizen science initiatives. Both women and men, including members of the indigenous population, will receive training as local promoters of selected BMPs and NbS.
Social enterprises and producer organizations	Fisher organizations will receive guidance and resources to adopt sustainable fishing practices, helping to reduce the impact of hypoxia on fish stocks. This support will include capacity-building for ecosystem management, ensuring the long-term viability of fishing activities. Farmers and livestock producers will also receive guidance and resources to implement BMPs and NbS through their associations. Additionally, they will receive technical and financial advice to develop plans, business models, and organizational manuals. This will facilitate the transition to inclusive best practices and the adoption of NbS, ultimately reducing land-based water pollution and marine hypoxia.
Academic institutions, non-governmental and civil society organizations	These entities will gain access to valuable data, collaborative networks, and support for research efforts, empowering them to advocate for and implement evidence-based environmental solutions. They will be considered in developing capacity-building curriculum on reducing land-based sources of water pollution and marine hypoxia for various stakeholders in the three prioritized landscapes. They will also be included in advanced research and evidence-based advocacy initiatives, enabling them to play a pivotal role in addressing water pollution and hypoxia through participatory monitoring for water quality, community engagement and scientific innovations.

Stakeholder	Role in the Project
Private sector	Private companies involved in the project will benefit from new opportunities to implement sustainable business practices, reducing their environmental footprint and enhancing their market appeal. They may have the opportunity to participate in innovative water treatment technologies and nutrient management solutions. By adopting these approaches, companies can contribute to reducing water pollution and gain a competitive edge in sustainable practices.
International cooperation	International agencies will provide technical expertise, funding, and capacity-building support to ensure the project's success. These agencies will contribute to the development and implementation of sustainable strategies aimed at reducing water pollution, combating marine hypoxia, and fostering resilience in local communities. Their involvement will also ensure alignment with global best practices, facilitating knowledge sharing, and supporting the adoption of innovative solutions for sustainable fisheries, water resource management, and conservation of biodiversity in project areas.
Multilateral and bilateral development banks	These institutions will primarily focus on providing financial resources and strategic guidance to support large-scale initiatives and infrastructure development aligned with project objectives. They will offer concessional funding, loans, and grants to implement NbS for reducing nutrient runoff and marine hypoxia. These banks will also engage in co-financing arrangements to maximize resource mobilization while promoting capacity building and institutional strengthening among local and national stakeholders. Additionally, their involvement will ensure a robust financial mechanism to achieve project scalability and long-term impact.

82. The associated relevant projects and initiatives are:

Project	Agency	Main relevance to this Child Project
ORIGEN: Restoring Watersheds for Ecosystems and Communities	GEF (11121) Conservation International (2024-2029)	Generate multiple environmental and socio-economic benefits by restoring degraded landscapes with an integrated watershed approach, strengthening planning, promoting local restoration actions and mobilizing funding in Chiapas, Jalisco, and Veracruz and pilot regions.
Financing Agrochemical Reduction and Management Plus (FARM+) in Mexico	GEF (11683) UNDP (2024-2030)	The goal of the FARM+ project is to increase the adoption of sustainable and climate resilient agricultural practices in Mexico by unlocking of financial resources, reducing the use of harmful agrochemicals, in a manner that enhance ecosystems health. The main relevance is that both projects will contribute to the reduction of nutrient pollution associated to the agricultural sector in the State of Veracruz, along the Gulf of Mexico.
Sustainable Communities for Climate Action in the Yucatan Peninsula (ACCIÓN Yucatán)	GCF (under preparation) FMCN (2025-2030)	The ACCIÓN project aims to enhance the climate resilience of vulnerable populations, ecosystems, and productive systems along the coasts of the Yucatán Peninsula. This will be accomplished through Ecosystem-based Adaptation (EbA) strategies while also strengthening sustainable livelihoods. The project will be implemented in various selected areas of the marine and coastal landscapes of the Yucatán Peninsula. These landscapes are defined by a polygon that encompasses the

Project	Agency	Main relevance to this Child Project
		entire coastal and marine region of the Yucatán Peninsula, extending from Laguna de Términos in Campeche to Chetumal in Quintana Roo. The project will have an impact in the coastal areas of Quintana Roo, focusing on activities related to sustainable production. For more information, please visit the provided link.
River Restoration for Climate Change Adaptation (RIOS)	GCF (SAP023) FMCN (2021-2026)	The RIOS Project aims to tackle the increased vulnerability to landslides, floods, and droughts forecasted as a direct result of extreme precipitation in the two targeted drainage basins. In the lower regions of these basins, significant human settlements have become more exposed to the impacts of climate change. This project will build on lessons learned about connecting watersheds and restoring rivers. While it shares some aspects of integrated watershed management and river restoration interventions with this project in Veracruz, it does not target the same geographic area. For more information, please visit the provided link.
Umbrella Programme to Support NBSAP Update and the 7th National Reports	UNDP	Effort funded by the Global Environment Facility (GEF) to continue the process of updating the National Biodiversity Strategies and Action Plan (NBSAP) and reporting on implementation of the e Kunming-Montreal Global Biodiversity Framework (GBF).
Global Biodiversity Framework Early Action Support (GBF-EAS)	UNDP	The Global Biodiversity Framework Early Action Support (GBF-EAS) project is designed to mobilize funding and support so that countries can meet the new biodiversity targets.
The Biodiversity Finance Initiative Mexico (BIOFIN Mexico)	UNDP	The Biodiversity Finance Initiative (BIOFIN) is a cross-sectoral initiative that seeks to analyze the context of public policies, actors, spending and investment that have an impact on biodiversity. BIOFIN Mexico aims to seek innovative financial solutions such as aligning public spending, providing more efficient expenditure management, and avoiding future costs due to the negative impacts of biodiversity degradation.
Integrated Transboundary Ridge-to-Reef Management of the Mesoamerican Reef (MAR2R)	GEF (5765) WWF (2017-2022)	The MAR Ridges-to-Reef (R2R) Project aimed to provide support for regional collaboration for integrated ridge to reef management of the Mesoamerican Reef (MAR) ecoregion. By demonstrating its advantages and improving regional, national, and local capacities for integrated management and governance of its freshwater, coastal, and marine resources, the project has significantly impacted the MAR ecoregion. This project can provide lessons learned with respect to activities developed with an integrated management approach from the land to the ocean. For more information, please visit the provided link. Through the Forging Partnerships for the Ocean Project, Mexico will contribute to implementing the MAR2R SAP

Project	Agency	Main relevance to this Child Project
		(CCAD, 2023)20 by strengthening national water quality monitoring programs, fostering multi-stakeholder governance platforms and ensuring economic and sustainable benefits for local communities in the Rio Hondo basin.
Protecting and Restoring the Ocean's natural Capital, building Resilience and supporting region-wide Investments for sustainable Blue socio-Economic development (PROCARIBE+)	UNDP (2023-2028)	The PROCARIBE+ objective is protecting, restoring and harnessing the natural coastal and marine capital of the Caribbean and North Brazil Shelf Large Marine Ecosystems to catalyze investments in a climate-resilient, sustainable post-covid Blue Economy, through strengthened regional coordination and collaboration, and wide-ranging partnerships. For more information, please visit the provided link. During the implementation phase, the Forging Partnerships for the Ocean Project will assist in executing the 10-year regional Strategic Action Programme (CLME+ SAP, 2015-2025). Additionally, the project will aim to identify opportunities for sharing lessons learned, especially regarding coastal wetland conservation efforts. This will be done in collaboration with UNOPS, serving as PROCARIBE's Implementing Partner, and through the Comisión Centroamericana de Ambiente y Desarrollo (CCAD).
Towards Joint Integrated, Ecosystem-based Management of the Pacific Central American Coastal Large Marine Ecosystem (PACA)	UNDP (2021-2025)	The PACA project aims to promote ecosystem-based management of the Pacific Central American Large Marine Ecosystem through the strengthening of regional governance. It is a regional project with the participation of Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, and Panama. For more information, please visit the provided link. During the implementation phase, the Forging Partnerships for the Ocean Project will communicate with WWF Mesoamerica in Guatemala, serving as the Sustainable Pacific Project Implementation Partner, as well as other implementing partners. The focus will be on exploring opportunities to share lessons learned, particularly regarding marine and territorial ecological zoning. This collaboration seeks to learn about effectively managing land use and various productive activities, including fisheries.

Co-financing source	Co-financing type	Co-financing amount	Included in project results?	If yes, list the relevant outputs
Government – Ministry of Agriculture and Rural Development (SADER)	Public Investment In-kind	30,060,566	Yes	Output 1.1.1 Output 1.1.2 Output 1.1.3 Output 3.1.1 Output 3.1.2

Co-financing source	Co-financing type	Co-financing amount	Included in project results?	If yes, list the relevant outputs
				Output 3.2.2
Civil Society Organization – Senderos y Encuentros para un Desarrollo Autónomo Sustentable, A.C (SENDAS)	In-kind	520,500.00	Yes	Output 3.1.1 Output 3.2.2
Secretariat of Welfare (Bienestar)	In-kind	51,700,000	Yes	Output 3.1.1 Output 3.2.2
Mexican Fund for the Conservation of Nature	Grant	180,832	Yes	Output 2.1.1 Output 2.1.2
National Commission for Protected Natural Areas (CONANP)	In-kind	1,000,000	Yes	All project outputs
National Commission for the Knowledge and Use of Biodiversity (CONABIO)	In-kind	200,000	Yes	Output 1.1.1 Output 1.1.2 Output 1.1.3
UNDP Mexico Country Office	In-kind	300,000	Yes	Output 1.1.1 Output 1.1.2 Output 1.1.3 Output 2.1.1 Output 2.1.2 Output 2.2.1 Output 2.2.2 Output 2.2.3 Output 2.2.4 Output 3.1.1 Output 3.1.2 Output 3.1.3 Output 3.2.1 Output 3.2.2 Output 3.2.3 Output 3.2.4

Risks and Assumptions:

83. The overall project risk categorization is moderate. The project activities are designed to ensure that there are minimal or no risks of adverse social or environmental impacts. During the project design stage, the social and environmental screening (UNDP SESP) was updated (see Annex 5) and an ESMF was developed (see Annex 9), which includes an IPPF (see Annex 9.1, at project implementation stage, IPPs will be developed and FPIC for project intervention will be achieved, based on this IPPF); in addition, a Comprehensive Stakeholder Engagement Plan (see Annex 8) was developed. During project inception the ESMF will be finalized/updated in order to ensure that all affected indigenous peoples and other local stakeholders are fully consulted prior to the implementation phase. Also, at project implementation an ESMP, Cultural Heritage Management Plan, and a Biodiversity Action Plan will be developed. As per standard UNDP requirements, the Project Technical Coordinator and Project Manager will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk register. Risks will be reported as critical when the impact and probability are high

(i.e., when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks, as well as environmental and social grievances, will also be reported to the GEF in the annual PIR. The detailed risk management strategy for the project is included in Annex 6.

Climate Risks:

84. Mexico is located in the planet’s intertropical and temperate regions, between meridians 118° 22’00’’ y 86° 42’36’’ West, and 14° 32’27’’ y 32°43’06’’ North. Its coastline is distributed in the South, West, and East, occupying 72.2% of the country’s perimeter. Its marine surface is 3.1 million Km², which belongs to the North and South Pacific Ocean, the Cortés Sea, the Gulf of Mexico, and the Caribbean Sea (SEMARNAT & INECC, 2002). Its orography is diverse, including large mountain and volcanic chains, with maximum altitudes of 5,610 m.a.s.l. Mexico’s geographic location, coastline extension, and orography expose it to climatic hazards, affecting its vulnerability to climate change. The observed and expected climatic changes for Mexico are synthesized below.

Table 1. Observed and expected climatic changes for Mexico¹⁸.

Climatic variable	Observed changes	Expected changes for the period 2040-2059
Temperature	+0.31 °C per decade	+0.82-1.63 °C - More warm days, with temperatures above 35 °C (mainly for the east coast) - The South Pacific and the Caribbean region represent the biggest increase in warm periods.
Precipitation	- Trends variation: increments and decrements. - Dry summers in the Yucatan Peninsula. - Wet summers in the Southwest of Mexico. - Wetter autumn in the Southwest of Mexico.	- Regional changes with decremental trends. - The South Pacific region will have the greatest annual percentage decrease in precipitation. - Extreme rainfall events will be more frequent, mainly in the Gulf of Mexico.

85. Regarding the use of Mexico’s water, 60.7% of the used water comes from surface sources, while 39.3% comes from subterranean sources. Since 75.6% of the concessioned volume of water was distributed for the agricultural sector, 14.8% for public supply, 4.7% for electric power (excluding hydroelectricity), and 4.9% for self-supplied industry (SEMARNAT, 2024), the agricultural sector is considered one of the most vulnerable to climate change. The project’s intervention areas are in three different landscapes, whose main characteristics are synthesized in Table 2.

Table 2. Biophysical characteristics of the project’s intervention areas and landscapes.

Intervention area	States	Main biophysical characteristics
Sontecomapan Lagoon	Veracruz	- Composed of six micro basins and one lagoon, with a total extension of 296.4 km². - The length of the major watercourses is 133.43 km. 50% of the rivers are intermittent, while 50% are perennial, such as the lagoon. - Its cover condition is 23% primary vegetation, 14% secondary vegetation, and 63% transformed cover. - The region presents a seasonal rainfall regime. The main climate is warm subhumid.

¹⁸ Based on SEMARNAT. 2024. Primer Informe Bienal de Transparencia ante la Convención Marco de las Naciones Unidas sobre el Cambio Climático. Available at: https://unfccc.int/sites/default/files/resource/BTR_libro_24DIC2024.pdf.

Intervention area	States	Main biophysical characteristics
Tehuantepec Isthmus Lagoon System	Oaxaca	- Composed of six micro basins and two lagoons, with a total extension of 6,506 km². - The length of the major watercourses is 1,235 km. 50% of the main rivers are intermittent, and 50% are perennial. - Its cover condition is 30% primary vegetation, 37% secondary vegetation, 33% transformed cover, and 0.4% water bodies. - The region exhibits fluvial dynamics closely linked to a seasonal rainfall regime. The main climate is warm subhumid.
Hondo River Basin	Campeche and Quintana Roo	- Composed of two micro basins, with a total extension of 7,446.4 km². - The length of the major watercourses is 438.6 km. 50% are perennial watercourses, while 50% are intermittent. - Its cover condition is 40% primary vegetation, 38% secondary vegetation, 22% transformed cover, and 0.1% water bodies. - The main climate of the region is warm subhumid.

Climatic Hazards, Vulnerability, and Risks

86. The following climate risk analysis was based on the Climate Change and Basins Platform.¹⁹ Climatic hazards and direct impacts were identified; then the probability of occurrence was estimated.

87. **Sontecomapan Lagoon.** Based on SEMARNAT (2024) and the National Atlas of Vulnerability to Climate Change (INECC, 2019), all the municipalities that are part of the Sontecomapan lagoon are considered 1st order priority, due to its vulnerability to climate change. Climate change scenarios for the lagoon system suggest that its minimum temperature will increase at least 2.43 °C, while its maximum temperature could increase up to 2.06 °C. Extreme rainfall events will be more frequent in this region. However, climate change scenarios predict a change from -10.44% to +6.26% (Table 3).

Table 3. Historic climate conditions and expected climatic changes for the period 2015-2039 in the Sontecomapan Lagoon²⁰

Climatic variable	Average (1950-2000)	Most extreme scenario	Least extreme scenario	Expected change			
				Most extreme scenario		Least extreme scenario	
				Absolute	Relative	Absolute	Relative
Max Temperature (°C)	26.68	28.75	27.40	2.06	7.74	0.72	2.70
Min Temperature (°C)	15.52	19.16	17.95	3.64	23.48	2.43	15.66
Average monthly rainfall (mm)	242.99	258.22	217.62	15.22	6.26	-25.38	-10.44

88. An identification of climatic vulnerabilities and risks was performed for the region (Table 4).

¹⁹ SEMARNAT & INECC. 2022. Plataforma de Cuencas y Cambio Climático (PLACCC). Available at: <https://placcc.inecc.gob.mx/home.html>.

²⁰ Based on CNRMC-M5, GFDL-CM3, HADGEM2-ES and MPI-ESM-LR models available at: SEMARNAT & INECC. 2022. Plataforma de Cuencas y Cambio Climático (PLACCC). <https://placcc.inecc.gob.mx/home.html>.

Table 4. Climatic risks identified for the Sontecomapan Lagoon²¹

Vulnerability and risk analysis variable	Flooding associated with changes in precipitation patterns	Landslides in human settlements	Sea level rise	Disease spread due to temperature increase	Water stress affecting livestock production	Flooding affecting livestock production
Exposure	Very high	Very high	High	Very high	Low	Low
Sensitivity	High	High	Very high	High	High	High
Consequences	High	Medium	Moderate	High	Very high	High
Probability of occurrence	Very high	High	Very high	Very high	Very high	High
Risk	Very high	Moderate	Moderate	High	High	Substantial
Vulnerability	Moderate	Moderate	Moderate	High	Moderate	Moderate

89. **Tehuantepec Isthmus Lagoon System.** Based on SEMARNAT (2024) and the National Atlas of Vulnerability to Climate Change (INECC, 2019), all the municipalities that are part of the Tehuantepec Isthmus Lagoon System are considered 1st order of priority, due to its vulnerability to climate change. Climate change scenarios for this lagoon system suggest that its minimum temperature will increase by at least 3.33%, while its maximum temperature could increase up to 7.09%. The region expects the greatest annual percentage decrease in precipitation compared to the rest of the country. However, climate change scenarios predict a change from -2.63% to +11.29% (Table 5).

Table 5. Historic climate conditions and expected climatic changes for the period 2015-2039 in the Tehuantepec Isthmus Lagoon System²²

Climatic variable	Average (1950-2000)	Most extreme scenario	Least extreme scenario	Expected change			
				Most extreme scenario		Least extreme scenario	
				Absolute	Relative	Absolute	Relative
Max Temperature (°C)	32.43	34.73	33.14	2.3	7.09	0.71	2.19
Min Temperature (°C)	15.93	17.96	16.46	2.03	12.74	0.53	3.33
Average monthly rainfall (mm)	129.61	144.24	126.19	14.63	11.29	-3.42	-2.63

²¹ Instituto Nacional de Ecología y Cambio Climático (INECC). 2019. Atlas Nacional de Vulnerabilidad al Cambio Climático México. First edition (eBook). Available at: atlasvulnerabilidad.inecc.gob.mx.

²² Based on CNRMC-M5, GFDL-CM3, HADGEM2-ES and MPI-ESM-LR models available at: SEMARNAT & INECC. 2022. Plataforma de Cuencas y Cambio Climático (PLACCC). <https://placcc.inecc.gob.mx/home.html>.

Table 3. Climatic risks identified for Tehuantepec Isthmus Lagoon System²³

Vulnerability and risk analysis variable	Flooding associated with changes in precipitation patterns	Landslides in human settlements	Sea level rise	Disease spread due to temperature increase	Water stress affecting livestock production	Flooding affecting livestock production
Exposure	High	Medium	High	High	High	High
Sensitivity	High	Medium	High	Medium	Very high	High
Consequences	Major	Moderate	Catastrophic	Moderate	Catastrophic	Major
Probability of occurrence	Likely	Possible	Almost certain	Likely	Likely	Possible
Risk	High	Moderate	Extreme	High	Extreme	High
Vulnerability	High	Moderate	High	Moderate	High	High

90. **Hondo River Basin.** Based on SEMARNAT (2024) and the National Atlas of Vulnerability to Climate Change (INECC, 2019), all the municipalities that are part of the Hondo River Basin are considered 1st order priority, due to its vulnerability to climate change. Climate change scenarios for the lagoon system suggest that its minimum temperature will increase by at least 4.12%, while its maximum temperature could increase up to 5.58%. The region expects the greatest annual percentage decrease in precipitation compared to the rest of the country. However, climate change scenarios predict a change from -10.50% to +9.56% (Table 6).

Table 7. Historic climate conditions and expected climatic changes for the period 2015-2039 in the Hondo River Basin²⁴

Climatic variable	Average (1950-2000)	Most extreme scenario	Least extreme scenario	Expected change			
				Most extreme scenario		Least extreme scenario	
				Absolute	Relative	Absolute	Relative
Max Temperature (°C)	32.96	34.8	33.9	1.84	5.58	0.94	2.85
Min Temperature (°C)	16.76	18.29	17.45	1.53	9.13	0.69	4.12
Average monthly rainfall (mm)	120.85	132.4	108.16	11.55	9.56	-12.69	-10.50

²³ Based on INECC. 2019. Atlas Nacional de Vulnerabilidad al Cambio Climático México. First edition (eBook). Available at: atlasvulnerabilidad.inecc.gob.mx.

²⁴ Based on CNRMC-M5, GFDL-CM3, HADGEM2-ES and MPI-ESM-LR models available at: SEMARNAT & INECC. 2022. Plataforma de Cuencas y Cambio Climático (PLACCC). <https://placcc.inecc.gob.mx/home.html>.

Table 4. Climatic risks identified for “Hondo River” based on INECC (2019).

Vulnerability and risk analysis variable	Flooding associated with changes in precipitation patterns	Landslides in human settlements	Sea level rise	Disease spread due to temperature increase	Water stress affecting livestock production	Flooding affecting livestock production
Exposure	High	Low	Low	Very high	Very high	Very high
Sensitivity	Medium	High	High	High	Very high	High
Consequences	Moderate	Moderate	Moderate	Major	Catastrophic	Major
Probability of occurrence	Possible	Unlikely	Unlikely	Likely	Almost certain	Possible
Risk	Moderate	Moderate	Moderate	High	Extreme	High
Vulnerability	Moderate	Moderate	Moderate	Moderate	High	High

Mitigation measures

91. The following mitigation measures are identified to reduce climate change vulnerability:

- Restoration of primary vegetation for promoting water infiltration, and for reducing water speed in extreme rainfall events.
- Promote land cover restoration using native species in areas identified as vulnerable to landslides.
- Promote agricultural and cattle-raising best practices that could improve soil health, so that vegetation can be recovered, and flooding and landslides risks can be reduced.
- Promote territorial management planning through which disaster risks related to sea level rise are identified and reduced.
- Promote reforestation of mangroves to reduce the risks associated with sea level rise.
- Promote rainfall catchment in farms, so that farmers, communities, and cattle can survive water stress.
- Promote the use of crops with lower water requirements to avoid increasing pressure on water resources.
- Promote better practices for agricultural irrigation, to reduce pressure on clean water resources.
- Promote water sanitation through the restoration of wetlands, as well as the design and installation of artificial wetlands. Also, promote the use of sanitized water in different conservation and productive activities.
- Promote the construction of natural barriers using vegetation, dry vegetation, and stones, in areas with steep slopes and susceptible to landslides.
- Promote the use of herbaceous vegetation and native trees in areas under erosive processes to reduce soil degradation, sediment retention, and soil stabilization.
- Promote the cleaning of water bodies for recovery of natural vegetation, as well as water sanitation.
- Promote the production of native species of riparian areas to favor sediment retention and water sanitation.

92. On the other hand, regarding its greenhouse gas (GHG) emissions, Mexico increased its emissions in 2022 to 757.29 million tons of CO₂. However, the Land Use, Land Use Change and Forestry (LULUCF) Sector, contributed a

net absorption of 188.78 million tons of CO₂. Therefore, Mexico's net emissions in 2022 were 568.5 MtCO₂e. Therefore, the following mitigation measures are identified:

- Restore mangroves and other blue carbon ecosystems to promote carbon sequestration.
- Promote the conservation of blue carbon ecosystems through conservation instruments such as Protected Areas, and Areas Voluntarily Designated for conservation.
- Promote the conservation and restoration of blue carbon ecosystems by boosting best productive practices in aquaculture and permaculture.
- Promote restoration of terrestrial ecosystems, ensuring carbon sequestration.

93. The likelihood of the occurrence of climate-related events has been rated as moderate (Likelihood = 3; Impact = 3, on a scale of 1 to 5 according to UNDP SES rating scale to assess the impact of risk).

Stakeholder engagement:

94. The successful implementation of the project will largely depend on effective communication and coordination with the multiple project stakeholders and the implementation of mechanisms to ensure their participation in project's activities. The key national and sub-national stakeholders include the SADER, NAFIN, SEMARNAT, CONAGUA, CONAFOR, CONANP, CONAPESCA, and CIIT, among others. At the local level, the most relevant stakeholders are the departmental and municipal governments, the private sector companies, women's groups, local communities, regional indigenous organizations, indigenous peoples, and NGOs, among others.

95. Local stakeholder and IPLC involvement will be structured through a Stakeholder Engagement Plan, ensuring compliance with Mexican law by following the Free, Prior, and Informed Consent (FPIC) process. The project will build on the FPIC exercise conducted by the CIIT in 2019 to renew and establish new agreements, particularly those aiming to protect and strengthen the cultural diversity and heritage of IPLCs throughout the project.

96. During the PPG, a stakeholder analysis was conducted, which served as the basis for the development of the Comprehensive Stakeholder Engagement Plan (Annex 8) and where the main stakeholders of the project, participation mechanisms and consultations during project formulation, governance aspects of the project, the communication and information management strategy, dispute resolution mechanisms, among others, are identified. In addition, the role of each stakeholder in project implementation is detailed. Various mechanisms depending on the degree of involvement required of the stakeholders and their role in the project will be used, these may include workshops, meetings, field visits, and interviews, among others. The number of direct beneficiaries is 67,065 people (50% women) including people that may not directly aware of the project's interventions.

97. The *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project will be responsible for the development of a landscape-level detailed Stakeholder Analysis and Engagement Plan (SAEP) covering geographically the source-to-sea continuum, which will be refined and operationalized at the start of the project. The landscape-level SAEP will include: (1) a stakeholder mapping and identification; (2) a stakeholder analysis characterization, including the following parameters: stakeholder type, sectors, stakeholder tiers, importance, interest, influence, action arena, positionality, and gender flag; (3) a stakeholder grouping to identify key categories of stakeholder to be prioritized; (4) the development of an engagement strategy with specific mechanisms and activities per key stakeholder groups. A template database to use for the stakeholders grouping, analysis and characterization will be provided by the GCP and used by the CPs to enable the development of an IP level database to be used for Communication activities as well as Stakeholder Engagement activities at the Global, Regional, and CP levels.

98. As part of the SAEP, the *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project will develop and implement a Private Sector Engagement Strategy (PSES) to ensure collaboration with key private sector entities, such as fertilizer companies, agri-food businesses, water supply firms, tourism businesses, fishing companies, the banking industry etc. As for the SAEP, the PSES at country level will need a detailed process for stakeholder mapping, characterization, categorization, leading to a comprehensive plan with specific engagement mechanisms and activities per key private sector groups that will be identified.

99. The *Forging Alliances for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project will work with the GCP to ensure a harmonized approach to developing, reviewing, and implementing the SAEP and the PSES. Towards this end, the CP will dedicate time to support the GCP revise the SEAP at GCP/IP level. The *Forging Alliances for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* will use its own financial support from the IA to develop and implement these plans but may require additional technical support from the CGP, which would require additional financial contribution from the *Forging Alliances for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project budget.

South-South and Triangular Cooperation (SSC/TrC):

100. Mexico's proactive engagement in addressing hypoxic zones within the GoM, CLME, PACA LMEs significantly advances the program's objectives of fostering clean and healthy oceans worldwide. The project places a strong emphasis on aligning with the global and regional framework of the CHO IP, particularly concerning the selected LMEs, which span national borders and necessitate coordinated action across multiple countries. Special attention will be given to continuing national efforts to promote regional cooperation, South-South cooperation, knowledge management, gender transformative measures, and technical exchanges, recognizing their critical role in comprehensive LME management. To present opportunities for replication in other countries, and to facilitate dissemination through global on-going South-South and global platforms, the project will participate in learning and collaboration platforms such as the GEF International Waters Learning Exchange and Resource Network (IW:LEARN)²⁵, the UN South-South Galaxy knowledge sharing platform²⁶, the Good Growth Community of Practice²⁷, and the Panorama Portal "Solutions for a Healthy Planet"²⁸.

101. In addition, to bring the voice of Mexico to global and regional fora, the project will explore opportunities for meaningful participation in specific events where UNDP could support engagement with the global development discourse on reducing coastal nutrient-based pollution, addressing marine hypoxia, and safeguarding LMEs. The project will provide regional cooperation opportunities with countries implementing initiatives on biodiversity conservation, healthy and clean oceans, and international waters, in geopolitical, social and environmental contexts relevant to the proposed project in Mexico.

Gender equality and Women's Empowerment:

102. According to the UNDP Gender Marker Rating, the project is categorized as GEN2: gender equality as a significant objective; results address differential needs of men or women and equitable distribution of benefits, resources, status, and rights, but do not address root causes of inequalities in their lives. The project will include any gender-responsive measures to address gender gaps or promote gender equality and women's empowerment by conducting gender/socio-economic assessment to identify gender gaps and assess how women and men are likely to be affected by and benefit from project activities, their active participation in strengthening multi-stakeholder governance structures and mechanisms to improve the integrated management of watersheds and marine-coastal zones to reduce water pollution and hypoxia, through capacity building, and through their participation in implementing pilot and demonstrative projects at the local level that showcase the adoption of best practices and NbS, among other gender-sensitive actions.

103. During the PPG, a gender analysis for the prioritized landscape and a detailed Gender Action Plan (included as Annex 10) were developed to ensure gender mainstreaming in the project. The Project Results Framework includes gender-sensitive indicators (disaggregated by sex; see Section VI) and specific gender-based indicators will be used for monitoring.

104. The project will align with Mexico's National Program for Equality between Women and Men. Existing platforms coordinated under the INMUJERES (the National Institute for Women) will aid in integrating gender perspectives into project activities.

²⁵ <https://iwllearn.net>

²⁶ <https://www.unsouthsouth.org/south-south-galaxy/>

²⁷ <http://goodgrowthpartnership.com>

²⁸ <https://panorama.solutions/en>

105. The *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project will collaborate closely with the CHO IP GCP on its gender-related activities, including a set of mandatory activities to ensure harmonization at the programmatic level. This will include the need to: (1) conduct a gender analysis and develop a gender action plan (GAP) that aligns with the GCP GAP; (2) conduct a gender-responsive stakeholder analysis that aligns with the GCP Stakeholder Analysis and Engagement Plan; (3) ensure that the project's gender specialist and other relevant members of the project team participate regularly in the GCP Gender Working Group; (4) participate in relevant program-level capacity-building events organized by the GCP that seek to benefit women; (5) establish and collect, analyze and report on sex-disaggregated data, in alignment with the programmatic-level gender indicators and report these to the GCP; and (6) identify good practice examples and lessons learned on gender issues in relation to the CHO IP and transmit these to the GCP for dissemination through program-level communications and/or knowledge products.

106. The *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project will ensure that gender is mainstreamed throughout its activities, including (as relevant) into: (1) scientific and technical data collection and monitoring related to the CHO IP; (2) awareness-raising and outreach campaigns on nutrient pollution and marine hypoxia; (3) project activities to integrate gender considerations in policies, strategies and plans in the context of the CHO IP; (4) any activities addressing finance and investment to incentivize the take-up of measures to address marine hypoxia, including opportunities to promote women's access to blue/green finance and blue/green jobs; (5) any activities that offer opportunities to facilitate partnerships between women-led businesses and other key stakeholders (e.g. WE-Fi) for women to develop small businesses focused on activities addressing marine hypoxia; (6) tailored technical support activities promoting best management practices to mitigate aspects of nutrient pollution in the agricultural, industrial and urban sectors, and (7) more generally, actions to ensure that women and women's groups/organizations can fully participate in all project activities.

Knowledge:

107. Component 4 of the project underscores a comprehensive knowledge management (KM) approach, prioritizing data sharing, advanced monitoring technologies, and involving citizens in data collection. Successful cases will serve as catalysts for replication in other landscapes in Mexico and other countries and regions, and will be promoted on international platforms like the Global Water Partnership (GWP), the Global Wastewater Initiative (GW2 I), the International Water Association (IWA), the Global Programme of Action for the Protection of the Marine Environment and Land-based Activity (GPA), UN Biodiversity Lab, PANORAMA, IW:LEARN, EXPOSURE and others supported by the CHO IP, ensuring wide dissemination of lessons learned and best practices, encouraging replication and scalability. Knowledge sharing of best practices and lessons learned would also be done through active participation of the child project in the CHO IP events and activities.

108. Specific knowledge products will include videos, books, photographs, webinars/e-learning, and radio guidelines, among others. In addition, the project will develop at least one PANORAMA during the project lifecycle and one photo-story in Exposure each year. The project's knowledge management strategy will also serve to disseminate internal and external technical reports, policy summaries, and case studies based on results from the implementation of pilot and demonstrative local and municipal level projects that showcase the adoption of BMP and NbS, which will be available to the nationally and internationally. The project results framework includes indicators for measuring the impact of the project's knowledge management strategy.

109. The Country Project will collaborate closely with the Global Coordination Project (GCP) to ensure alignment with the program KML Strategy and implementation activities. The GCP will represent the CHO IP in terms of engagement with the GEF's International Waters Learning Exchange and Resource Network (IW:LEARN) and will be targeting Core Indicator 7.4 on behalf of the Program. The project [name of Project] will provide inputs to the GCP to engage/liaise with IW:LEARN as outlined in the KML strategy (to be developed by the GCP during the program inception phase). The Project will prepare knowledge products to enhance cross-project learning and gender-transformative actions to reduce land-based pollution causing hypoxia, provide regular updates and contribute content to the CHO knowledge portal. In addition, the project will participate in learning exchanges, twinning programs, and provide inputs to the Clean and Healthy Ocean Knowledge Atlas as guided by the GCP. This collaboration will require staff time, event participation, and support from multimedia and design professionals to ensure high-quality contributions to global knowledge-sharing initiatives.

110. The *Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions* project will collaborate closely with the CHO IP GCP through strategic communication and awareness-raising on marine hypoxia and nutrient pollution. This will include developing a national baseline assessment of marine hypoxia and nutrient pollution awareness and a corresponding National Communication and Outreach Plan, adapting global communication materials to the national context, executing a national awareness-raising campaign, and utilizing gender-responsive social media strategies to highlight impact stories from a gender perspective. The project will also contribute to and benefit from GCP initiatives such as the Goodwill Ambassadors plan and the dissemination of policy briefs to strengthen the science-policy interface at national and regional levels. The project's communication specialist will participate in the CHO IP Communications Workgroup, implement the CHO IP Visual Identity across all communication products, and contribute to global-level communications with project-specific materials. Press releases will be issued to announce key achievements, including the project launch, ensuring consistent visibility at the national level. Country projects will ensure that all communication materials highlight that the project is part of the global CHO IP, ensuring that the collective impact of national projects amplifies the overall global impact of the CHO IP.

Innovativeness, Sustainability and Potential for Scaling Up:

111. Project innovation will include the use of digital and technological tools for water quality monitoring, including obtaining continuous real-time water-quality data and mapping. In addition, the project will make use of innovative BMP and investment solutions to reduce water nutrient pollution and marine hypoxia. This will include alternative and innovative designs of wastewater treatment adapted to local conditions and the needs of selected municipalities. It will also include mixed-financing and investment instruments for piloting NbS for the reduction of water pollution and marine hypoxia with the participation of local organizations, IPLCs, and OSSEs.

112. Strengthening the water quality monitoring capacity of key institutions and local stakeholders in the three target landscapes will contribute to ensuring environmental sustainability. In addition, the project will support the restoration of coastal-marine ecosystems and hydrological processes as well as the reforestation of upstream areas and buffers critical for the reduction of agricultural runoff and the conservation of biodiversity. Similarly, the implementation of NbS and BMPs at the municipal and rural levels will result in long-term reduction of water pollution and marine hypoxia, in addition to building habitat for biodiversity and restoring soil productivity, among other benefits.

113. Socioeconomic sustainability will be achieved primarily by piloting projects with local organizations, IP & LCs, and OSSEs for the adoption of best practices and NbS to reduce water pollution and marine hypoxia. This will result in socioeconomic benefits for IPLCs that will contribute to the sustainability of pilot activities. In addition, the project will provide training for the implementation of NbS and BMPs, which will build skills that will remain after project completion. Awareness and education campaigns, together with community-based monitoring, will build greater awareness and lasting commitment to water quality improvement. The project will give special attention to empowering women and making them active participants of project implementation ensuring benefits for women and their long-term involvement in improving water quality where they reside.

114. Financial sustainability will be achieved by making financial mechanisms for implementing NbS and BMPs available to IPLCs, producers, and municipalities. This will include mixed-financing and investment instruments for IPLCs and producers that will address short-, medium-, and long-term financial needs of these and other local stakeholders. In addition, the project will provide technical assistance and build skills to facilitate access to long-term financing. In the case of the municipalities, the project will make recommendations for investing in NbS within the operational rules and guidelines of public budgetary programs so that these financing options will be permanently available to all municipalities in the target landscapes.

115. Institutional sustainability will be achieved by strengthening the capacity of subnational and national institutions to collect and share water quality data in a coordinated manner. An information and analysis system to collect, systematize, and exchange knowledge and data on watershed management, ocean health (marine hypoxia) and water quality, which will be managed inter-institutionally and with assured interoperability, will allow information to be made available in an organized manner, improving decision-making during and beyond project execution. In addition, the project will strengthen existing multi-stakeholder governance structures and mechanisms,

planning, and policies to enhance long-term integrated watershed and marine-coastal zones management and reduce water pollution and marine hypoxia.

116. In terms of scalability, the project underscores significant changes through public-private models to expand NbS implementation. Its goals include establishing a proof of concept, developing sustainable financial instruments, and attracting investments to facilitate NbS adoption. This potential for scalability extends to the Interoceanic Corridor of the Isthmus of Tehuantepec's influence areas, and in the Rio Hondo basin, with replication possibilities in the mid-term. The project actively involves key stakeholders for support and co-financing, utilizing effective KM and communications. This approach leverages the catalytic nature of GEF investments, amplifying transformative effects not only within the corridor and Rio Hondo basin, but also potentially across Mexico, Latin America and the Caribbean, and beyond.

Digital Solutions²⁹:

117. The project will use advanced technologies such as satellite imagery and remote sensing, as well as other cutting-edge technologies, and enhance field surveys to collect data on water quality, marine hypoxia, marine habitats, climate change mitigation, and socio-economic benefit indicators. The project will develop an information and analysis system based on a web platform (explorer) to collect, systematize and exchange knowledge on comprehensive river basin management, ocean health (marine hypoxia) and water quality. Finally, social media (e.g., WhatsApp, Facebook, TikTok, Instagram, etc.), and institutional websites (such as SADER, CONAGUA, and CONABIO) will be used to share project-related information electronically.

PROJECT MANAGEMENT

Cost Efficiency and Effectiveness

118. The project will create a coalition of multiple stakeholders at the national, subnational, and local levels that will allow for the coordinated implementation of the project's actions considering and integrated watershed, landscape, and coastal management approach. Similarly, the project will address water quality and nutrient-based pollution using a Source-to-Sea approach. This is considered more cost-effective than addressing these issues in isolation.

119. The project will seek opportunities to use a portfolio management approach to enhance cost effectiveness and learning by leveraging activities and partnerships with other initiatives/projects.

Project Management

120. The project will be operationalized in three landscapes/seascapes: Isthmus of Tehuantepec and the Yucatan Peninsula in southern Mexico that share borders with three LMEs, CLME, PACA).

121. The project will work in close collaboration with ongoing GEF initiatives as follows:

Project	Agency	Main relevance to this Child Project
ORIGEN: Restoring Watersheds for Ecosystems and Communities	GEF (11121) Conservation International (2024-2029)	Generate multiple environmental and socio-economic benefits by restoring degraded landscapes with an integrated watershed approach, strengthening planning, promoting local restoration actions and mobilizing funding in Chiapas, Jalisco, and Veracruz and pilot regions.
Financing Agrochemical Reduction and	GEF (11683) UNDP	The goal of the FARM+ project is to increase the adoption of sustainable and climate resilient agricultural practices in Mexico by unlocking of financial resources, reducing the use of

²⁹ Please see the Guideline "Embedding Digital in Project Design".

Project	Agency	Main relevance to this Child Project
Management Plus (FARM+) in Mexico	(2024-2030)	harmful agrochemicals, in a manner that enhance ecosystems health. The main relevance is that both projects will contribute to the reduction of nutrient pollution associated to the agricultural sector in the State of Veracruz, along the Gulf of Mexico
Sustainable Communities for Climate Action in the Yucatan Peninsula (ACCIÓN Yucatán)	GCF (under preparation) FMCN (2025-2030)	The ACCIÓN project aims to enhance the climate resilience of vulnerable populations, ecosystems, and productive systems along the coasts of the Yucatán Peninsula. This will be accomplished through Ecosystem-based Adaptation (EbA) strategies while also strengthening sustainable livelihoods. The project will be implemented in various selected areas of the marine and coastal landscapes of the Yucatán Peninsula. These landscapes are defined by a polygon that encompasses the entire coastal and marine region of the Yucatán Peninsula, extending from Laguna de Términos in Campeche to Chetumal in Quintana Roo. The project will have an impact in the coastal areas of Quintana Roo, focusing on activities related to sustainable production. For more information, please visit the provided link.
River Restoration for Climate Change Adaptation (RIOS)	GCF (SAP023) FMCN (2021-2026)	The RIOS Project aims to tackle the increased vulnerability to landslides, floods, and droughts forecasted as a direct result of extreme precipitation in the two targeted drainage basins. In the lower regions of these basins, significant human settlements have become more exposed to the impacts of climate change. This project will build on lessons learned about connecting watersheds and restoring rivers. While it shares some aspects of integrated watershed management and river restoration interventions with this project in Veracruz, it does not target the same geographic area. For more information, please visit the provided link.
Strengthening water security and resilience in priority basins through Nature-based Solutions and effective governance, in a COVID-19 context	PNUD (with Coca Cola Foundation and other sources of funding) (2022-2025)	This project aims to reduce water vulnerability in communities and their livelihoods within priority watersheds through nature-based solutions. This approach seeks to enhance resilience and water security in the face of climate change. The actions promoted by the project are focused on improving the provision of hydrological environmental services and replenishing water supplies in these key watersheds. Additionally, the project will offer valuable insights into implementing ecosystem-based methods in watershed management, collaborating with local communities, civil society organizations, government institutions, and the private sector. For more information, please visit the provided link.
Integrated Transboundary Ridges-to-Reef Management	GEF (5765) WWF	The MAR Ridges-to-Reef (R2R) Project aimed to provide support for regional collaboration for integrated ridge to reef management of the Mesoamerican Reef (MAR) ecoregion. By

Project	Agency	Main relevance to this Child Project
of the Mesoamerican Reef	(2017-2022)	demonstrating its advantages and improving regional, national, and local capacities for integrated management and governance of its freshwater, coastal, and marine resources, the project has significantly impacted the MAR ecoregion. This project can provide lessons learned with respect to activities developed with an integrated management approach from the land to the ocean. For more information, please visit the provided link.
Coastal Communities Faced with Climate Change and Pollution (C5)	National Institute of Ecology and Climate Change (2018-2023)	The C5 Project aimed to tackle three significant environmental issues in the coastal region of the Gulf of Mexico: pollution primarily caused by the extraction, production, and processing of hydrocarbons; the deterioration of coastal wetland ecosystems; and the various impacts of climate change, which include rising temperatures, sea level rise, coastal erosion, and a marked decrease in fishery productivity. This project offers valuable insights into engaging the coastal population, whose main economic activity is artisanal fishing. For more information, please visit the provided link.
Umbrella Programme to Support NBSAP Update and the 7th National Reports	UNDP	Party-led effort funded by the Global Environment Facility (GEF) to continue the process of updating National Biodiversity Strategies and Action Plans (NBSAPs) and undertake reporting on implementation of the e Kunming-Montreal Global Biodiversity Framework (GBF).

PROJECT RESULTS FRAMEWORK

Contribution to the Sustainable Development Goal (s): 5: Gender equality; 6: Clean water and sanitation; 11: Sustainable cities and communities; 12: Responsible consumption and production; 14: Life below water; 15: Life on land; and 17: Partnerships for the goals.							
Intended Outcome as stated in the UNSDCF/Country Programme Results and Resource Framework: Cooperation Framework Outcome 6. By 2025, the Mexican State implements policies, strategies, and programmes that allow moving towards a green economy that promotes the mitigation of climate change and the strengthening of the institutional framework, taking into consideration energy efficiency, promotion of clean and renewable energy, production, consumption, transportation, cities, and sustainable agriculture, with a focus on health, human rights, gender, interculturality, life cycle, and territory.							
Applicable Output(s) from the UNDP Strategic Plan: Output 5. Strengthened capacities and partnerships between key actors for promotion of sustainable economies and strengthening institutional frameworks to create resilience to climate change; Output 6. Supported strategies focused on consolidating conservation policy and sustainable management of ecosystems and biodiversity from a perspective of green economy and inclusion.							
Project title and Quantum Project Number: Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions 01003814							
Objective and Outcome Indicators		Data Source	Baseline	Mid-term Target	End of Project Target	Data Collection Methods	Risks/Assumptions
Project Objective:	To reduce marine hypoxia and coastal nutrient pollution from agricultural, industrial, and municipal sources associated with three Large Marine Ecosystems (LMEs) in Mexico through integrated watershed management measures that combine policy coherence, infrastructure investments, and nature-based solutions (NbS).						
	Indicator 1 (Mandatory Core Indicator 11): # direct project beneficiaries disaggregated by gender (individual people)	Sum of stakeholders in the three target landscapes and at the institutional level that will participate in different activities, and that will benefit from improved ecosystem services, such as better water quality, water availability, climate regulation, and soil quality even if they are not directly aware of the project’s interventions, differentiated by sex	0	22,518 people (50% women)	67,065 people (50% women)	Stakeholder participation databases GEF-8 Core Indicator spreadsheet	Risks: The project team and Implementing Partner fail to involve all key project partners and stakeholders. Assumptions: Willingness on the part of decision-makers to reduce coastal pollution and marine hypoxia. There is willingness on the part of the inhabitants in the target landscapes to reduce pressures on coastal-marine ecosystems and biodiversity.

							The indicator will be achieved through direct interventions (e.g., capacity building, participation in demonstration modules, Low Value Grant- LVG beneficiaries, etc.) as well as systemic activities (e.g., improved governance and participation, investment projects, improved laws and regulations, etc.).
	Indicator 2 (Mandatory GEF Core Indicator 3): Area of land and ecosystems under restoration (hectare)	Ecosystems to be restored include mangroves, seagrass, coastal, and riverine wetlands	0	3,300 ha	11,000 ha	Project maps (GIS) and field reports GEF-8 Core Indicator spreadsheet	<u>Risks:</u> The project landscapes are subject to extreme weather conditions such as droughts, floods, and storms, which can affect the viability and success of restoration efforts. Insufficient cofinancing to support restoration efforts. The participatory processes necessary for establishing restoration areas are not achieved.

							<u>Assumptions:</u> There is capacity for restoration, including access to the necessary technologies. There is interest among inhabitants of the target biodiversity landscapes to restore degraded areas and ecosystems. The indicator will be achieved through direct interventions (e.g., direct restoration efforts at land/seascape level (i.e., demonstration geographies, cofinancing restoration initiatives and investments) as well as systemic activities (e.g., national and local restoration plans and programs, improved laws regulations and technical guidance, etc.).
	Indicator 3 (Mandatory GEF Core Indicator 4): Area of landscapes under improved	The target was calculated by adding the production landscapes where the use of fertilizers and	0	75,000 ha	211,277 ha	Spatial analysis; project maps and field reports GEF-8 Core Indicator spreadsheet	<u>Risks:</u> There are unsustainable activities that may be more economically attractive for local

	practices (hectare)	the production of wastes will be controlled through enhanced planning and management, and sustainable agroecological production for the reduction of coastal pollution and marine hypoxia					stakeholders (e.g., agriculture, cattle ranching) Limited benefits (incentives: economic and financial mechanisms) for local stakeholders result in limited global environmental benefits. <u>Assumptions:</u> Optimal involvement of stakeholders in the project for the reduction of coastal pollution and marine hypoxia in production landscapes. The indicator will be achieved through direct interventions (e.g., participation in demonstration modules, LVGs, Best Management Practice interventions at landscape level, etc.) as well as systemic activities (improved governance and participation, investment
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							projects, improved extension services, improved laws and regulations, etc.).
	Indicator 4 (Mandatory GEF Core Indicator 5): Area of marine habitat under improved practices (hectare)	The target was calculated by adding the production seascapes where the production of organic wastes will be controlled through enhanced planning and management, and sustainable production for the reduction of coastal pollution and marine hypoxia	0	206,632 ha	590,377 ha	Spatial analysis; project maps and field reports GEF-8 Core Indicator spreadsheet	<u>Risks:</u> There are unsustainable activities that may be more economically attractive for local stakeholders (e.g., aquaculture, fisheries) Limited benefits (incentives: economic and financial mechanisms) for local stakeholders result in limited global environmental benefits. <u>Assumptions:</u> Optimal involvement of stakeholders in the project for the reduction of coastal pollution and marine hypoxia in production seascapes. The indicator will be achieved through direct interventions (e.g., participation

							in demonstration modules, LVGs, BMPs interventions at seascape level, etc.) as well as systemic activities (improved governance and participation, improved information sharing and monitoring systems, investment projects, improved laws and regulations, etc.).
	Indicator 5 (Mandatory GEF Core Indicator 6): Greenhouse Gas Emissions Mitigated (metric ton of CO2e)	This target was estimated using FAO's Ex-ACT tool	0	1,798,430	5,994,766	Field Report Updated FAO's Ex-ACT tool	<u>Risks:</u> The target landscapes/seascapes are subject to high climate variability and changes in land use/production practices that minimize the success of restoration and GHG emissions reduction efforts. <u>Assumptions:</u> Project is successful in controlling deforestation and waste production in the target landscapes. The indicator will be achieved through a combination of

							direct interventions and systemic activities, aligned with GEF Core Indicators 3, 4, and 5, as well as their corresponding outcome-level indicators.
	Indicator 6 (Mandatory GEF Core Indicator 7): Shared water ecosystems under new or improved cooperative management (count)	The Mexico Child Project should report on Indicators 7.1, 7.2, and 7.3. The Mexico Child Project will contribute to the management of three LME but will not develop and/or implement a TDA/SAP.	0	3	3	GEF-8 Core Indicator spreadsheet	<u>Risks:</u> There are unsustainable activities that may be more economically attractive for local stakeholders (e.g., aquaculture, fisheries) Limited benefits (incentives: economic and financial mechanisms) for local stakeholders result in limited global environmental benefits. <u>Assumptions:</u> Optimal involvement of stakeholders in the project for the reduction of coastal pollution and marine hypoxia in LMEs
	Indicator 7: Number of countries in target	Official government and sectoral records	0	1	1	Project reports CHO IP reports	<u>Risks:</u> The project team and Implementing

	LMEs with improved policy or regulatory frameworks that seek to reduce nutrient pollution and hypoxia (program-wide indicator)						Partner fail to involve all key project partners and stakeholders <u>Assumptions:</u> There is political will and interest to improve policy or regulatory frameworks
	Indicator 8: Number of private sector organizations participating in the CHO IP that adopt ESG statements and solutions to reduce nutrient pollution and marine hypoxia (program-wide indicator) (Baseline and targets to be defined during project implementation)	Private sector records	TBD	TBD	TBD	Project reports CHO IP reports	<u>Risks:</u> The project team and Implementing Partner fail to involve the private sector <u>Assumptions:</u> Interest among private sector companies to adopt solutions to reduce nutrient pollution and marine hypoxia
	Indicator 9: Amount of new national public and private sector financing targeted at supporting NbS solutions to address nutrient pollution and marine hypoxia (program-wide indicator)	Project information and reports on secured new financing	0	At least 750,000 USD/year	At least two million USD/year	Project reports CHO IP reports	<u>Risks:</u> The project team and Implementing Partner fail to involve all key project partners and stakeholders in the project, in particular the private sector

							<u>Assumptions:</u> Project is successful in securing financial resources from new sources including the private sector
	Indicator 10: Number of international best practice (Codes of Practice, standards, etc.) addressing nutrient pollution and marine hypoxia integrated into national level policy and management frameworks in target countries (program-wide indicator)	Official government and sectoral records	TBD	TBD	TBD	Project reports CHO IP reports	<u>Risks:</u> The project team and Implementing Partner fail to involve all key project partners and stakeholders <u>Assumptions:</u> There is political will and interest from municipal and national authorities
	Indicator 11: Percentage of positive feedback from sampled target stakeholders on the impact generated by awareness-raising campaigns and learning opportunities promoted by the CHO IP (program-wide indicator)	Project information on development of knowledge and programmatic management with the CHO-IP	0	At least 50%	At least 50%	Project reports CHO IP reports	<u>Risks:</u> The project team and Implementing Partner fail to involve all key project partners and stakeholders <u>Assumptions:</u> There is interest from stakeholders to participate Effective coordination with GCP
Project Component 1	Improving the evidence base and raising awareness to more effectively address nutrient pollution and marine hypoxia						

Project Outcome 1.1 The quality, management, and availability of scientific and technical data required by decision-makers to address nutrient pollution and marine hypoxia are improved at the subnational and national levels, in particular, in three prioritized landscapes	Indicator 12: Number of inter-institutional agreements for information exchange	Key institutions, for example SADER, SEMAR, CONABIO, CONAGUA, CONAPESCA, INECC, state governments, and academia)	0	At least three (3) (one per landscape)	At least three (3) (one per landscape)	Signed agreements	<u>Risks:</u> The project team and Implementing Partner fail to involve all key project partners and stakeholders. Conflicting mandates prevent the establishment of inter-institutional agreements <u>Assumptions:</u> Willingness on the part of key stakeholders to establish inter-institutional agreements
	Indicator 13: Number of institutions that provide and share information on water pollution, river basins and marine-coastal hypoxia	Institutions may include: SADER, SEMAR, CONABIO, CONAGUA, CONAPESCA, INECC, state governments, and academia	0	At least eight (8)	At least eight (8)	Water quality databases Official requests of information	<u>Risks:</u> The project team and Implementing Partner fail to involve all key project partners and stakeholders <u>Assumptions:</u> Willingness on the part of key institution to share information
	Indicator 14: Percentage of nutrient pollution monitoring sites with data collected following a Standardized Water Quality	Project water quality monitoring team, CONAGUA, and academia	0	At least 35%	100%	Water quality monitoring stations reports	<u>Risks:</u> Monitoring team fails to implement the protocol; loss of monitoring equipment; difficult weather conditions that do not allow

	Data Collection Protocol						accessing monitoring sites <u>Assumptions:</u> Optimal conditions for sampling
	Indicator 15: Percentage of positive feedback from stakeholders on the impacts generated by the awareness campaigns and training opportunities. (GEF Indicator 11)	Sample of stakeholders interviewed in each project landscape through KAP surveys	TBD	At least 30%	At least 50%	KAP indicators and surveys	<u>Risks:</u> Limited impact from awareness raising and education activities regarding nutrient pollution and marine hypoxia <u>Assumptions:</u> Willingness of stakeholders to participate Sampling efforts are optimal
Outputs to achieve Outcome 1	1.1.1. Technical and participatory assessments of the status of water quality data from source-to-sea (water pollution and marine hypoxia) in three target landscapes, including monitoring of water pollution and marine hypoxia from four sources (municipal, agricultural, aquaculture and industrial), based on historical information. 1.1.2. Information and analysis system to collect, systematize and exchange knowledge on comprehensive river basin management, ocean health (marine hypoxia) and water quality (including nutrient and oxygen data) at a subnational level in operation, managed inter-institutionally, with assured interoperability, and accessible to different audiences. 1.1.3. Broad, permanent, and inclusive outreach, communication and awareness, and education campaigns promote linkages and commitments related to integrated watershed management and pollution and hypoxia reduction in key areas of three large marine ecosystems - LMEs (Gulf of Mexico, Caribbean Sea and Pacific Central American Coastal, PACA).						
Project Component 2	Supporting the strengthening of policy, regulatory and investment frameworks to incentivize and finance pollution mitigation						
Outcome 2.1 Improved governance at subnational and national levels to reduce water pollution through NbS	Indicator 16: Number of operational, gender-sensitive and culturally appropriate governance structures and/or	Official government, community, and/or other stakeholder records Note: the number of governance	0	At least three (3) (one per landscape)	At least six (6) (two per landscape)	Watersheds and marine-coastal zones management documents MOUs or other agreements	<u>Risks:</u> The project team and Implementing Partner fail to involve all key project partners

	mechanisms per landscape strengthened and/or created	structures and/or mechanisms to be strengthened or to be created will be confirmed following a needs assessment to be conducted during project implementation				Meeting minutes	and stakeholders. <u>Assumptions:</u> There is interest from stakeholders
	Indicator 17: Number of management instruments developed or updated per landscape	Official government and sectoral records	0	At least four (4) (GEF CI 4.1 covering 57,190 hectares, and GEF CI 6.1)	At least nine (9) (three per landscape) (GEF CI 4.1 covering 163,400 hectares, and GEF CI 6.1)	Updated management instruments MOUs or other agreements Meeting minutes	<u>Risks:</u> Conflicting interests from different stakeholders regarding economic development and environmental sustainability <u>Assumptions:</u> There is political will and interest from municipal and environmental authorities and from IPLCs and other local stakeholders
	Indicator 18: Number of LMEs with an improved state-level regulatory and planning framework with public participation and an inclusive approach, including targets for reducing water pollution through	Official government and sectoral records	0	Three (3) (GEF CI 5.2 covering 590,377 hectares; CI 7.3)	Three (3) (GEF CI 5.2 covering 590,377 hectares; CI 7.3)	Watersheds and marine-coastal zones regulatory and planning documents	<u>Risks:</u> Conflicting interests from different stakeholders regarding economic development and environmental sustainability <u>Assumptions:</u> There is political will and interest from municipal and

	NBS and a gender perspective						environmental authorities and from IPLCs and other local stakeholders
Outputs to achieve Outcome 2.1	2.1.1. Existing inclusive multi-stakeholder governance structures and mechanisms and others deemed necessary strengthened and in operation to improve the integrated management of watersheds and marine-coastal zones and define goals and strategies to reduce deforestation, water pollution, and hypoxia. 2.1.2. Planning, regulatory, land and/or marine management, and integrated watershed management instruments developed and/or updated with public participation and an inclusive approach, including objectives for the reduction of deforestation and of water pollution through NbS and a gender perspective.						
Outcome 2.2 Enabling environment promoted to guide investments with water pollution and marine hypoxia reduction objectives.	Indicator 19: Number of financing institutions, from the public or private sector, adopting guidelines for the reduction of nutrient pollution and for inclusiveness (women, youth and indigenous peoples).	Official government and sectoral records	0	At least two (2)	At least six (6)	Government and sectoral documents	Risks: Conflicting interests from different stakeholders regarding economic development and environmental sustainability Assumptions: There is political will and interest from the public or private sector
	Indicator 20: Level of financing mobilized annually subject to the guidelines or taxonomies that integrate criteria for the reduction of water pollution by nutrients.	Project information and reports on secured new financing and related agreements	0	At least 750,000 USD/year	At least two million USD/year	Financial records of key stakeholders	Risks: Limited budgets and allocation of resources from government and private sector Assumptions: Project is successful in securing financial resources from new sources
Outputs to achieve Outcome 2.2	2.2.1. Guidelines for sustainable and inclusive financing and reducing water pollution in CIIT's development hubs (<i>polos de desarrollo</i>), the Isthmus of Tehuantepec Lagoon Complex, the Sontecomapan Lagoon, and the Hondo River Basin formulated in participatory manner and disseminated. 2.2.2. Inclusive, sustainable mixed-financing and investment instruments available for water pollution reduction through public-private dialogues and multi-party collaboration agreements.						

	2.2.3. Investment feasibility assessment for rehabilitating wastewater treatment plants (WWTPs) and other effective technologies to reduce water pollution developed (Note: rehabilitation of WWTPs will be done through co-financing and other funding mechanisms). 2.2.4. Recommendations for investing criteria in Nature-based Solutions (NbS) within the operational rules and guidelines of public budgetary programs prepared with a gender perspective and social inclusion criteria.						
Project Component 3	Supporting demonstration of best management practices (BMP) and investments that showcase innovative solutions to reduce marine hypoxia						
Outcome 3.1 Strengthened technical, organizational and financial capacities of local organizations to promote measures to reduce land-based water pollution and marine hypoxia through good practices and NbS.	Indicator 21: Number of local organizations with strengthened capacities to access financing to implement good practices and NbS.	Project team reports and databases of participation	0	At least 12 (on average 4 per landscape)	At least 30 (on average 10 per landscape)	Project report and databases Interviews and surveys	<u>Risks:</u> Project team and the Implementing Partner have limited success in engaging local organizations <u>Assumptions:</u> Interest at the local level to access financing for implementing NbS
	Indicator 22: Number of people disaggregated by sex with strengthened technical and financial capacities to implement good practices and NbS. (GEF-8 Indicator 11).	Project team reports and databases of participation and related to the Gender Action Plan	0	420 people (50% men and 50% women)	1,200 people (50% men and 50% women)	Project report and databases Interviews and surveys	<u>Risks:</u> Project team and the Implementing Partner have limited success in engaging IPLCs, producers and other local stakeholders <u>Assumptions:</u> Interest at the local level to access financing for implementing NbS
	Indicator 23: Number of people participating in thematic communities of practice (disaggregated by sex) related to	Project team reports and databases of participation	0	70 people (50% men and 50% women)	200 people (50% men and 50% women)	Project report and databases Interviews and surveys	<u>Risks:</u> Project team and the Implementing Partner have limited success in engaging key stakeholders

	reducing nutrient pollution, marine hypoxia, and gender aspects (GEF-8 Indicator 11)						Assumptions: Interest among stakeholders to participate and in the reduction of water pollution and marine hypoxia
Outputs to achieve Outcome 3.1	3.1.1. Organizational, technical, and financial capacity-building program to implement BMPs and NbS developed to reduce land-based water pollution and marine hypoxia and facilitate access to financing in the three target landscapes, with gender and social inclusion criteria. 3.1.2. Plans, business models, and organizational manuals updated or developed for Organizations of the Social Sector of the Economy (OSSE), according to the scale of the project, to transition to best practices and NbS implementation, and facilitate access to financing. 3.1.3. Inclusive thematic Communities of Practice (CoPs) promoting BMPs through exchange, peer-to-peer learning and capacity development to strengthen portfolio delivery and wider stakeholder engagement developed and deployed.						
Outcome 3.2 The adoption of best practices and NbS contributes to the reduction of water pollution and marine hypoxia.	Indicator 24: Number of persons (disaggregated by sex) who receive financial support from the project to implement BMPs and Nature-based Solutions (NbS) (GEF-8 Indicator 11)	Project team reports including reports related to the Gender Action Plan	0	210 (50% men and 50% women)	600 (50% men and 50% women)	Surveys and interviews Project databases of stakeholder participation	Risks: Limited benefits for stakeholders involved in NbS and BMPs restricts participation Assumptions: There is willingness among of IPLCs, producers and other local stakeholders to participate
	Indicator 25: Number of municipalities that adopt BMPs and NbS aimed at reducing water pollution and marine hypoxia in wastewater treatment processes.	Project team reports and records regarding the adoption of BMPs and NbS by municipalities	0	At least two (2)	At least six (6)	Municipal technical and financial records WWTPs plans	Risks: Limited benefits for municipalities involved in NbS and BMPs restricts participation Assumptions: There is willingness among

						municipalities to participate
	Indicator 26: Total surface area (hectares) of productive units (agricultural, livestock, fishing) that adopt BMPs and NbS, including pilot and demonstration cases (GEF CI 4.3, 5.2, 6.1, and 7.1). (Targets to be validated during the first year of project implementation)	Project team reports and records regarding the adoption of BMPs and NbS at	0	15,000 hectares (Agriculture: 7,000 hectares; Livestock: 5,200 hectares, and Aquaculture and fisheries: 2,800 hectares) (GEF CI 4.3 covering 9,700 hectares; GEF CI 5.2 and 7.1 covering 2,800 hectares, and GEF CI 6.1: 1,716,985 tCO ₂ eq)	45,000 hectares (Agriculture: 21,000 hectares; Livestock: 15,600 hectares, and Aquaculture and fisheries: 8,500 hectares) (GEF CI 4.3 covering 36,600 hectares; GEF CI 5.2 and 7.1 covering 8,500 hectares, and GEF CI 6.1: 5,762,065 tCO ₂ eq)	Spatial analysis; project maps and field reports GEF-8 Core Indicator spreadsheet <u>Risks:</u> Limited benefits for stakeholders involved in NbS and BMPs limits participation <u>Assumptions:</u> There is willingness among of IPLCs, producers and other local stakeholders to participate
	Indicator 27: Total surface area (hectares) under restoration and hydrological rehabilitation in watersheds and marine-coastal zones, including pilot and demonstration cases (Targets to be validated during the first year of project implementation)	Project team reports and records regarding participation in restoration activities	0	3,300 hectares (GEF CI 3.1 covering 2,100 hectares; GEF CI 3.2 covering 450 hectares; GEF CI 3.4 covering 750 hectares; GEF CI 6.1: 69,810 tCO ₂ eq.)	11,000 hectares (GEF CI 3.1 covering 7,000 hectares; GEF CI 3.2 covering 1,500 hectares; GEF CI 3.4 covering 2,500 hectares; GEF CI 6.1: 232,701 tCO ₂ eq.)	Spatial analysis; project maps and field reports GEF-8 Core Indicator spreadsheet <u>Risks:</u> Limited benefits for stakeholders involved in restoration activities limits participation <u>Assumptions:</u> There is willingness among of IPLCs, producers and other local stakeholders to participate
Outputs to achieve Outcome 3.2	3.2.1. Inclusive municipal projects in the three prioritized landscapes are supported for the adoption of BMPs and NbS to reduce water pollution and marine hypoxia, including pre-investment activities such as proof of concept, technical feasibility analysis, and environmental impact assessments, as well as pilot and demonstration cases featuring innovative, cost-effective, low-carbon water treatment technologies in prioritized rural and marine-coastal areas. 3.2.2. Projects with local organizations, Indigenous Peoples, and OSSEs are supported by grants and other financing sources to adopt BMPs and NbS aimed at reducing water pollution from agricultural and livestock					

	production (nutrient runoff), aquaculture and fishing practices, and domestic sources in rural areas, while implementing pilot and demonstrative projects to showcase these practices. 3.2.3. Restoration and hydrological rehabilitation, and improved management to benefit biodiversity interventions in watersheds and marine-coastal zones supported in three target landscapes with collaboration from government institutions, civil society organizations, local organizations, OSSEs, and women's groups through grants and other funding sources. 3.2.4. Participatory community monitoring plan for biodiversity and water quality in river basins and marine-coastal areas designed and implemented, to raise awareness, foster ownership, and support local decision-making.						
Project Component 4	Ensuring knowledge management and learning, communication, gender and stakeholder engagement are integrated across the IP, including programmatic coordination and reporting						
Outcome 4.1 Knowledge management and learning, communication, gender mainstreaming, and stakeholder engagement effectively support program and project objectives and are fully integrated across the IP.	Indicator 28: Number of project knowledge and communication products to share lessons learned, good practices, and positive impacts at both local and national levels, as well as through the CHO-IP knowledge portal	Project information on development of knowledge management products. This will include at least one PANORAMA case during the project lifecycle and one photo-story in Exposure each year, starting from the second year of implementation.	0	At least 10	At least 30	Database with knowledge management products/actions Project reports	<u>Risks:</u> Low level of project execution results in limited development of knowledge management and communication products <u>Assumptions:</u> Broad and timely dissemination of information Effective coordination with GCP
	Indicator 29: Number of events and exchanges facilitated by the GCP and IW:LEARN, involving key national project stakeholders.	Project information on development of knowledge management	0	At least 10	At least 30	Database with knowledge management actions	<u>Risks:</u> Poor coordination and communication limits knowledge sharing and learning <u>Assumptions:</u> Interest from different stakeholders to participate Effective coordination with GCP

	Indicator 30: Percent of the objectives of the frameworks, plans, and assessments for implementing social and environmental standards in the project are met, including the Gender Action Plan and the Comprehensive Stakeholder Participation Plan.	The overall SESP project categorization is moderate risk	0	50%	100%	Results of surveys / interviews Updated management plans to mitigate social and environmental risks, including the SESP	<u>Risks:</u> Measures implemented are not sufficient to avoid, minimize, mitigate, or manage risks <u>Assumptions:</u> Project implemented in line with the implementation schedule of the ESMF/IPPF and other SES-related plans
Outputs to achieve Outcome 4.1	4.1.1. Knowledge of nutrient pollution and marine hypoxia and innovative solutions to reduce these effectively documented, managed, and shared nationally and across and beyond the IP. 4.1.2. Coherent communications activities and products (common messages, branding, website, etc.) designed and applied locally and nationally, and contribute to the IP's communication strategy. 4.1.3. Environmental and Social Management Plan (ESMP), Gender Action Plan, Comprehensive Stakeholder Participation Plan, and other management plans related to UNDP Social and Environmental Standards (SES) implemented and in line with the IP gender integration and stakeholder participation requirements.						
Outcome 4.2 Programmatic coordination, coherence, and reporting are ensured.	Indicator 31: Number of thematic and working groups for nutrient pollution and marine hypoxia reduction established at the project landscape level and linked to similar groups associated with the CHO-IP. (GEF CI 7.2)	Project information on programmatic management	0	At least one (1)	At least three (3)	Project reports and interviews	<u>Risks:</u> The project team and Implementing Partner fail to involve all key project partners and stakeholders <u>Assumptions:</u> There is interest from stakeholders to participate Effective coordination with GCP
Outputs to achieve Outcome 4.2	4.2.1. Participation in programmatic management activities facilitated by the GCP.						
Component 5	Monitoring & Evaluation						

Outcome 5.1 Effective project implementation and monitoring based on adaptive management and lessons learned are ensured.	Indicator 32: Percent of the M&E objectives are met.		0	50%	100%	Annual PIRs MTR and TE reports	<u>Risks</u> : Low level of project implementation, including technical and budget deficiencies <u>Assumptions</u> : Project outcomes satisfactorily delivered within the expected timeline
Outputs to achieve Outcome 5.1	5.1.1. Gender-sensitive project M&E system to track progress on impact developed and implemented. 5.1.2. Regular reporting to the program level ensured following GCP guidance and agreed reporting frameworks.						

MONITORING AND EVALUATION (M&E) PLAN

122. Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP (including guidance on GEF project revisions) and [UNDP Evaluation Policy](#). **The UNDP Country Office is responsible for ensuring full compliance with all UNDP project M&E requirements including project monitoring, UNDP quality assurance requirements, quarterly risk management, and evaluation requirements.**

123. Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the [GEF Monitoring Policy](#) and the [GEF Evaluation Policy](#) and other [relevant GEF policies](#)³⁰. The M&E plan and budget included below will guide the GEF-specific M&E activities to be undertaken by this project.

124. In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed – including during the Project Inception Workshop - and will be detailed in the Inception Report.

Minimum project monitoring and reporting requirements as required by the GEF:

125. Inception Workshop and Report: A project inception workshop will be held within 2 months from the First disbursement date, with the aim to:

- a. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
- b. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
- c. Review the results framework and monitoring plan.
- d. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP and other stakeholders in project-level M&E.
- e. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework (where relevant) and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
- f. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
- g. Plan and schedule Project Board meetings and finalize the first-year annual work plan. Finalize the TOR of the Project Board.
- h. Formally launch the Project.

126. GEF Project Implementation Report (PIR): The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. UNDP will undertake quality assurance of the PIR before submission to the GEF. The PIR submitted to the GEF will be shared with the Project Board. UNDP will conduct a quality review of the PIR, and this quality review and feedback will be used to inform the preparation of the subsequent annual PIR.

127. GEF Core indicators: The GEF Core indicators included as Annex 15 will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the core indicators status. The updated monitoring data must be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent groundtruthing. The methodologies to be used in data collection have been defined by the GEF and are available on the [GEF](#).

³⁰ See <https://www.thegef.org/projects-operations/policies-guidelines>

128. Independent Mid-term Review (MTR): An independent mid-term review (MTR) will be completed by the mid-point of the project. The terms of reference, the MTR process and the final MTR report will follow the standard templates and MTR guidance for UNDP-supported GEF-financed projects available on the [UNDP Evaluation Resource Center](#). The MTR must be submitted to the GEF by the mid-point of the project but no later than 48 months after CEO Endorsement. To meet the submission deadline, final MTR reports must be completed and submitted to BPPS NCE team no later than 2 months in advance of the submission deadline to allow sufficient time for internal review/clearance that is required prior to submission.
129. Provisions must be taken to complete and submit the MTR within the submission deadline. Therefore, the MTR process must start no later than 8 months before the expected date of submission of the MTR.
130. The MTR will be ‘independent, impartial and rigorous’. The evaluator(s) that UNDP will hire to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be reviewed. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review.
131. The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the MTR process. Additional quality assurance support is available from BPPS/NCE.
132. The final MTR report will be publicly available in English and will be posted on the UNDP ERC by the MTR submission date included on cover page of this project document. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report’s submission to the GEF.
133. Terminal Evaluation (TE): An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and TE guidance for UNDP-supported GEF-financed projects available on the [UNDP Evaluation Resource Center](#). TE must be submitted to the GEF no later than 6 months after the Completion Date. This is a hard deadline that, if not met, can only be extended through a formal extension request. To meet the submission deadline, final TE reports must be completed and submitted to BPPS NCE team no later than 2 months in advance of the deadline to allow sufficient time for internal review/clearance that is required prior to submission.
134. Provisions must be taken to complete and submit the TE within the submission deadline. Therefore, TE must start no later than 8 months before the expected date of submission of the TE (or 11 months prior to the estimated operational closure date).
135. The evaluation will be ‘independent, impartial and rigorous’. The evaluator(s) that UNDP will hire to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project being evaluated.
136. The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from BPPS NCE.
137. The final TE report will be publicly available in English and posted on the UNDP ERC by the TE submission date included on cover page of this project document. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report submission to the GEF.
138. Per the GEF Terminal Evaluation requirements, for cancelled full-sized projects, Terminal Evaluations are required if the GEF grant expenditure exceeds more than US\$ 2 million.
139. Final Report: The project’s final GEF PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

140. In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans.

141. **Monitoring Plan:** The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored by the Project Management Unit annually, and will be reported in the GEF PIR every year, and will be evaluated periodically during project implementation. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. Project risks, as outlined in the risk register, will be monitored quarterly.

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
Track results progress	Project Objective: To reduce marine hypoxia and coastal nutrient pollution from agricultural, industrial, and municipal sources associated with three Large Marine Ecosystems (LMEs) in Mexico through integrated watershed management measures that combine policy coherence, infrastructure investments, and nature-based solutions (NbS).	Indicator 1 (Mandatory Core Indicator 11): # direct project beneficiaries disaggregated by gender (individual people)	Midterm: 22,518 people (50% women) End of project: 67,065 people (50% women)	This indicator captures the number of individual people who receive targeted support or assistance from the GEF-financed project and/or who use the specific resources that the project maintains or enhances. The indicator will be achieved through direct interventions (e.g., capacity building, participation in demonstration modules, Low Value Grants- LVG beneficiaries, etc.) as well as systemic activities (e.g., improved governance and participation, investment projects,	Annually (reported in Development Objective (DO) progress section of the GEF PIR), mid-term, closure	Project Manager M&E Officer Social and Environmental Safeguards Specialist	Results of surveys/interviews with producers, IPLCs, and other stakeholders (unstructured and/or semi-structured) Updated Gender Action Plan M&E Officer report GEF PIR Mid-term Review Report Terminal Evaluation

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
				improved laws and regulations, etc.).			
		Indicator 2 (Mandatory GEF Core Indicator 3): Area of land and ecosystems under restoration (hectare)	Midterm: 3,300 ha End of project: 11,000 ha	This indicator captures the total area of land undergoing restoration in terms of ecosystem function and/or ecology Sum of Sub indicator 3.1 (Area of degraded agricultural lands restored), Sub indicator 3.2 (Area of forest and forest land restored), and Sub indicator 3.4 (Area of wetlands [including estuaries and mangroves] under restoration). The indicator will be achieved through direct interventions (e.g., direct restoration efforts at land/seascape level (i.e., demonstration geographies, cofinancing restoration initiatives and investments)) as well as systemic activities (e.g.,	Annually (GEF PIR), mid-term, closure	Project Technical Coordinator and Project Manager M&E Officer	M&E Officer report Mid-term Review Report. Terminal Evaluation Report.

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
				national and local restoration plans and programs, improved laws regulations and technical guidance, etc.).			
		Indicator 3 (Mandatory GEF Core Indicator 4): Area of landscapes under improved practices (hectare)	Midterm: 75,000 ha End of project: 211,277 ha	This indicator captures the total area of landscapes under improved practices, including in production sectors that lead to improved environmental conditions and/or for which management plans have been prepared and endorsed and are under implementation. The indicator will be achieved through direct interventions (e.g., participation in demonstration modules, LVGs, BMPs interventions at landscape level, etc.) as well as systemic activities (improved governance and participation, investment projects,	Mid-term, closure	Project Technical Coordinator and Project Manager M&E Officer	M&E Officer report Mid-term Review Report Terminal Evaluation Report

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
				improved extension services, improved laws and regulations, etc.).			
		Indicator 4 (Mandatory GEF Core Indicator 5): Area of marine habitat under improved practices (hectare)	Midterm: 206,632 ha End of project: 590,377 ha	This indicator captures the area of marine habitat under improved management to benefit biodiversity and/or for which management plans have been prepared and endorsed and are under implementation. This indicator excludes protected areas. The indicator will be achieved through direct interventions (e.g., participation in demonstration modules, LVGs, BMPs interventions at seascape level, etc.) as well as systemic activities (improved governance and participation, improved information sharing and monitoring systems, investment projects,	Mid-term, closure	Project Technical Coordinator and Project Manager M&E Officer	M&E Officer report Mid-term Review Report Terminal Evaluation Report

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
				improved laws and regulations, etc.).			
		Indicator 5 (Mandatory GEF Core Indicator 6): Greenhouse Gas Emissions Mitigated (metric ton of CO2e)	Midterm: 1,798,430 End of project: 5,994,766	This indicator refers to the total reduction of GHG emissions and carbon stocks enhanced (reported in tons of carbon dioxide equivalent - CO2e). GEF-8 Indicator 6.1. Carbon sequestered or emissions avoided in the sector of Agriculture, Forestry, and Other Land Use; and emissions avoided outside AFOLU sector (direct). The indicator will be achieved through a combination of direct interventions and systemic activities, aligned with GEF Core Indicators 3, 4, and 5, as well as their corresponding outcome-level indicators.	Bi-annual, mid-term, closure	Restoration Expert M&E Officer	Restoration and improved management expert reports and FAO's Ex-ACT tool updated assessments M&E Officer report GEF PIR Mid-term Review Report Terminal Evaluation Report
		Indicator 6 (Mandatory GEF Core Indicator 7):	Midterm: 3 End of project: 3	This indicator refers to the projects' contribution to the management of three	Mid-term, closure	M&E Officer	M&E Officer report GEF PIR Mid-term Review Report

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
		Shared water ecosystems under new or improved cooperative management (count)		LME but will not develop and/or implement a TDA/SAP.			Terminal Evaluation Report
		Indicator 7: Number of countries in target LMEs with improved policy or regulatory frameworks that seek to reduce nutrient pollution and hypoxia (program-wide indicator)	Midterm: 1 End of project: 1	Measures Mexico's efforts to improved policy or regulatory frameworks that seek to reduce nutrient pollution and hypoxia	Mid-term, closure	M&E Officer	M&E Officer report GEF PIR Mid-term Review Report Terminal Evaluation Report
		Indicator 8: Number of private sector organizations participating in the CHO IP that adopt ESG statements and solutions to reduce nutrient pollution and marine hypoxia (program-wide indicator) (Baseline and targets to be defined during	Midterm: TBD End of project: TBD	Mesures the degree of involvement of the private sector and companies to reduce nutrient pollution and marine hypoxia	Mid-term, closure	M&E Officer	M&E Officer report GEF PIR Mid-term Review Report Terminal Evaluation Report

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
		project implementation)					
		Indicator 9: Amount of new national public and private sector financing targeted at supporting NbS solutions to address nutrient pollution and marine hypoxia (program-wide indicator)	Midterm: At least 750,000 USD/year End of project: At least two million USD/year	Measures the increase in funding to o address nutrient pollution and marine hypoxia	Mid-term, closure	M&E Officer	M&E Officer report GEF PIR Mid-term Review Report Terminal Evaluation Report
		Indicator 10: Number of international best practice (Codes of Practice, standards, etc.) addressing nutrient pollution and marine hypoxia integrated into national level policy and management frameworks in target countries (program-wide indicator) (Baseline and targets to be defined during project implementation)	Midterm: TBD End of project: TBD	Measures the willingness of Mexico s to address nutrient pollution and marine hypoxia through national policy reforms following international standards and best practices	Mid-term, closure	M&E Officer	M&E Officer report GEF PIR Mid-term Review Report Terminal Evaluation Report

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
		Indicator 11: Percentage of positive feedback from sampled target stakeholders on the impact generated by awareness-raising campaigns and learning opportunities promoted by the CHO IP (program-wide indicator)	Midterm: At least 50% End of project: At least 50%	Measures the impact of the CHO IP and GCP at the local/ landscape level	Mid-term, closure	M&E Officer	M&E Officer report GEF PIR Mid-term Review Report Terminal Evaluation Report
	Project Outcome 1.1 The quality, management, and availability of scientific and technical data required by decision-makers to address nutrient pollution and marine hypoxia are improved at the subnational and national levels, in particular, in three prioritized landscapes	Indicator 12: Number of inter-institutional agreements for information exchange	Midterm: At least three (3) (one per landscape) End of project: At least three (3) (one per landscape)	Measures the number of agreements between national and subnational institutions established to share information on water pollution and marine hypoxia	Annually	Project Technical Coordinator and Project Manager M&E Officer	Signed agreements
		Indicator 13: Number of institutions that provide and share information on water pollution, river basins and marine-coastal hypoxia	Midterm: At least eight (8) End of project: At least eight (8)	Measures the number institutions willing to share information on water pollution and marine hypoxia	Annually	M&E Officer	Water quality and marine hypoxia databases
		Indicator 14: Percentage of	Midterm: At least 35%	Measures the percentage of nutrient	Annually	M&E Officer	Water quality and marine hypoxia databases

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
		nutrient pollution monitoring sites with data collected following a Standardized Water Quality Data Collection Protocol	End of project: 100%	pollution monitoring sites, which will be established within in the project landscapes and coastal-marine zones, that follow a Standardized Water Quality Data Collection Protocol to be developed by the project		Project Technical Coordinator and Project Manager	Field reports
		Indicator 15: Percentage of positive feedback from stakeholders on the impact generated by awareness campaigns and training opportunities promoted	Midterm: At least 30% End of project: At least 50%	Measures the impact of awareness campaigns and training to build public awareness and changes in behavior to reduce water pollution and marine hypoxia. This Indicator contributes to GEF Core Indicator 11.	Inception, mid-term, closure	M&E Officer	KAP indicators Survey and interviews
	Project Outcome 2.1 Improved governance at subnational and national levels to reduce water pollution through Nbs	Indicator 16: Number of operational, gender-sensitive and culturally appropriate governance structures and/or mechanisms per landscape strengthened and/or created	Midterm: At least three (3) End of project: At least six (6; two per landscape)	Measures improved governance of watersheds and costal marine zones to reduce water pollution Note: the number of governance structures and/or mechanism to be strengthened or to be created will be	Annually	M&E Officer Governance and Public Policy Specialist	Official documents for watersheds and costal marine zone management

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
				confirmed following a needs assessment to be conducted during project implementation			
		Indicator 17: Number of management instruments developed or updated per landscape	Midterm: At least four (4) GEF CI 4.1 covering 57,190 hectares, and GEF CI 6.1) End of project: At least nine (9; three per landscape) GEF CI 4.1 covering 163,400 hectares, and GEF CI 6.1)	Measures improved management of watersheds and costal marine zones to reduce water pollution. It considers that the total area of landscapes/seascapes under improved management leads to improved water quality and reduction of marine hypoxia. This indicator contributes to GEF Indicators 4.1, 4.3, 5.2, and 6.1.	Annually	M&E Officer Governance and Public Policy Specialist	Official documents for watersheds and costal marine zone management
		Indicator 18: Number of LMEs benefiting from an improved state regulatory and planning framework with public participation and an inclusive approach, including targets for reducing water pollution	Midterm: Three (3) (GEF CI 5.2 covering 590,377 hectares) End of project: Three (3) (GEF CI 5.2 covering	Measures project contribution to the conservation of LME through the reduction of nitrogen, phosphorus, and organic matter pollutants This indicator contributes to GEF Indicator 5.2.	Mid-term, closure	M&E Officer Governance and Public Policy Specialist	Watersheds and marine-coastal zones regulatory and planning documents

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
		through NBS and a gender perspective	590,377 hectares)				
	Project Outcome 2.2 Enabling environment promoted to guide investments with water pollution and marine hypoxia reduction objectives.	Indicator 19: Number of financing institutions from the public or private sector adopting guidelines for the reduction of nutrient pollution and for inclusiveness (women, youth and indigenous peoples).	Midterm: At least two (2) End of project: At least six (6)	Measures engagement of public or private sector to invest in addressing water pollution and marine hypoxia	Mid-term, closure	M&E Officer Sustainable Financing Specialist	Government and sectoral, institutional and financial documents
		Indicator 20: Level of financing mobilized annually subject to the guidelines or taxonomies that integrate criteria for the reduction of water pollution by nutrients	Midterm: At least 750,000 USD/year End of project: At least two million USD/year	Measures new financing leveraged to address water pollution and marine hypoxia	Annually	M&E Officer Sustainable Financing Specialist	Financial records of key stakeholders

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
	Project Outcome 3.1 Strengthened technical, organizational and financial capacities of local organizations to promote measures to reduce land-based water pollution and marine hypoxia through good practices and NbS	Indicator 21: Number of local organizations with strengthened capacities to access financing to implement good practices and NbS.	Midterm: At least 12 (on average 4 per landscape) End of project: At least 30 (on average 10 per landscape)	Measures the number of local organizations benefiting from financial mechanisms and investing in reducing water pollution and marine hypoxia	Annually	M&E Officer	Project report and databases Results from Interviews and surveys
		Indicator 22: Number of peoples disaggregated by sex with strengthened technical and financial capacities to implement	Midterm: 420 people (50% men and 50% women) End of project: 1,200 people (50% men and 50% women)	Measures the number of members of IPLCs receiving training to facilitate their involvement in NbS to address water pollution and marine hypoxia locally. This indicator contributes to GEF Indicator 11.	Annually	M&E Officer Social and Environmental Safeguards Specialist	Project report and databases related to capacity building
		Indicator 23: Number of people participating in thematic communities of practice (disaggregated by sex) related to reducing nutrient pollution, marine hypoxia, and gender aspects	Midterm: 70 people (50% men and 50% women) End of project: 200 people (50% men and 50% women)	Measures the number of stakeholders interested in addressing water pollution and marine hypoxia locally. This indicator contributes to GEF Indicator 11.	Annually	M&E Officer Social and Environmental Safeguards Specialist	Project report and databases Results from Interviews and surveys
	Project Outcome 3.2 The adoption of best practices and NbS	Indicator 24: Number of persons (disaggregated by	Midterm: 210 (50% men and 50% women)	Measures the number of people benefiting from	Annually	M&E Officer Social and Environmental Safeguards Specialist	Project databases of stakeholder participation

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
	contributes to the reduction of water pollution and marine hypoxia.	sex) who receive financial support from the project to implement BMPs and Nature-based Solutions (NbS)	End of project: 600 (50% men and 50% women)	financial mechanisms and investing in reducing water pollution and marine hypoxia. This indicator contributes to GEF Indicator 11.			Results from Interviews and surveys
		Indicator 25: Number of municipalities that adopt BMPs and NbS aimed at reducing water pollution and marine hypoxia in wastewater treatment processes.	Midterm: At least two (2) End of project: At least six (6)	Measures the number of municipalities investing in alternative wastewater treatment measures to reduce water pollution and marine hypoxia	Mid-term, closure	M&E Officer	Municipal technical and financial records Project technical reports
		Indicator 26: Total surface area (hectares) of productive units (agricultural, livestock, fishing) that adopt BMPs and NbS, including pilot and demonstration cases	Midterm: 15,000 hectares (Agriculture: 7,000 hectares; Livestock ranching: 5,200 hectares, and Aquaculture and fisheries: 2,800 hectares) (GEF CI 4.3 covering 9,700 hectares; GEF CI 5.2 covering	Measures area under best practices in landscape and seascapes	Annually, mid-term, closure	M&E Officer	Project technical reports M&E Officer report Mid-term Review Report Terminal Evaluation Report

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
			2,800 hectares, and GEF CI 6.1: 1,716,985 tCO₂eq) End of project: 45,000 hectares (Agriculture: 21,000 hectares; Livestock ranching: 15,600 hectares, and Aquaculture and fisheries: 8,500 hectares) GEF CI 4.3 covering 36,600 hectares; GEF CI 5.2 covering 8,500 hectares, and GEF CI 6.1: 5,762,065 tCO₂eq)				
		Indicator 27: Total surface area (hectares) under restoration and hydrological rehabilitation in watersheds and marine-coastal zones, including pilot and	Midterm: 3,300 hectares (GEF CI 3.1 covering 2,100 hectares; GEF CI 3.2 covering 450 hectares; GEF CI 3.4 covering 750 hectares; GEF CI	Measures area under restoration.	Annually, mid-term, closure	M&E Officer	Project technical reports M&E Officer report Mid-term Review Report Terminal Evaluation Report

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
		demonstration cases	6.1: 69,810 tCO ₂ eq) End of project: 11,000 hectares (GEF CI 3.1 covering 7,000 hectares; GEF CI 3.2 covering 1,500 hectares; GEF CI 3.4 covering 2,500 hectares; GEF CI 6.1: 232,701 tCO ₂ eq.))				
	Project Outcome 4.1 Knowledge management and learning, communication, gender mainstreaming, and stakeholder engagement effectively support program and project objectives and are fully integrated across the IP.	Indicator 28: Number of project knowledge and communication products to share lessons learned, good practices, and positive impacts at both local and national levels, as well as through the CHO-IP knowledge portal	Midterm: At least 10 End of project: At least 30	Measures the number of the knowledge management and communication products that the project develops for knowledge sharing	Annually	M&E Officer Knowledge Management and Capacity Building Expert	Drafts of knowledge management products Online publications and posting Hard copy publications
		Indicator 29: Number of events and exchanges facilitated by the GCP and IW:LEARN, involving key	Midterm: At least 10 End of project: At least 30	Measures the level of involvement of project staff and key stakeholders participating in	Annually	M&E Officer Knowledge Management and Capacity Building Expert	Project databases of stakeholder participation GCP/IP reports

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
		national project stakeholders.		events sponsored by the GCP/IP			
		Indicator 30: Percent of the objectives of the frameworks, plans, and assessments for implementing social and environmental standards in the project are met, including the Gender Action Plan and the Comprehensive Stakeholder Participation Plan	Midterm: 50% End of project: 100%	UNDP SES: risk assessment and mitigation strategies; the overall project categorization is substantial risk	Annually (GEF PIR), mid-term, closure	M&E Officer Social and Environmental Safeguards Specialist	M&E Officer report Mid-term Review Report Terminal Evaluation Report
	Project Outcome 4.2 Programmatic coordination, coherence, and reporting are ensured.	Indicator 31: Number of thematic and working groups for nutrient pollution and marine hypoxia reduction established at the project landscape level and linked to similar groups associated with the CHO-IP.	Midterm: At least one (1) End of project: At least three (3)	Measures the number of project stakeholders participating in programmatic management in coordination with the GCP/IP	Annually (GEF PIR), mid-term, closure	M&E Officer Knowledge Management and Capacity Building Expert	GCP/IP reports Mid-term Review Report Terminal Evaluation Report
	Project Outcome 5.1 Effective project implementation and monitoring based on	Indicator 32: Percent of the M&E objectives are met.	Midterm: 50% End of project: 100%	Project-level M&E targets defined in compliance with UNDP requirements	Annually, mid-term, closure	M&E Officer Independent project evaluators	M&E Officer report PIRs Mid-term Review Report

Monitoring Activity							
	Results Monitoring	Indicators	Targets	Description of indicators and targets	Frequency	Responsible for data collection	Means of verification
	adaptive management and lessons learned are ensured.			(including guidance on GEF project revisions) and UNDP Evaluation Policy			Terminal Evaluation Report

Monitoring Activity			
	Frequency/Timeframe	Expected Action	Partners (if joint)
Inception Workshop and Report	Inception Workshop within 2 months of the First Disbursement	As per above description	SADER
Track results progress (see above table for details)	Annually and at mid-point and closure	Slower than expected progress will be addressed by project management.	SADER
Monitor and Manage Risk	Quarterly	Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken.	SADER
Monitor the Comprehensive Stakeholder Engagement Plan, Gender Action Plan, Environmental and Social Management Plan, Indigenous Peoples Plan, and other SES-related plans, as needed	Ongoing		SADER
Supervision Missions	Annually		SADER, UNDP
Learning and Learning Missions	As needed	Relevant lessons are captured by the project team and used to inform management decisions.	SADER
Annual Project Quality Assurance	Annually	Areas of strength and weakness will be reviewed by project management and used to inform decisions to improve project performance.	UNDP
Review and Make Course Corrections	At least annually	Performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections.	SADER, UNDP
Annual GEF Project Implementation Report (PIR)	Annually typically between June-September	Mandatory contribution by Project Team, CO and RTA. Strengths and weaknesses will be reviewed by project management and used to inform decisions to improve project performance	SADER, UNDP

Monitoring Activity			
	Frequency/Timeframe	Expected Action	Partners (if joint)
Project Review (Project Board)	At least annually)	Any quality concerns or slower than expected progress should be discussed by the project board and management actions agreed to address the issues identified.	SADER, UNDP, Representatives of Beneficiaries

Evaluation Plan

Evaluation Title	Partners (if joint)	Related Strategic Plan Output	UNSDCF/CPD Outcome	Planned Completion Date	Key Evaluation Stakeholders
Independent Mid-Term Review (MTR)	SADER	Output 5. Strengthened capacities and partnerships between key actors for promotion of sustainable economies and strengthening institutional frameworks to create resilience to climate change; Output 6. Supported strategies focused on consolidating conservation policy and sustainable management of ecosystems and biodiversity from a perspective of green economy and inclusion.	TBD ³¹	By the MTR submission date included on cover page of Project Document	SADER, CIIT, Municipalities, IPLCs, other
Independent Terminal Evaluation (TE)	SADER	Output 5. Strengthened capacities and partnerships between key actors for promotion of sustainable economies and strengthening	TBD ³²	By the TE submission date included on cover page of Project Document	SADER, CIIT, Municipalities, IPLCs, other

³¹ The current UNSDCF term is 2025.

³² The current UNSDCF term is 2025.

		institutional frameworks to create resilience to climate change; Output 6. Supported strategies focused on consolidating conservation policy and sustainable management of ecosystems and biodiversity from a perspective of green economy and inclusion.			
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Monitoring and Evaluation Budget for project execution:	
GEF M&E requirements to be undertaken by Project Management Unit (PMU)	Indicative costs (US\$)
Inception Workshop and Report	11,000
M&E required to report on progress made in reaching GEF core indicators and project results included in the project results framework	83,937
Preparation of the annual GEF Project Implementation Report (PIR)	10,000
Monitoring of the Comprehensive Stakeholder Engagement Plan, Gender Action Plan, Environmental and Social Management Plan, Indigenous Peoples Plan, and other SES-related plans, as needed	93,938
Supervision missions	0
Learning missions	0
Independent Mid-term Review (MTR):	38,760
Independent Terminal Evaluation (TE):	31,570
TOTAL indicative COST	269,205

GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Section 1: General roles and responsibilities in the projects' governance mechanism

142. Implementing Partner: The Implementing Partner for this project is the Ministry of Agriculture and Rural Development (SADER).

143. The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

144. The Implementing Partner is responsible for executing this project. Specific tasks include:

- a. Project planning, coordination, management, monitoring, evaluation, and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- b. Overseeing the management of project risks as included in this project document and new risks that may emerge during project implementation.
- c. Procurement of goods and services, including human resources.
- d. Financial management, including overseeing financial expenditures against project budgets.
- e. Approving and signing the multi-year workplan.
- f. Approving and signing the combined delivery report at the end of the year; and,
- g. Signing the financial report or the funding authorization and certificate of expenditures.

145. Responsible Parties: The National Finance Sustainable Fund (NAFIN, Spanish acronym) will serve as a Responsible Party. Additional responsible parties could be identified at a later stage.

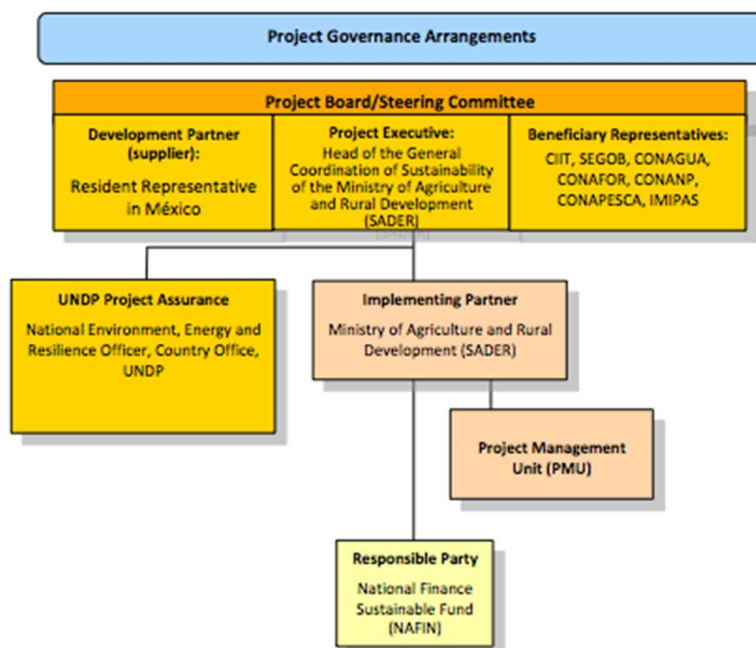
146. Project stakeholders and target groups: National Commission for the Knowledge and Use of Biodiversity (Comisión Nacional para el Conocimiento y Uso de la Biodiversidad); National Forestry Commission (Comisión Nacional Forestal); National Water Commission (Comisión Nacional del Agua; National Commission of Natural Protected Areas (Comisión Nacional de Áreas Naturales Protegidas); National Commission of Fisheries (Comisión Nacional de Pesca); National Council of Indigenous Peoples (Consejo Nacional de los Pueblos Indígenas, INPI). In addition, national and local academic and research institutions, as well as civil society organizations will play a key role in local consultations and activities.

147. An inception workshop will be held at the beginning of the project. It will be an opportunity to inform and engage key stakeholders in the project activities. It will be an opportunity to inform and engage key stakeholders in the project activities. In addition, mid-term and final self-assessment meetings will be held with key stakeholders and direct beneficiaries. These meetings will jointly review progress and receive comments, feedback, and recommendations for project implementation.

148. UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes overseeing project execution undertaken by the Implementing Partner to ensure that the project is being carried out in accordance with UNDP and GEF policies and procedures and the standards and provisions outlined in the Delegation of Authority (DOA) letter for this project. **The UNDP GEF Executive Coordinator, in consultation with UNDP Bureaus and the Implementing Partner, retains the right to revoke the project DOA, suspend or cancel this GEF project.** UNDP is responsible for the Project Assurance function in the project governance structure and presents to the Project Board and attends Project Board meetings as a non-voting member.

Section 2: Project governance structure

Full NIM with Government as Implementing Partner



- Second line of Defense**
- Regional Bureau oversees RR and Country Office compliance at portfolio level.
- BBPS VF RTA oversees technical quality assurance and GEF compliance. BBPS VF PTA oversees RTA function.
- UNDP Executive Coordinator and Regional Bureau Deputy Director can revoke DOA/ cancel/suspend project or provide enhanced oversight.

149. The UNDP Resident Representative assumes full responsibility and accountability for oversight and quality assurance of this Project and ensures its timely implementation in compliance with the GEF-specific requirements and UNDP's Programme and Operations Policies and Procedures (POPP), its Financial Regulations and Rules and Internal Control Framework. A representative of the UNDP Country Office will assume the assurance role and will present assurance findings to the Project Board, and therefore attends Project Board meetings as a non-voting member.

Section 3: Segregation of duties and firewalls vis-à-vis UNDP representation on the project board:

150. As noted in the [Minimum Fiduciary Standards for GEF Partner Agencies](#), in cases where a GEF Partner Agency (i.e. UNDP) carries out both implementation oversight and execution of a project, the GEF Partner Agency (i.e. UNDP) must separate its project implementation oversight and execution duties, and describe in the relevant project document a: 1) Satisfactory institutional arrangement for the separation of implementation oversight and executing functions in different departments of the GEF Partner Agency; and 2) Clear lines of responsibility, reporting and accountability within the GEF Partner Agency between the project implementation oversight and execution functions.

151. In this case, UNDP is only performing an implementation oversight role in the project vis-à-vis our role in the project board and in the project assurance function and therefore a full separation of project implementation oversight and execution duties has been assured.

Section 4: Roles and Responsibilities of the Project Organization Structure:

- Project Board:** All UNDP projects must be governed by a multi-stakeholder board or committee established to review performance based on monitoring and evaluation, and implementation issues to ensure quality delivery of results. The Project Board (also called the Project Steering Committee) is the most senior, dedicated oversight body for a project.

152. The two main (mandatory) roles of the project board are as follows:

- High-level oversight of the execution of the project by the Implementing Partner** (as explained in the ["Provide Oversight"](#) section of the POPP). This is the primary function of the project board and includes

annual (and as-needed) assessments of any major risks to the project, and decisions/agreements on any management actions or remedial measures to address them effectively. The Project Board reviews evidence of project performance based on monitoring, evaluation and reporting, including progress reports, evaluations, risk logs and the combined delivery report. The Project Board is responsible for taking corrective action as needed to ensure the project achieves the desired results.

- b. **Approval of strategic project execution decisions of the Implementing Partner** with a view to assess and manage risks, monitor and ensure the overall achievement of projected results and impacts and ensure long term sustainability of project execution decisions of the Implementing Partner (as explained in the [“Manage Change”](#) section of the POPP).

153. Requirements to serve on the Project Board:

- a. Agree to the Terms of Reference of the Board and the rules on protocols, quorum and minuting.
- b. Meet annually; at least once.
- c. Disclose any conflict of interest in performing the functions of a Project Board member and take all measures to avoid any real or perceived conflicts of interest. This disclosure must be documented and kept on record by UNDP.
- d. Discharge the functions of the Project Board in accordance with UNDP policies and procedures.
- e. Ensure highest levels of transparency and ensure Project Board meeting minutes are recorded and shared with project stakeholders.

154. Responsibilities of the Project Board:

- a. Consensus decision making:
 - 1. The project board provides overall guidance and direction to the project, ensuring it remains within any specified constraints, and providing overall oversight of the project implementation.
 - 2. Review project performance based on monitoring, evaluation and reporting, including progress reports, risk logs and the combined delivery report.
 - 3. The project board is responsible for making management decisions by consensus.
 - 4. In order to ensure UNDP’s ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.
 - 5. In case consensus cannot be reached within the Board, the UNDP representative on the board will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed
- b. Oversee project execution:
 - 1. Agree on Project Technical Coordinator and Project Manager’s tolerances as required, within the parameters outlined in the project document, and provide direction and advice for exceptional situations when the Project Technical Coordinator and Project Manager’s tolerances are exceeded.
 - 2. Appraise annual work plans prepared by the Implementing Partner for the Project; review combined delivery reports prior to certification by the implementing partner.
 - 3. Address any high-level project issues as raised by the Project Technical Coordinator and Project Manager and project assurance.
 - 4. Advise on major and minor amendments to the project within the parameters set by UNDP and the donor and refer such proposed major and minor amendments to the UNDP BPPS Nature, Climate and Energy Executive Coordinator (and the GEF, as required by GEF policies).

5. Provide high-level direction and recommendations to the project management unit to ensure that the agreed deliverables are produced satisfactorily and according to plans.
 6. Track and monitor co-financed activities and realization of co-financing amounts of this project.
 7. Approve the Inception Report, GEF annual project implementation reports, mid-term review and terminal evaluation reports.
 8. Ensure commitment of human resources to support project implementation, arbitrating any issues within the project.
- c. Risk Management:
1. Provide guidance on evolving or materialized project risks and agree on possible mitigation and management actions to address specific risks.
 2. Review and update the project risk register and associated management plans based on the information prepared by the Implementing Partner. This includes risks related that can be directly managed by this project, as well as contextual risks that may affect project delivery or continued UNDP compliance and reputation but are outside of the control of the project. For example, social and environmental risks associated with co-financed activities or activities taking place in the project's area of influence that have implications for the project.
 3. Address project-level grievances.
- d. Coordination:
1. Ensure coordination between various donor and government-funded projects and programmes.
 2. Ensure coordination with various government agencies and their participation in project activities.

155. **Composition of the Project Board:** The composition of the Project Board must include individuals assigned to the following three roles:

- a. **Project Executive:** This is an individual who represents ownership of the project and chairs (or co-chairs) the Project Board. The Executive usually is the senior national counterpart for nationally implemented projects (typically from the same entity as the Implementing Partner), and it must be UNDP for projects that are direct implementation (DIM). In exceptional cases, two individuals from different entities can co-share this role and/or co-chair the Project Board. If the project executive co-chairs the project board with representatives of another category, it typically does so with a development partner representative. The Project Executive is: *the Head of the General Coordination of Sustainability of the Ministry of Agriculture and Rural Development*.
- b. **Beneficiary Representative(s):** Individuals or groups representing the interests of those groups of stakeholders who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often representatives from civil society, industry associations, or other government entities benefiting from the project can fulfil this role. There can be multiple beneficiary representatives in the Project Board. The Beneficiary representative(s) is/are: *CIIT, SEGOB, IMIPAS, CONAPESCA, CONAGUA, CONAFOR and CONANP*.
- c. **Development Partner(s):** Individuals or groups representing the interests of the parties concerned that provide funding, strategic guidance and/or technical expertise to the project. The Development Partner(s) is *the UNDP Resident Representative*.

- **Project Assurance:** Project assurance is the responsibility of each project board member; however, UNDP has a distinct assurance role for all UNDP projects in carrying out objective and independent project oversight and monitoring functions. UNDP performs quality assurance and supports the Project Board (and Project Management

Unit) by carrying out objective and independent project oversight and monitoring functions, including compliance with the risk management and social and environmental standards of UNDP. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Technical Coordinator and Project Manager. Project assurance is totally independent of project execution.

A designated representative of UNDP playing the project assurance role is expected to attend all board meetings and support board processes as a non-voting representative. It should be noted that while in certain cases UNDP's project assurance role across the project may encompass activities happening at several levels (e.g. global, regional), at least one UNDP representative playing that function must, as part of their duties, specifically attend board meeting and provide board members with the required documentation required to perform their duties. The UNDP representative playing the main project assurance function is *the National Environment, Energy and Resilience Officer, UNDP Country Office for Mexico*

- **Project Management – Execution of the Project:** The Project Technical Coordinator and Project Manager (also called project coordinator) is the senior most representative of the Project Management Unit (PMU) and is responsible for the overall day-to-day management of the project on behalf of the Implementing Partner, including the mobilization of all project inputs, supervision over project staff, responsible parties, consultants and sub-contractors. The Project Technical Coordinator and Project Manager typically presents key deliverables and documents to the board for their review and approval, including progress reports, annual work plans, adjustments to tolerance levels and risk registers.

The PTM will be the primary contact for the Mexico Child Project and will be responsible for the following:

- Identify appropriate staff to participate in meetings;
- Report all changes in project staffing to the GCP within two weeks of staffing changes so that there is an up-to-date and active distribution list;
- Identify the correct counterparts for capacity building needs assessment;
- Help identify trainees for capacity building events;
- Identify opportunities for peer-to-peer exchanges, study tours and other capacity building events;
- Participate in the SC meetings and other cohort events;
- Identify the right counterpart to help organize training events sponsored by the GCP;
- Help with the transfer of lessons learned to the GCP and support communications products
- Liaise for the preparation of the annual Programme reporting;
- Lead on other organizational or coordination issues between the GCP and the national CPs; and
- Represent the country in meetings and events related to the CHO IP as needed to discuss results, share good practices and lessons learned.

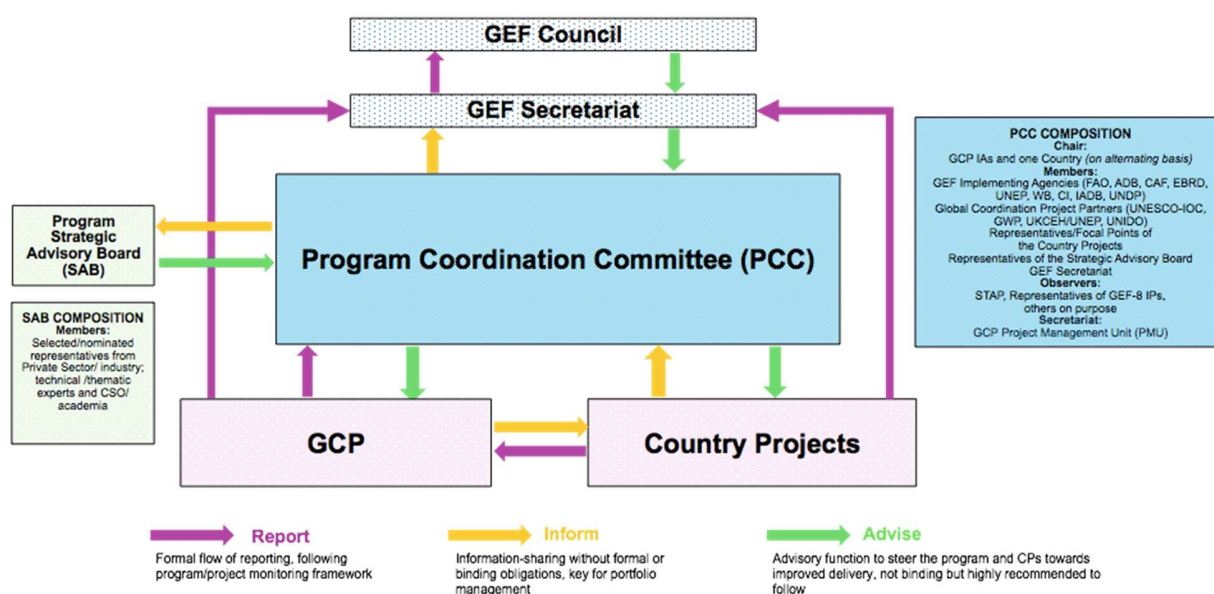
156. A designated representative of the PMU is expected to attend all board meetings and support board processes as a non-voting representative.

157. The primary PMU representative attending board meetings is *the Project Coordinator*.

The CHO IP governance structure.

158. The figure below illustrates the multi-level governance structure of the CHO IP. This will consist of the following key elements:

CHO IP Governance structure



159. **CHO Program Coordination Committee (CHO-PCC).** This will provide a channel for countries and representatives of diverse global CHO stakeholder groups (including IAs, EAs, entities, organizations, networks and coalitions representing the interests of nitrogen users and producers, women, indigenous peoples, academia, research institutions, youth and the private sector) to share guidance on the priorities and approaches of the IP, including key emerging issues to be addressed and suggested initiatives or stakeholders with which the IP should collaborate. Members of the PCC include: GEF Implementing Agencies (FAO, ADB, CAF, EBRD, UNEP, WB, CI, IADB, UNDP) Global Coordination Project Partners (UNESCO-IOC, GWP, UKCEH/UNEP, UNIDO); Representatives/Focal Points of the Country Projects; GEF Secretariat. The GCP PMU serves as the Secretariat of the CHO-PCC.

160. The PCC will:

- Inform and receive advice from the SAB.
- Receive formal reporting from the GCP (aggregating information collected from the Country Projects through the Program-level monitoring and reporting framework);
- Advise and provide guidance to the GCP on priorities and approaches for portfolio delivery;
- Receive inputs from the program Implementing Agencies and Country Projects.

161. The CHO-PCC will also provide a space to guide on new and/or corrective actions to consistently support and consolidate the progress made by the 14 CPs and the GCP and address issues and bottlenecks. For this reason, the CHO-PCC will hold in-person meetings during the annual stocktaking meetings organized by the GCP, but will also hold virtual meetings when needed between these annual events.

162. The CHO-PCC does not take decisions on budgetary issues. Terms of Reference for the PCC will be defined during the first year of execution of the CHO IP and will be reviewed and adopted at the first Program Coordination Committee Meeting.

163. A **CHO-IP Strategic Advisory Board (CHO-SAB)** will support the GCP partners and PMU to optimize alignment between the technical activities of the IP/GCP and global initiatives/actors. Relevant members of the SAB will meet (as needed, and as requested by the IP co-leads, PCC members, partners and/or agencies), to advise on specific policy, strategic or technical issues, including:

- Guidance on the **formulation and application of programmatic indicators** that will be aggregated across the IP, including but not limited to GEF Core Indicators and Sub-Indicators (see M&E plan). Appropriate indicators will be defined during the GCP inception phase.

- **Brokerage and organization of technical support** from specialized institutions and service providers.
- **“Matchmaking”**, linking Country Projects with regional and global actors, networks and initiatives that have the potential to support the operations at national level (for example as sources of finance, knowledge, policy engagement and market and value chain opportunities), knowledge sharing, scaling of impacts, and transformational impacts at systems level (for example on policy and legal frameworks).

164. Terms of Reference for the SAB will be defined during the first year of execution of the CHO IP and will be reviewed and adopted at the first Program Coordination Committee Meeting.

FINANCIAL PLANNING AND MANAGEMENT

165. The total cost of the project is USD 97,423,367. This is financed through a GEF grant of USD 13,461,469 administered by UNDP, and additional support of USD 83,961,898. UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co-financing transferred to UNDP bank account only.

166. **Co-financing:** The actual realization of project co-financing amounts will be monitored by the UNDP Country Office and the PMU on an annual basis in the GEF PIF and will be reported to the GEF during the mid-term review and terminal evaluation process as follows:

Co-financing source	Co-financing type	Name of Co-financier	Investment Mobilized	Co-financing amount
Government	Public Investment	Ministry of Agriculture and Rural Development (SADER)	Investment mobilized Recurrent expenditures	30,060,566
	In-kind			
Civil Society Organization	In-kind	Senderos y Encuentros para un Desarrollo Autónomo Sustentable, A.C (SENDAS)	Recurrent expenditures	520,500
Government	In-kind	Secretariat of Welfare (Bienestar)	Recurrent expenditures	51,700,000
Civil Society Organization	Grant	Mexican Fund for the Conservation of Nature	Investment mobilized	180,832
Government	In-kind	National Commission for Protected Natural Areas (CONANP)	Recurrent expenditures	1,000,000
Government	In-kind	National Commission for the Knowledge and Use of Biodiversity (CONABIO)	Recurrent expenditures	200,000
GEF Agency	In-kind	UNDP Mexico Country Office	Recurrent expenditures	300,000
Total				83,961,898

167. **Budget Revision and Tolerance:** As per UNDP POPP, the project board may agree with the Project Technical Coordinator and Project Manager on a tolerance level for each detailed plan under the overall multi-year workplan. The agreed tolerance should be written in the project document or approved project board meeting minutes. It should normally not exceed 10 percent of the agreed annual budget at the activity level, but within the overall approved multi-year workplan at the activity level. Within the agreed tolerances, the Project Technical Coordinator and Project Manager can operate without intervention from the project board. Restrictions apply as follows:

168. Should the following deviations occur, the Project Technical Coordinator and Project Manager /IP through UNDP Country Office will seek the approval of the BPPS/NCE-VF team to ensure accurate reporting to the GEF. It is **strongly encouraged** to maintain the expenditures within the approved budget at the budgetary account and at the component level:

- a. Budget reallocations must prove that the suggested changes in the budget will not lead to material changes in the results to be achieved by the project. A strong justification is required and will be approved on an exceptional basis. Budget re-allocations among the components (including PMC) of the approved Total Budget and Work Plans (TBWP) that represent a value greater than 10% of the total GEF grant.
- b. Introduction of new outputs/activities (i.e. budget items) that were not part of the agreed project document and TBWP that represent a value greater than 5% of the total GEF grant. The new budget items must be eligible as per the [GEF and UNDP policies](#).
- c. Project management cost (PMC): budget under PMC component is capped and cannot be increased.

169. UNDP is not in a position to increase the total budget above the amount approved by the donor, therefore any over-expenditure would have to be absorbed from non-GEF resources by the Implementing Partner (GEF Executing Entity).

170. **Project extensions:** The UNDP-BPPS-NCE team Executive Coordinator must approve all requests for extension of the Project Completion Date and for other milestone extensions with hard deadlines. All extensions impose additional time and cost burdens at all levels and the GEF project budget cannot be increased beyond its originally approved amount. A single extension may be granted on an exceptional basis and subject to the conditions and maximum durations set out in the UNDP POPP. The project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs shall be covered by non-GEF resources; the additional UNDP oversight costs during the extension period must be covered by non-GEF resources, in accordance with UNDP's policy as set out in UNDP POPP.

171. For any extension request, UNDP CO and IP will consult and jointly present a clear plan indicating how and from which specific sources the additional oversight costs that will be incurred by UNDP will be covered during the extended period. The BPPS-NCE Executive Coordinator will consult the Regional Bureaux (RBX) and may reject the extension request if no (external co-financing by the IP or internal UNDP CO resources) can be identified.

172. All extension requests, along with all supporting documentation, shall be submitted by the IP to the UNDP CO in line with the requirements and within the deadlines set out in the UNDP SOPs and policies in UNDP POPP.

173. **Audit:** The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop. If the Implementing Partner is an UN Agency, the project will be audited according to that Agencies applicable audit policies

174. **Transfer or disposal of assets:** In consultation with the Implementing Partner and other parties of the project, UNDP is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project, however **must be done before the operational closure date**. In all cases of transfer, a transfer document must be prepared and kept on file³³. The transfer should be done before Project Management Unit complete their assignments.

175. **Completion Date:** The project completion date is the date of Project Document Signature plus project duration. This date can only be extended through a formal extension request. Prior to completion date, all UNDP-financed inputs must be provided and related activities for the Project completed. No activities, except for the final

³³ See

https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default.

clearance of the Terminal Evaluation Report and the corresponding management response and the end-of-project review Project Board Meeting should take place after the Completion Date.

176. **Project Closure:** Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. All costs incurred to close the project must be included in the project closure budget and reported as final project commitments presented to the Project Board during the final project review. The only costs a project may incur following the final project review are those included in the project closure budget.

- a. **Operational Closure:** Operational closure must happen within 9 months from project completion date. Prior to operational closure, the Terminal Evaluation must have been submitted and the corresponding TE management response and the end-of-project review Project Board meeting must have been completed. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. Before Operational Closure, the project must have completed the transfer or disposal of any equipment that is still the property of UNDP.

- b. **Financial Closure:** Financial closure must happen within 6 months of operational closure or after the date of cancellation. The project will be financially closed when the following conditions have been met: a) the project is operationally completed or has been cancelled; b) the Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to BPPS/NCE for confirmation before the project will be financially closed in Quantum by the UNDP Country Office.

177. **Cancellation and Suspension:** All projects considering going through cancellation or suspension must follow UNDP and GEF requirements. Guidance can be found in the UNDP POPP ([SOPs for management actions of Vertical Fund projects escalated to the Executive Coordinator](#) and [Guidance for GEF project revisions](#)).

178. **Refund to GEF:** Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the BPPS/NCE team Directorate in New York. No action is required by the UNDP Country Office on the actual refund from UNDP project to the GEF. Unspent project balance is not permitted to be transferred to any other projects.

TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Quantum Business Unit	UNDP-MEX		
Quantum Project ID:	01003814	Quantum Project Title:	<i>As in Quantum</i>
Quantum Award ID:	1377327	Quantum Award Title:	<i>As in Quantum</i>
UNDP-GEF PIMS No.	9744		
Implementing Partner	Ministry of Agriculture and Rural Development (SADER)		

Quantum Outcome (GEF Component)	Quantum Output (GEF Component)	Quantum Responsible Party	Quantum Fund ID	Quantum Donor ID	Quantum Budgetary Account Code	Quantum Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	See Budget Note
Component 1. Improving the evidence base and raising awareness to more effectively address nutrient pollution and marine hypoxia	Outcome 1.1. The quality, management, and availability of scientific and technical data required by decision-makers to address nutrient pollution and marine hypoxia are improved at the subnational and national levels, in particular in three target landscapes	NAFIN	62000	10003	71300	Local Consultants	50,000	50,000	38,000	38,000	38,000	214,000	1
			62000		71800	Contractual Services – Imp Partn	62,313	62,313	62,313	62,312	62,312	311,563	2
			62000		71600	Travel	28,500	68,500	15,000	15,000	15,000	142,000	3
			62000		72100	Contractual Services-Companies	85,000	150,000	75,000	75,000	75,000	460,000	4
			62000		72200	Equipment and Furniture	175,000		25,000			200,000	5
			62000		72300	Materials & Goods	21,000	21,000	21,000	21,000	21,000	105,000	6
			62000		72400	Communic & Audio Visual Equip	15,000		5,000			20,000	7
			62000		74200	Audio Visual&Print Prod Costs		57,000	42,000	42,000	42,000	183,000	8
			62000		75700	Training, Workshops and Confer	22,500	42,500	20,000	10,000		95,000	9
		Total NAFIN						459,313	451,313	303,313	263,312	253,312	1,730,563
	Total Outcome 1.1						459,313	451,313	303,313	263,312	253,312	1,730,563	
Total Component 1							459,313	451,313	303,313	263,312	253,312	1,730,563	
Component 2: Supporting the strengthening of	Outcome 2.1: Improved governance at	NAFIN	62000	10003	71200	International Consultants		10,500	10,500			21,000	10
			62000		71300	Local Consultants	12,000	18,000	18,000	12,000		60,000	11

policy, regulatory and investment frameworks to incentivize and finance pollution mitigation	subnational and national levels to reduce NbS water pollution.		62000		71800	Contractual Services – Imp Partn	64,148	64,148	64,148	64,147	64,147	320,738	12
			62000		71600	Travel	12,500	15,500	13,000	9,500	7,500	58,000	13
			62000		72400	Communic & Audio Visual Equip		15,000	15,000			30,000	14
			62000		72500	Supplies		3,000	3,000	3,000	3,000	12,000	15
			62000		74200	Audio Visual&Print Prod Costs	6,000	12,500	12,500	5,000		36,000	16
			62000		75700	Training, Workshops and Confer	17,500	30,500	23,000	14,500	7,500	93,000	17
		Total NAFIN						112,148	169,148	159,148	108,147	82,147	630,738
	Total Outcome 2.1						112,148	169,148	159,148	108,147	82,147	630,738	
	Outcome 2.2: Enabling environment promoted to guide investments with water pollution and marine hypoxia reduction objectives	NAFIN	10003	62000	71300	Local Consultants	16,000	32,000				48,000	18
				62000	71800	Contractual Services – Imp Partn	19,800	19,800	19,800	19,800	19,800	99,000	19
				62000	71600	Travel	8,500	18,000	9,000	3,500		39,000	20
				62000	74200	Audio Visual&Print Prod Costs	2,500	15,500	5,500			23,500	21
				62000	75700	Training, Workshops and Confer	15,000	33,500	17,500	7,000		73,000	22
		Total NAFIN					61,800	118,800	51,800	30,300	19,800	282,500	
		Total Outcome 2.2						61,800	118,800	51,800	30,300	19,800	282,500
Total Component 2							173,948	287,948	210,948	138,447	101,947	913,238	
Component 3: Supporting demonstration of best management practices (BMP) and investments that showcase innovative solutions to	Outcome 3.1: Strengthened technical, organizational and financial capacities of local organizations to promote measures to	NAFIN	10003	62000	71300	Local Consultants	0	12,000				12,000	23
				62000	71800	Contractual Services – Imp Partn	31,680	31,680	31,680	31,680	31,680	158,400	24
				62000	71600	Travel	15,000	16,500	16,500	21,000	6,000	75,000	25
				62000	72100	Contractual Services-Companies	50,000	280,000	190,000	80,000		600,000	26
				62000	74200	Audio Visual&Print Prod Costs		35,000	5,000	5,000		45,000	27
				62000	75700	Training, Workshops and Confer	8,000	22,500	7,500	15,000		53,000	28

reduce marine hypoxia	reduce land-based water pollution and marine hypoxia through good practices and NbS	Total NAFIN					104,680	397,680	250,680	152,680	37,680	943,400	
	Total Outcome 3.1						104,680	397,680	250,680	152,680	37,680	943,400	
	Outcome 3.2: The adoption of best practices and NbS contributes to the reduction of water pollution and marine hypoxia.	NAFIN	62000	10003	71300	Local Consultants	64,000	128,000	48,000	48,000	24,000	312,000	29
			62000		71800	Contractual Services – Imp Partn	46,674	46,674	46,674	46,672	46,672	233,366	30
			62000		72100	Contractual Services - Companies		990,000	990,000	690,000	450,000	3,120,000	31
			62000		71600	Travel	43,000	68,000	68,500	68,500	63,000	311,000	32
			62000		72200	Equipment and Furniture	75,000		25,000			100,000	33
			62000		72300	Materials & Goods	9,000	30,000	30,000	30,000	30,000	129,000	34
			62000		72400	Communic & Audio Visual Equip	35,000		10,000			45,000	35
			62000		72600	Grants	469,500	1,051,250	1,051,250	945,000		3,517,000	36
			62000		74200	Audio Visual&Print Prod Costs			10,500	10,500	10,500	31,500	37
			62000		75700	Training, Workshops and Confer	17,000	52,000	19,500	15,000	15,000	118,500	38
	Total NAFIN						759,174	2,365,924	2,299,424	1,853,672	639,172	7,917,366	
Total Outcome 3.2						759,174	2,365,924	2,299,424	1,853,672	639,172	7,917,366		
Total Component 3							863,854	2,763,604	2,550,104	2,006,352	676,852	8,860,766	
Component 4: Ensuring that knowledge management and learning, communication, gender and	Outcome 4.1: Knowledge management and learning, communication, gender mainstreaming,	NAFIN	62000	10003	71200	International Consultants	84,000					84,000	39
			62000		71300	Local Consultants	48,000		6,000		14,000	68,000	40
			62000		71800	Contractual Services – Imp Partn	98,722	98,722	98,722	98,721	98,720	493,607	41
			62000		71600	Travel	24,500	17,500	19,500	20,500	20,000	102,000	42

stakeholder engagement are integrated across the IP, including programmatic coordination and reporting	and stakeholder engagement effectively support program and project objectives and are fully integrated across the IP		62000		72400	Communic & Audio Visual Equip	30,000		10,000			40,000	43
			62000		74200	Audio Visual&Print Prod Costs	7,000	25,500	25,500	25,500	26,500	110,000	44
			62000		75700	Training, Workshops and Confer	24,920	10,000	30,920	12,500	16,000	94,340	45
		Total NAFIN					317,142	151,722	190,642	157,221	175,220	991,947	
		Total Outcome 4.1					317,142	151,722	190,642	157,221	175,220	991,947	
	Outcome 4.2: Programmatic coordination, coherence, and reporting are ensured	NAFIN	62000	10003	71800	Contractual Services – Imp Partn	4,950	4,950	4,950	4,950	4,950	24,750	46
			62000		71600	Travel	6,000	6,000	6,000	6,000	6,000	30,000	47
		Total NAFIN					10,950	10,950	10,950	10,950	10,950	54,750	
		Total Outcome 4.2					10,950	10,950	10,950	10,950	10,950	54,750	
		Total Component 4							328,092	162,672	201,592	168,171	186,170
M&E	M&E assesses project impact and guides adaptive management	UNDP	62000	10003	71200	International Consultants			20,000		18,000	38,000	48
			62000		71300	Local Consultants			11,000		8,000	19,000	49
			62000		71600	Travel			4,000		3,000	7,000	50
			62000		75700	Training, Workshops and Confer			3,760		2,570	6,330	51
		Subtotal UNDP							38,760		31,570	70,330	
		NAFIN	62000	10003	71800	Contractual Services – Imp Partn	33,145	33,145	33,145	33,145	33,145	165,725	52
			62000		71600	Travel	4,430	4,430	4,430	4,430	4,430	22,150	53
			62000		75700	Training, Workshops and Confer	11,000					11,000	54
		Subtotal NAFIN					48,575	37,575	37,575	37,575	37,575	198,875	
Total M&E							48,575	37,575	76,335	37,575	69,145	269,205	

PMC	Project Management Component	NAFIN	62000	10003	71800	Contractual Services – Imp Partn	107,235	107,235	107,235	107,235	107,235	536,175	55	
			62000		71600	Travel	4,765	4,765	4,765	4,765	4,765	23,825	56	
			62000		72200	Equipment and Furniture	4,000			1,000		5,000	57	
			62000		72400	Communic & Audio Visual Equip	14,500	3,000	12,500	3,000	3,000	36,000	58	
			62000		72500	Supplies	1,500	1,500	1,500	1,500	1,500	7,500	59	
		Total NAFIN						132,000	116,500	126,000	117,500	116,500	608,500	
		UNDP	62000		74100	Professional Services	6,500	6,500	6,500	6,500	6,500	32,500	60	
		Total UNDP						6,500	6,500	6,500	6,500	6,500	32,500	
		Total Project Management Cost						138,500	123,000	132,500	124,000	123,000	641,000	
Total Project Grant						2,012,282	3,826,112	3,474,792	2,737,857	1,410,426	13,461,469			

Budget Notes

See Budget Note	Budget Note (Description)
Component 1. Improving the evidence base and raising awareness to more effectively address nutrient pollution and marine hypoxia	
1	Data Management Expert (50%) to systematize, analyze, and share water quality data for three target landscapes (Total cost: \$95,000; \$19,000/year over 5 years). Water Quality Monitoring Expert to train local teams (one in each target landscape) and staff from key institutions for the participatory monitoring of water quality from source-to-sea (Total cost: \$24,000; \$12,000/year during years 1 and 2). Data Management Expert (50%) to operate the information and analysis system based on a web platform (explorer) for water quality data management and decision-making, and share data with AI, FAO, and IOC (Total cost: \$95,000; \$19,000/year over 5 years).
2	Technical Coordinator and Project Manager to assess water quality capacity and training needs of key institutions and to develop and supervise the participatory monitoring of water quality program from source-to-sea (Total cost: \$188,825; \$37,765/year over 5 years) Field Officer (3 persons, one per target landscape) to support the collection and analysis of data. (Total cost: \$122,738; for 3 persons over 5 years)
3	Travel expenses for the identification of pollution sources and associated infrastructure in three target landscapes (Total cost: \$18,000; \$3,000/year-landscape during years 1 and 2) Travel expenses for training and the participatory monitoring of water quality from source-to-sea (Total cost: \$45,000; \$9,000/year during 5 years) Travel expenses for two experts to attend the summer schools organized by the GCP (Total cost: \$40,000; \$20,000/person-event during year 2) Travel expenses for two experts to participate in data management meetings (Paris, two workshops) 5 days per year to submit data to a national/ international repository compatible with GO2DAT (Total cost: \$30,000; \$3,000/meeting-each over 5 years)

	Travel expenses related to the development an information and analysis system for water quality data management and decision-making (Total cost: \$9,000; \$4,500/year during years 1 and 2)
4	Firm to develop an information and analysis system based on a web platform (explorer) for water quality data management and decision-making (Total cost: \$150,000; \$75,000/year during years 1 and 2) Firm to design and implement awareness campaigns related to integrated watershed management and pollution and hypoxia reduction in three target landscapes, including establishing the awareness baseline, identifying target audiences, and assessing the impact of the campaigns using KAP indicators (Total cost: \$310,000 during years 1 to 3)
5	Field equipment (test kits, meters, sensors, buoys, etc.) for the participatory monitoring of water quality from source-to-sea (Total cost: \$200,000; \$150,000 year 1 and \$50,000 year 3)
6	Material and goods (fuel, paper products, field/lab products, etc.) for the participatory monitoring of water quality from source-to-sea (Total cost: \$105,000; \$21,000/year for 5 years)
7	Computer equipment and software related to the development and operationalization of the information and analysis system based on a web platform (explorer) for water quality data management and decision-making (Total cost: \$20,000 during years 1 and 3)
8	Print production costs of the report on the inventory of water pollution sources and associated infrastructure for three target landscapes (Total cost: \$15,000 during year 2). Audiovisual and print production costs for sharing information generated by citizen science through the participatory community-based monitoring plan (Total cost: \$48,000; \$12,000/year during years 2 to 5). Production costs of materials for annual awareness raising campaign at the landscape level (Total cost: \$120,000; \$30,000/year during years 2 to 5)
9	Training of local teams (one in each target landscape) and staff from key institutions for the participatory monitoring of water quality from source-to-sea (Total cost: \$30,000; \$15,000/year during years 1 and 2). Meetings to establish inter-institutional agreements to share data for the integration of an information system (Total cost: \$5,000 during years 1 and 2). Meetings to establish a research and development group to evaluate the existing indices and define indicators and implement them in the information and analysis system (Total cost: \$5,000 during years 1 and 2) Meetings and workshops for identifying gender gaps and assessing how women and men are likely to be affected by and benefit from project activities (Total cost: \$5,000; 2,500/year during years 1 and 2). Training of both women and men as local promoters (community, teachers, etc.), including the indigenous population, to ensure the sustainability of the awareness campaigns (Total cost: \$20,000; 10,000/year during years 2 and 3). Leadership meetings or events for women's organizations to share their knowledge, experience and learn from others regarding integrated watershed management and pollution and hypoxia reduction (Total cost: \$30,000; 10,000/year during years 2 to 4)
Component 2: Supporting the strengthening of policy, regulatory and investment frameworks to incentivize and finance pollution mitigation	
10	International Safeguards Expert to develop the ESIA associated with "upstream" activities of the project involving regulatory and legislative amendments, and other related plans as needed (\$21,000; \$700 daily rate x 30 days during years 2 and 3)
11	Legal expert to support developing and or updating regulatory land and/or marine management, and integrated watershed management instruments to include objectives for the reduction of water pollution through NbS (Total cost: \$48,000; \$12,000/year during years 1 to 4). National Safeguards Expert to support the development of the ESIA associated with "upstream" activities of the project involving regulatory and legislative amendments, and other related plans as needed (\$12,000; \$400 daily rate x 30 days during years 2 and 3)
12	Governance and Public Policy Specialist (Total cost: \$198,000; \$39,600/year over 5 years). Field Officer (3 persons, one per target landscape) to support improved governance at subnational levels to reduce water pollution (Total cost: \$122,738 for 3 persons over 5 years).

13	Travel cost associated to strengthening of existing inclusive multi-stakeholder governance structures and mechanisms (Total cost: \$37,500; \$7,500/year over 5 years) Travel cost associated to developing and or updating planning, regulatory, land and/or marine management, and integrated watershed management instruments to include objectives for the reduction of water pollution through NbS (Total cost: \$18,000 during years 1 to 4) Travel costs associated with the development of the ESIA and other related plans as needed (Total cost: \$2,500 during year 2)
14	Communication, audiovisual, and computer equipment and software to strengthen existing inclusive multi-stakeholder governance structures and mechanisms (Total cost: \$30,000; \$15,000/year during years 2 and 3)
15	Office and IT supplies and consumables to support the strengthening of existing inclusive multi-stakeholder governance structures and mechanisms (Total cost: \$12,000; \$3,000/year during years 2 to 5)
16	Printing and audiovisual production costs associated to developing and or updating planning, regulatory, land and/or marine management, and integrated watershed management instruments to include objectives for the reduction of water pollution through NbS (Total cost: \$36,000 over years 1 to 4)
17	Workshops and meetings to assess existing governance structures' needs (Total cost: \$15,000; \$7,500/year during years 1 and 2). Workshops and meetings to support establishing and/or strengthening the identified multi-stakeholder governance structures and mechanisms, including their action plans (Total cost: \$30,000; \$7,500/year during years 2 to 5). Workshops and meetings associated to developing and or updating planning, regulatory, land and/or marine management, and integrated watershed management instruments to include objectives for the reduction of water pollution through NbS (Total cost: \$48,000 over years 1 to 4)
18	WWTP Expert to conduct the inventory of WWTPs and other wastewater treatment solutions and to assess their current status and propose alternative and innovative treatment solutions adapted to local conditions and needs (Total cost: \$32,000; \$4,000/month, 8 months during years 1 and 2). NbS Expert to identify and prioritize the NbS that could be incorporated in the operational rules and guidelines of public budgetary programs (Total cost: \$16,000; \$4,000/month, 4 months during year 2).
19	Sustainable Financing Specialist to develop guidelines for sustainable and inclusive financing and reducing water pollution in three target landscapes, make available inclusive mixed-financing and investment instruments for sustainable water pollution reduction, support the development of investment feasibility assessments for rehabilitating WWTPs in selected municipalities and other effective technologies to reduce water pollution, develop recommendations for investing criteria in NbS (Total cost: \$99,000; \$19,800/year over 5 years).
20	Travel cost related to developing guidelines for sustainable and inclusive financing and reducing water pollution in the three target landscapes (Total cost: \$13,500 over years 1 to 3) Travel cost related to making available to key stakeholders inclusive mixed-financing and investment instruments for sustainable water pollution reduction (Total cost: \$12,000 during years 1 to 4) Travel costs related to the investment feasibility assessment for rehabilitating WWTPs and other effective technologies to reduce water pollution (Total cost: \$9,000 during years 1 and 2) Travel costs related to identifying and prioritizing NbS that could be incorporated in the operational rules and guidelines of public budgetary programs (Total cost: \$4,500 during year 2)
21	Printing and audiovisual production costs related to developing guidelines for sustainable and inclusive financing and reducing water pollution in the three target landscapes (Total cost: \$13,500 over years 1 to 3). Printing and production costs of results of the assessment for rehabilitating WWTPs and proposal of related-NbS to reduce water pollution (Total cost: \$10,000 during year 2)

22	Workshops and meetings for developing guidelines for sustainable and inclusive financing and reducing water pollution in the three target landscapes, including structuring a portfolio of inclusive projects (Total cost: \$27,000 over years 1 to 3). Workshops and meetings related to making available to key stakeholders inclusive mixed-financing and investment instruments for sustainable water pollution reduction, including technical assistance to help facilitate access to long-term financing (Total cost: \$24,000 during years 1 to 4). Workshops and meetings related to investment feasibility assessment for rehabilitating WWTPs and other effective technologies to reduce water pollution (Total cost: \$12,000 during years 1 and 2). Workshops and meetings related to identifying and prioritizing NbS that could be incorporated in the operational rules and guidelines of public budgetary programs (Total cost: \$10,000 during year 2)
Component 3: Supporting demonstration of best management practices (BMP) and investments that showcase innovative solutions to reduce marine hypoxia	
23	NbS Expert to develop a catalog of BMPs and NbS to reduce land-based nutrient pollution and marine hypoxia (Total cost: \$12,000; \$4,000/months for 3 months during year 2)
24	Sustainable Financing Specialist (Total cost: \$59,400; \$11,880/year over 5 years). Knowledge Management and Capacity Building Specialist (50%) to support the implementation of the capacity-building program to implement BMPs and NbS, and to support thematic CoPs for BMPs (Total cost: \$99,000; \$19,800/year over 5 years).
25	Travel costs related to participation in technical training workshops on “Nutrient Mitigation Opportunities” led by the INMS (Total cost: \$36,000; \$3,000/workshop-person for three persons, one per target landscape, during years 1 to 4) Travel costs related to assessing the impact of the capacity-building program (Total cost: \$4,500 during year 4) Travel related to the development of business plans and/or models, ideation tools, and local organizational manuals tailored to the needs of key stakeholders (Total cost: \$13,500; \$4,500/year during years 2 to 4) Travel costs for one person to participate in a workshop to design the learning priorities, governance structure, and workplan of thematic CoPs (Total cost: \$3,000 during year 1) Travel costs for one person to participate in the CoP annual workshop (Total cost: \$15,000; \$3,000/year over 5 years) Travel costs for one person to participate in the end of project workshop to design the sustainability strategy and continuation of thematic CoPs (Total cost: \$3,000 during year 5)
26	Firms to implement an inclusive technical and financial capacity-development program to reduce land-based water pollution and marine hypoxia, including designing training materials, developing a capacity-building curriculum, and delivering training (Total cost: \$360,000 during years 1 to 3). Firms (e.g., technological institutes and universities) to provide technical and financial advice to beneficiary OSSEs and municipal governments (Total cost: \$240,000 during years 2 to 4).
27	Printing costs of a catalog of BMPs and NbS to reduce land-based water pollution and marine hypoxia (Total cost: \$10,000 during year 2). Printing costs of a capacity-building curriculum on reducing land-based sources of nutrient pollution and marine hypoxia for various stakeholders and landscapes (Total cost: \$20,000 during year 2). Audio visual and print production costs related to the development of business plans and/or models, ideation tools, and local organizational manuals tailored to the needs of key stakeholders (Total cost: \$15,000; \$5,000/year during years 2 to 4)
28	Participatory workshops for conducting an assessment of BMPs and NbS to reduce land-based water pollution and marine hypoxia (Total cost: \$11,000 during years 1 and 2). Participatory workshops to assess training needs and develop culturally appropriate techniques and mechanisms for training various stakeholders (Total cost: \$12,000 during years 1 and 2). Participatory workshops to evaluate the impact of the capacity-building program (Total cost: \$7,500 during year 4). Workshops and meetings to develop business plans and/or models, ideation tools, and local organizational manuals tailored to the needs of key stakeholders (Total cost: \$22,500; \$7,500/year during years 2 to 4)

29	NbS Expert to conduct a municipal government-level gender-sensitive assessment of BMPs with different scenarios and expert advice to select the most appropriate BMPs based on internationally recognized data, tools, codes of conduct and guidelines; and to design a protocol for monitoring and evaluating the effects of BMPs and NbS (Total cost: \$36,000; \$4,000/months for 9 months during years 1 and 2). NbS Expert to conduct a gender-sensitive assessment of BMPs at the community or local level with different scenarios and expert advice to select the most appropriate BMPs based on internationally recognized data, tools, codes of conduct and guidelines; and to design a protocol for monitoring and evaluating the effects of BMPs and NbS (Total cost: \$36,000; \$4,000/months for 9 months during years 1 and 2). Biodiversity Conservation Expert to identify priority sites for conservation actions in the watersheds and marine-coastal zones within the three priority landscapes, and to provide technical support during implementation (Total cost: \$96,000; \$4,000/month for 24 months over 5 years). Restoration Expert to identify priority sites for restoration and hydrological rehabilitation in the watersheds and marine-coastal zones within the three priority landscapes and to provide technical support during implementation, including assessing the project's climate change mitigation benefits bi-annually, at mid-point and end of project using FAO's Ex-ACT tool (Total cost: \$96,000; \$4,000/month for 24 months over 5 years). Biodiversity Monitoring Expert to design the biodiversity component of a community and citizen science-based monitoring plan in watersheds and marine-coastal areas (Total cost: \$24,000; \$4,000/month for 6 months during years 1 and 2). Water Quality Monitoring Expert to design the water quality component of a community and citizen science-based monitoring plan in watersheds and marine-coastal areas (Total cost: \$24,000; \$4,000/month for 6 months during years 1 and 2).
30	Sustainable Financing Specialist to provide financial advice for the implementation of inclusive municipal projects for the adoption of best practices and NbS for the reduction of water pollution and marine hypoxia (Total cost: \$39,600; \$7,920/year over 5 years). Field Officer (3 persons, one per target landscape to provide technical support to municipal projects for the adoption of best practices and NbS for the reduction of water pollution and marine hypoxia (Total cost: \$122,741; for 3 persons over 5 years) Field assistant to support the implementation of the participatory community and citizen science monitoring plan for biodiversity and water quality in watersheds and marine-coastal areas (Total cost: \$71,025 over 5 years)
31	Firms to design and implement inclusive pilot and demonstrative cases of best practices and NbS for the reduction of water pollution and marine hypoxia in selected municipalities in three target landscapes (Total cost: \$3,000,000 during years 2 to 5). Firms (e.g., technological institutes, local schools, and universities) to provide technical advice and support during the implementation of pilot projects and demonstrative cases that apply good practices and NbS at the local level (Total cost: \$120,000 during years 2 to 4)

32	Travel costs related to conducting a municipal-level gender-sensitive assessment of BMPs with different scenarios and expert advice (Total cost: \$9,000 during years 1 and 2) Travel costs related to providing financial advise and technical support to municipal projects for the adoption of best practices and NbS for the reduction of water pollution and marine hypoxia (Total cost: \$22,500 over 5 years) Travel cost related to monitoring and evaluating the impacts of BMPs and NbS (Total cost: \$9,000; \$3,000/year during years 3 to 5) Travel costs related to conducting a gender-sensitive assessment of BMPs at the community or local level (Total cost: \$9,000 during years 1 and 2) Travel costs related to providing financial advise and technical support to community or local level projects for the adoption of best practices and NbS for the reduction of water pollution and marine hypoxia (Total cost: \$22,500 over 5 years) Travel costs related to monitoring and evaluating the impacts of BMPs and NbS at the local level (Total cost: \$9,000; \$3,000/year during years 3 to 5) Travel cost related to exchanging experiences and lessons learned in the three landscapes and elsewhere in the country regarding the adoption of best practices and NbS for the reduction of water pollution and marine hypoxia (Total cost: \$22,500; \$7,500/year during years 3 to 5) Travel costs related to providing technical support for the implementation of conservation, restoration and hydrological rehabilitation actions in watersheds and marine-coastal zones in three target landscapes (Total cost: \$22,500 over 5 years) Travel cost related to the design and implementation of the participatory community and citizen science monitoring plan for biodiversity and water quality in watersheds and marine-coastal areas (Total cost: \$45,000 over 5 years) Travel costs to support demonstration of BMPs and investments that showcase innovative solutions to reduce marine hypoxia (Total cost: \$140,000; \$28,000/year over 5 years)
33	Field equipment (test kits, meters, sensors, buoys, camera traps, binoculars, etc.) for the participatory monitoring of water quality and biodiversity (Total cost: \$100,000; \$75,000 year 1 and \$25,000 year 3)
34	Materials and goods (fuel, paper products, field/lab products, etc.) related to community and citizen science-based monitoring activities of biodiversity and water quality in watersheds and marine-coastal areas (Total cost: \$129,000, during years 1 to 5)
35	Computer equipment and software for the systematization and analysis of information related to the monitoring of biodiversity and water quality in watersheds and marine-coastal areas (Total cost: \$45,000 during years 1 and 3)
36	LVG to implement projects with local organizations, indigenous peoples and OSSEs for the adoption of best practices and NbS, the use of LVG will follow UNDP's Policy on Low Value Grants (Total cost: \$1,817,000 during years 1 to 4) LVGs to implement conservation, restoration and hydrological rehabilitation interventions in watersheds and marine-coastal zones in three priority landscapes, the use of LVG will follow UNDP's Policy on Low Value Grants (Total cost: \$1,700,000 during years 1 to 4)
37	Audio visual and print production cost related to reporting on the results of community and citizen science monitoring of biodiversity and water quality in watersheds and marine-coastal areas (Total cost: \$31,500; \$10,500/year during years 3 to 5)

38	Participatory workshops and meetings to identify sites in each target landscape to implement BMPs and NbS to reduce water pollution and marine hypoxia at the municipal level (Total cost: \$7,500; \$3,750/year during years 1 and 2) Participatory workshops and meetings for monitoring and evaluating the impacts of BMPs and NbS at the municipal level (Total cost: \$11,250; \$3,750/year during years 3 to 5) Participatory workshops and meetings to identify sites in each target landscape to implement BMPs and NbS to reduce water pollution and marine hypoxia at the local level (Total cost: \$7,500; \$3,750/year during years 1 and 2) Participatory workshops and meetings for monitoring and evaluating the impacts of BMPs and NbS at the rural community level (Total cost: \$11,250; \$3,750/year during years 3 to 5) Workshops and meetings to identify sites and to support the design of conservation, restoration, and hydrological rehabilitation actions in watersheds and marine-coastal areas within the three target landscapes (Total cost: \$13,500; \$4,500/year during years 1 to 3) Workshops and meetings related to the design a community and citizen science-based monitoring plan of biodiversity and water quality in watersheds and marine-coastal areas (Total cost: \$15,000 during years 1 and 2) Training workshops for three community monitoring teams/brigades (Total cost: \$30,000; \$10,000/team during year 2) Workshops and meetings to assess the results of a community and citizen science-based monitoring plan of biodiversity and water quality in watersheds and marine-coastal areas (Total cost: \$22,500; \$7,500/year during years 3 to 5)
Component 4: Ensuring that knowledge management and learning, communication, gender and stakeholder engagement are integrated across the IP, including programmatic coordination and reporting	
39	International Safeguards Expert to develop the ESMP, IPP and other plans as needed (Total cost: \$84,000; \$700 daily rate x 120 days; year 1)
40	Knowledge Management Expert for the independent review and synthesis of the results and learning for the reduction of nutrient pollution and marine hypoxia in policy briefs and to prepare a conceptual proposal and roadmap for the (gradual) application of the best practices, including a cost benefit analysis (Total cost: \$20,000 during years 3 and 5) National Safeguards Expert to locally support the development of the ESMP, IPP and other plans (Total cost: \$48,000; \$400 daily rate x 120 days; year 1)
41	Knowledge Management and Capacity Building Specialist (37.5%) (Total cost: \$74,250; \$14,850/year over 5 years) Field Officer (3, one per target landscape) to support the documentation, management and sharing of knowledge for the reduction of nutrient pollution and marine hypoxia and of innovative solutions (Total cost: \$122,732; for 3 persons over 5 years) Social and Environmental Safeguards Specialist to implement all safeguards plans, as appropriate (ESMP/IPP; Gender Action Plan; Comprehensive Stakeholder Engagement Plan, etc.) (Total cost: \$98,875; \$19,775/year over 5 years) Indigenous Peoples Expert to support FPIC and the implementation of the IPP and project activities with IPs (Total cost: \$197,750; \$39,550/year over 5 years)
42	Travel costs for the participation in pairing, learning trips, and other exchanges facilitated by the GCP to foster south-south and north-south knowledge sharing across the CHO regions (Total cost: \$50,000; \$10,000/year over 5 years) Travel costs related to the documentation, management, and sharing of lessons learned and project results in the three target landscapes (Total cost: \$12,000 during years 2 to 5) Travel costs related to project's communication and outreach activities (Total cost: \$20,000 during years 1 to 5) Travel expenses and DSA related to the development of social and environmental safeguard assessments and plans (Total cost: \$10,000; year 1) Travel expenses related to the implementation of SES-related management plans (Total cost: \$10,000; \$2,000/year over 5 years)
43	Audio visual equipment in support of project knowledge management regarding nutrient pollution and marine hypoxia and innovative solutions (Total cost: \$20,000 during years 1 and 3) Audio visual equipment to support the project's communication and outreach activities (Total cost: \$20,000 during years 1 and 3)

44	Audio visual and publication costs regarding the reduction of nutrient pollution and marine hypoxia and innovative solutions, including contributions to IW:LEARN, the CHOP IP, and the Clean and Healthy Ocean Knowledge Atlas, among others (Total cost: \$60,000; \$15,000/year during years 2 to 5) Publication costs of project communication products regarding the reduction of nutrient pollution and marine hypoxia and innovative solutions, including to contribute to IP-level communications (Total cost: \$25,000 during years 1 to 5) Audio visual and printing materials related to social and environmental safeguards assessments and implementation Total cost: (\$25,000; \$5,000/year over 5 years)
45	Workshops and meeting for the documentation and sharing of knowledge regarding the reduction of nutrient pollution and marine hypoxia and innovative solutions in the three target landscapes (Total cost: \$20,000 during years 2 to 5) Workshops and meetings related to project's communication and outreach activities (Total cost: \$12,500 during years 1 to 5) Workshops (6) for training the PMU and institutional partners on environmental and social safeguards as per UNDP standards (Total cost: \$15,000; \$2,500/workshop; years 1 and 3) Workshops for SES-related public consultations and to ensure stakeholder engagement (Total cost: \$25,000, \$5,000/year over 5 years) Workshops (4) on gender mainstreaming for project partners (Total cost: \$11,840; \$2,960/workshop; years 1 and 3) Workshops/meetings (4) for the grievance mechanism socialization and training (Total cost: \$10,000; \$2,500/workshop; years 1 and 3)
46	Knowledge Management and Capacity Building Specialist (12.5%) to support programmatic coordination, coherence, and reporting (Total cost: \$24,750; \$4,950/year over 5 years)
47	Travel costs for one person to participate in the Program Coordination Committee in coordination with the GCP (Total cost: \$15,000; \$3,000/year over 5 years) Travel costs for one person to participate in the CHO Annual Stocktaking Meetings (Total cost: \$15,000; \$3,000/year over 5 years)
Monitoring and Evaluation	
48	International consultant for Mid-Term Review (Total cost: \$20,000 during year 3) International consultant for Terminal Evaluation (Total cost: \$18,000 during year 5)
49	National consultant for Mid-Term Review (Total cost: \$11,000 during year 3) National consultant for Terminal Evaluation (Total cost: \$8,000 during year 5)
50	Travel expenses for Mid-Term Review (Total cost: \$4,000 during year 3) Travel expenses for Terminal Evaluation (Total cost: \$3,000 during year 5)
51	Mid-Term Review workshop (Total cost: \$3,760 during year 3) Terminal Evaluation workshop (Total cost: \$2,570 during year 5)
52	M&E Officer for monitoring of GEF core indicators, transformational indicators, GBF targets, the PRF, ESMP/IPP, Gender Action Plan, Comprehensive Stakeholder Engagement Plan, other related plans as needed, as well as mandatory reports production - i.e., PIRs (Total cost: \$165,725; \$33,145/year over 5 years)
53	Travel expenses related to the monitoring of GEF core indicators and the PRF, and social and environmental safeguards (Total cost: \$22,150; \$4,430/year for 5 years)
54	Project Inception Workshop (Total cost: \$11,000 during year 1)
PMC	
55	Technical Coordinator and Project Manager will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors (Total cost: \$101,675; \$20,335/year over 5 years) Operations Officer - review project expenditures and ensure that project funds are used in compliance with the Project Document and UNDP/GEF financial rules and procedures; keep records of project funds and expenditures and develop financial progress reports (Total cost: \$197,750; \$39,550/year over 5 years) Project Administrator- Assist the Technical Coordinator and Project Manager in day-to-day management and oversight of project activities; provide PMU-related administrative and logistical assistance (Total cost: \$236,750; \$47,350/year over 5 years)
56	Travel cost associated to project technical and financial management (Total cost: \$23,825; \$4,765/year over 5 years)

57	Office furniture (Total cost: \$5,000; years 1 and 3)
58	Communication equipment and communication charges (phone, internet, etc.) (Total cost: \$36,000; Communication equipment: \$8,000, years 1 and 3, Communication charges: \$250/month during 60 months over 5 years; Computer and software (6): \$12,000, \$2,000/unit, years 1 and 3; Printer (2): \$1,000; \$500/unit, years 1 and 3)
59	Office and IT Supplies and Consumables (Total cost: \$7,500; \$1,500/year over 5 years)
60	Project audits (Total cost: \$32,500; \$6,500/year over 5 years)

LEGAL CONTEXT

179. This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Mexico and UNDP, signed on 23 February 1961. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.”

180. This project will be implemented by the Ministry of Agriculture and Rural Development (SADER) (“Implementing Partner”) in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

RISK MANAGEMENT

1. Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, 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. To this end, the Implementing Partner shall:
 - i. Put in 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;
 - ii. Assume all risks and liabilities related to the Implementing Partner’s security, and the full implementation of the security plan.
2. 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 hereunder shall be deemed a breach of the Implementing Partner’s obligations under this Project Document.
3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no 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 hereunder do not appear on the United Nations Security Council Consolidated Sanctions List, and that no UNDP funds received pursuant to the Project Document are used for money laundering activities. The United Nations Security Council Consolidated Sanctions List can be accessed via <https://www.un.org/securitycouncil/content/un-sc-consolidated-list>.
4. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.
 - (a) In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General’s Bulletin ST/SGB/2003/13 of 9 October 2003, concerning “Special measures for protection from sexual exploitation and sexual abuse” (“SEA”).
 - (b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment (“SH”). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment. SH may occur in the workplace or in connection with work. While typically involving a pattern of conduct, SH may take the form of a single incident. In assessing the reasonableness of expectations or perceptions, the perspective of the person who is the target of the conduct shall be considered.
5. a) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities) and shall require from its sub-parties referred to in paragraph 4 (with respect to their activities) that they have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to

take effective preventive and investigative action. These should include policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will require that such sub-parties take all appropriate measures to:

Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;

- i. Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4 have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP;
 - ii. Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof;
 - iii. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and
 - iv. Promptly and confidentially, record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.
- b) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.
6. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism (<http://www.undp.org/secu-srm>).
 7. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.
 8. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.
 9. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds.
 10. In the implementation of the activities under this Project Document, UNDP places reasonable reliance upon the Implementing Partner for it to apply its laws, regulations and processes, and applicable international laws regarding anti money laundering and countering the financing of terrorism, to ensure consistency with the principles of then in force the UNDP Anti-Money Laundering and Countering the Financing of Terrorism Policy.
 11. The Implementing Partner will ensure that its financial management, anti-corruption, anti-fraud and anti-money laundering and countering the financing of terrorism policies are in place and enforced for all funding received from or through UNDP.
 12. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations

Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

13. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes in accordance with UNDP's regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.
14. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

15. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud, corruption or other financial irregularity, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document.

Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud, corruption or other financial irregularity, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

16. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.
17. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.
18. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, mutatis mutandis, in all sub-contracts or sub-agreements entered into further to this Project Document.

Mandatory Annexes

1. GEF Budget Template (available from BPPS NCE team)
2. GEF Execution Support Letter
3. Project Map and geospatial coordinates of the project area
4. Multiyear Workplan
5. Social and Environmental Screening Procedure (SESP), or justification of SESP exemption
6. UNDP Risk Register
7. Overview of technical consultancies/subcontracts
8. Stakeholder Engagement Plan
9. Environmental Social Management Framework (ESMF)
10. Gender Analysis and Gender Action Plan
11. Procurement Plan – for first year of implementation
12. GEF Focal Area Specific Annexes: Target Landscape Profiles, and GHG Calculations
13. Additional agreements: letters of financial commitments
14. Signed LOA between UNDP and IP requesting UNDP Support Services (if required on exceptional basis and authorized by the GEF)
15. GEF CEO Endorsement/Approval
16. On-Granting Provisions Applicable to the Implementing Partner (N/A)
17. Terms of Reference for Project Board and Project Team
18. GEF Core indicators
19. GEF Taxonomy (see template below)
20. Results of the [Partners Capacity Assessment Tool \(PCAT\)](#) and [HACT Micro Assessment](#)
21. UNDP Project Quality Assurance Report (to be completed in UNDP online corporate planning system)

Annex 1: GEF Budget Template

Expenditure Category	Detailed Description	Component (USDeq.)							Total (USDeq.)	Responsible Entity
		Component 1	Component 2	Component 3	Component 4	Sub-Total	M&E	PMC		(Executing Entity receiving funds from the GEF Agency)[1]
Equipment	Audio visual equipment in support of project knowledge management regarding nutrient pollution and marine hypoxia and innovative solutions (Total cost: \$20,000 during years 1 and 3) Audio visual equipment to support the project's communication and outreach activities (Total cost: \$20,000 during years 1 and 3)				40,000	40,000			40,000	NAFIN
Equipment	Communication equipment and communication charges (phone, internet, etc.) (Total cost: \$36,000; Communication equipment: \$8,000, years 1 and 3, Communication charges: \$250/month during 60 months over 5 years; Computer and software (6): \$12,000, \$2,000/unit, years 1 and 3; Printer (2): \$1,000; \$500/unit, years 1 and 3)					-		36,000	36,000	NAFIN
Equipment	Communication, audiovisual, and computer equipment and software to strengthen existing inclusive multi-stakeholder governance structures and mechanisms (Total cost: \$30,000; \$15,000/year during years 2 and 3)		30,000			30,000			30,000	NAFIN
Equipment	Computer equipment and software for the systematization and analysis of information related to the monitoring of biodiversity and water quality in watersheds and marine-coastal areas (Total cost: \$45,000 during years 1 and 3)			45,000		45,000			45,000	NAFIN
Equipment	Computer equipment and software related to the development and operationalization of the information and analysis system based on a web platform (explorer) for water quality data management and decision-making (Total cost: \$20,000 during years 1 and 3)	20,000				20,000			20,000	NAFIN
Equipment	Field equipment (test kits, meters, sensors, buoys, camera traps, binoculars, etc.) for the participatory monitoring of water quality and biodiversity (Total cost: \$100,000; \$75,000 year 1 and \$25,000 year 3)			100,000		100,000			100,000	NAFIN

Equipment	Field equipment (test kits, meters, sensors, buoys, etc.) for the participatory monitoring of water quality from source-to-sea (Total cost: \$200,000; \$150,000 year 1 and \$50,000 year 3)	200,000				200,000			200,000	NAFIN
Equipment	Office furniture (Total cost: \$5,000; years 1 and 3)					-		5,000	5,000	NAFIN
Grants	LVG to implement projects with local organizations, indigenous peoples and OSSEs for the adoption of best practices and NbS, the use of LVG will follow UNDP 's Policy on Low Value Grants (Total cost: \$1,817,000 during years 1 to 4) LVGs to implement conservation, restoration and hydrological rehabilitation interventions in watersheds and marine-coastal zones in three priority landscapes, the use of LVG will follow UNDP 's Policy on Low Value Grants (Total cost: \$1,700,000 during years 1 to 4)			3,517,000		3,517,000			3,517,000	NAFIN
Contractual services-Individual	Technical Coordinator and Project Manager	188,825				188,825		101,675	290,500	NAFIN
Contractual services-Individual	Operations Officer					-		197,750	197,750	NAFIN
Contractual services-Individual	Project Administrator					-		236,750	236,750	NAFIN
Contractual services-Individual	Governance and Public Policy Specialist		198,000			198,000			198,000	NAFIN
Contractual services-Individual	Field Officers (3 persons)	122,738	122,738	122,741	122,732	490,949			490,949	NAFIN
Contractual services-Individual	Knowledge Management and Capacity Building Specialist			99,000	99,000	198,000			198,000	NAFIN
Contractual services-Individual	Social and Environmental Safeguards Specialist				98,875	98,875			98,875	NAFIN
Contractual services-Individual	Indigenous Peoples Expert to support FPIC and the implementation of the IPP and project activities with Ips				197,750	197,750			197,750	NAFIN
Contractual services-Individual	M&E Officer					-	165,725		165,725	NAFIN
Contractual services-Individual	Sustainable Financing Specialist		99,000	99,000		198,000			198,000	NAFIN

Contractual services-Individual	Field assistant to support the implementation of the participatory community and citizen science monitoring plan			71,025		71,025			71,025	NAFIN
Contractual services-Company	Firm to develop an information and analysis system based on a web platform (explorer) for water quality data management and decision-making (Total cost: \$150,000; \$75,000/year during years 1 and 2) Firm to design and implement awareness campaigns related to integrated watershed management and pollution and hypoxia reduction in three target landscapes, including establishing the awareness baseline, identifying target audiences, and assessing the impact of the campaigns using KAP indicators (Total cost: \$310,000 during years 1 to 3)	460,000				460,000			460,000	NAFIN
Contractual services-Company	Firms to design and implement inclusive pilot and demonstrative cases of best practices and NbS for the reduction of water pollution and marine hypoxia in selected municipalities in three target landscapes (Total cost: \$3,000,000 during years 2 to 5). Firms (e.g., technological institutes, local schools, and universities) to provide technical advice and support during the implementation of pilot projects and demonstrative cases that apply good practices and NbS at the local level (Total cost: \$120,000 during years 2 to 4)			3,120,000		3,120,000			3,120,000	NAFIN
Contractual services-Company	Firms to implement an inclusive technical and financial capacity-development program to reduce land-based water pollution and marine hypoxia, including designing training materials, developing a capacity-building curriculum, and delivering training (Total cost: \$360,000 during years 1 to 3). Firms (e.g., technological institutes and universities) to provide technical and financial advice to beneficiary OSSEs and municipal governments (Total cost: \$240,000 during years 2 to 4).			600,000		600,000			600,000	NAFIN
International Consultants	International consultant for Mid-Term Review (Total cost: \$20,000 during year 3) International consultant for Terminal Evaluation (Total cost: \$18,000 during year 5)					-	38,000		38,000	UNDP
International Consultants	International Safeguards Expert to develop the ESIA associated with “upstream” activities of the project involving regulatory and legislative amendments, and other related plans as needed (\$21,000; \$700 daily rate x 30 days during years 2 and 3)		21,000			21,000			21,000	NAFIN
International Consultants	International Safeguards Expert to develop the ESMP, IPP and other plans as needed (Total cost: \$84,000; \$700 daily rate x 120 days; year 1)				84,000	84,000			84,000	NAFIN

Local Consultants	Data Management Expert (50%) to systematize, analyze, and share water quality data for three target landscapes (Total cost: \$95,000; \$19,000/year over 5 years). Water Quality Monitoring Expert to train local teams (one in each target landscape) and staff from key institutions for the participatory monitoring of water quality from source-to-sea (Total cost: \$24,000; \$12,000/year during years 1 and 2). Data Management Expert (50%) to operate the information and analysis system based on a web platform (explorer) for water quality data management and decision-making, and share data with AI, FAO, and IOC (Total cost: \$95,000; \$19,000/year over 5 years)	214,000				214,000			214,000	NAFIN
Local Consultants	Knowledge Management Expert for the independent review and synthesis of the results and learning for the reduction of nutrient pollution and marine hypoxia in policy briefs and to prepare a conceptual proposal and roadmap for the (gradual) application of the best practices, including a cost benefit analysis (Total cost: \$20,000 during years 3 and 5) National Safeguards Expert to locally support the development of the ESMP, IPP and other plans (Total cost: \$48,000; \$400 daily rate x 120 days; year 1)				68,000	68,000			68,000	NAFIN
Local Consultants	Legal expert to support developing and or updating regulatory land and/or marine management, and integrated watershed management instruments to include objectives for the reduction of water pollution through NbS (Total cost: \$48,000; \$12,000/year during years 1 to 4). National Safeguards Expert to support the development of the ESIA associated with “upstream” activities of the project involving regulatory and legislative amendments, and other related plans as needed (\$12,000; \$400 daily rate x 30 days during years 2 and 3)		60,000			60,000			60,000	NAFIN
Local Consultants	National consultant for Mid-Term Review (Total cost: \$11,000 during year 3) National consultant for Terminal Evaluation (Total cost: \$8,000 during year 5)					-	19,000		19,000	UNDP

Local Consultants	NbS Expert to conduct a municipal government-level gender-sensitive assessment of BMPs with different scenarios and expert advice to select the most appropriate BMPs based on internationally recognized data, tools, codes of conduct and guidelines; and to design a protocol for monitoring and evaluating the effects of BMPs and NbS (Total cost: \$36,000; \$4,000/months for 9 months during years 1 and 2). NbS Expert to conduct a gender-sensitive assessment of BMPs at the community or local level with different scenarios and expert advice to select the most appropriate BMPs based on internationally recognized data, tools, codes of conduct and guidelines; and to design a protocol for monitoring and evaluating the effects of BMPs and NbS (Total cost: \$36,000; \$4,000/months for 9 months during years 1 and 2). Biodiversity Conservation Expert to identify priority sites for conservation actions in the watersheds and marine-coastal zones within the three priority landscapes, and to provide technical support during implementation (Total cost: \$96,000; \$4,000/month for 24 months over 5 years). Restoration Expert to identify priority sites for restoration and hydrological rehabilitation in the watersheds and marine-coastal zones within the three priority landscapes and to provide technical support during implementation, including assessing the project's climate change mitigation benefits bi-annually, at mid-point and end of project using FAO's Ex-ACT tool (Total cost: \$96,000; \$4,000/month for 24 months over 5 years). Biodiversity Monitoring Expert to design the biodiversity component of a community and citizen science-based monitoring plan in watersheds and marine-coastal areas (Total cost: \$24,000; \$4,000/month for 6 months during years 1 and 2). Water Quality Monitoring Expert to design the water quality component of a community and citizen science-based monitoring plan in watersheds and marine-coastal areas (Total cost: \$24,000; \$4,000/month for 6 months during years 1 and 2).			312,000		312,000			312,000	NAFIN
Local Consultants	NbS Expert to develop a catalog of BMPs and NbS to reduce land-based nutrient pollution and marine hypoxia (Total cost: \$12,000; \$4,000/months for 3 months during year 2)			12,000		12,000			12,000	NAFIN
Local Consultants	WWTP Expert to conduct the inventory of WWTPs and other wastewater treatment solutions and to assess their current status and propose alternative and innovative treatment solutions adapted to local conditions and needs (Total cost: \$32,000; \$4,000/month, 8 months during years 1 and 2). NbS Expert to identify and prioritize the NbS that could be incorporated in the operational rules and guidelines of public		48,000			48,000			48,000	NAFIN

	budgetary programs (Total cost: \$16,000; \$4,000/month, 4 months during year 2).									
Training, Workshops, Meetings	Mid-Term Review workshop (Total cost: \$3,760 during year 3) Terminal Evaluation workshop (Total cost: \$2,570 during year 5)					-	6,330		6,330	UNDP
Training, Workshops, Meetings	Participatory workshops and meetings to identify sites in each target landscape to implement BMPs and NbS to reduce water pollution and marine hypoxia at the municipal level (Total cost: \$7,500; \$3,750/year during years 1 and 2) Participatory workshops and meetings for monitoring and evaluating the impacts of BMPs and NbS at the municipal level (Total cost: \$11,250; \$3,750/year during years 3 to 5) Participatory workshops and meetings to identify sites in each target landscape to implement BMPs and NbS to reduce water pollution and marine hypoxia a the local level (Total cost: \$7,500; \$3,750/year during years 1 and 2) Participatory workshops and meetings for monitoring and evaluating the impacts of BMPs and NbS at the rural community level (Total cost: \$11,250; \$3,750/year during years 3 to 5) Workshops and meetings to identify sites and to support the design of conservation, restoration, and hydrological rehabilitation actions in watersheds and marine-coastal areas within the three target landscapes (Total cost: \$13,500; \$4,500/year during years 1 to 3) Workshops and meetings related to the design a community and citizen science-based monitoring plan of biodiversity and water quality in watersheds and marine-coastal areas (Total cost: \$15,000 during years 1 and 2) Training workshops for three community monitoring teams/brigades (Total cost: \$30,000; \$10,000/team during year 2) Workshops and meetings to assess the results of a community and citizen science-based monitoring plan of biodiversity and water qulaity in watersheds and marine-coastal areas (Total cost: \$22,500; \$7,500/year during years 3 to 5)			118,500		118,500		118,500	NAFIN	

Training, Workshops, Meetings	Participatory workshops for conducting an assessment of BMPs and NbS to reduce land-based water pollution and marine hypoxia (Total cost: \$11,000 during years 1 and 2). Participatory workshops to assess training needs and develop culturally appropriate techniques and mechanisms for training various stakeholders (Total cost: \$12,000 during years 1 and 2). Participatory workshops to evaluate the impact of the capacity-building program (Total cost: \$7,500 during year 4). Workshops and meetings to develop business plans and/or models, ideation tools, and local organizational manuals tailored to the needs of key stakeholders (Total cost: \$22,500; \$7,500/year during years 2 to 4)			53,000		53,000			53,000	NAFIN
Training, Workshops, Meetings	Project Inception Workshop (Total cost: \$11,000 during year 1)					-	11,000		11,000	NAFIN
Training, Workshops, Meetings	Training of local teams (one in each target landscape) and staff from key institutions for the participatory monitoring of water quality from source-to-sea (Total cost: \$30,000; \$15,000/year during years 1 and 2). Meetings to establish inter-institutional agreements to share data for the integration of an information system (Total cost: \$5,000 during years 1 and 2). Meetings to establish a research and development group to evaluate the existing indices and define indicators and implement them in the information and analysis system (Total cost: \$5,000 during years 1 and 2) Meetings and workshops for identifying gender gaps and assessing how women and men are likely to be affected by and benefit from project activities (Total cost: \$5,000; 2,500/year during years 1 and 2). Training of both women and men as local promoters (community, teachers, etc.), including the indigenous population, to ensure the sustainability of the awareness campaigns (Total cost: \$20,000; 10,000/year during years 2 and 3). Leadership meetings or events for women 's organizations to share their knowledge, experience and learn from others regarding integrated watershed management and pollution and hypoxia reduction (Total cost: \$30,000; 10,000/year during years 2 to 4)	95,000				95,000			95,000	NAFIN

Training, Workshops, Meetings	Workshops and meeting for the documentation and sharing of knowledge regarding the reduction of nutrient pollution and marine hypoxia and innovative solutions in the three target landscapes (Total cost: \$20,000 during years 2 to 5) Workshops and meetings related to project's communication and outreach activities (Total cost: \$12,500 during years 1 to 5) Workshops (6) for training the PMU and institutional partners on environmental and social safeguards as per UNDP standards (Total cost: \$15,000; \$2,500/workshop; years 1 and 3) Workshops for SES-related public consultations and to ensure stakeholder engagement (Total cost: \$25,000, \$5,000/year over 5 years) Workshops (4) on gender mainstreaming for project partners (Total cost: \$11,840; \$2,960/workshop; years 1 and 3) Workshops/meetings (4) for the grievance mechanism socialization and training (Total cost: \$10,000; \$2,500/workshop; years 1 and 3)				94,340	94,340			94,340	NAFIN
Training, Workshops, Meetings	Workshops and meetings for developing guidelines for sustainable and inclusive financing and reducing water pollution in the three target landscapes, including structuring a portfolio of inclusive projects (Total cost: \$27,000 over years 1 to 3). Workshops and meetings related to making available to key stakeholders inclusive mixed-financing and investment instruments for sustainable water pollution reduction, including technical assistance to help facilitate access to long-term financing (Total cost: \$24,000 during years 1 to 4). Workshops and meetings related to investment feasibility assessment for rehabilitating WWTPs and other effective technologies to reduce water pollution (Total cost: \$12,000 during years 1 and 2). Workshops and meetings related to identifying and prioritizing NbS that could be incorporated in the operational rules and guidelines of public budgetary programs (Total cost: \$10,000 during year 2)		73,000			73,000			73,000	NAFIN
Training, Workshops, Meetings	Workshops and meetings to assess existing governance structures' needs (Total cost: \$15,000; \$7,500/year during years 1 and 2). Workshops and meetings to support establishing and/or strengthening the identified multi-stakeholder governance structures and mechanisms, including their action plans (Total cost: \$30,000; \$7,500/year during years 2 to 5). Workshops and meetings associated to developing and or updating planning, regulatory, land and/or marine management, and integrated watershed management instruments to include objectives for the reduction of water pollution through NbS (Total cost: \$48,000 over years 1 to 4)		93,000			93,000			93,000	NAFIN

Travel	Travel cost associated to project technical and financial management (Total cost: \$23,825; \$4,765/year over 5 years)					-		23,825	23,825	NAFIN
Travel	Travel cost associated to strengthening of existing inclusive multi-stakeholder governance structures and mechanisms (Total cost: \$37,500; \$7,500/year over 5 years) Travel cost associated to developing and or updating planning, regulatory, land and/or marine management, and integrated watershed management instruments to include objectives for the reduction of water pollution through NbS (Total cost: \$18,000 during years 1 to 4) Travel costs associated with the development of the ESIA and other related plans as needed (Total cost: \$2,500 during year 2)		58,000			58,000			58,000	NAFIN
Travel	Travel cost related to developing guidelines for sustainable and inclusive financing and reducing water pollution in the three target landscapes (Total cost: \$13,500 over years 1 to 3) Travel cost related to making available to key stakeholders inclusive mixed-financing and investment instruments for sustainable water pollution reduction (Total cost: \$12,000 during years 1 to 4) Travel costs related to the investment feasibility assessment for rehabilitating WWTPs and other effective technologies to reduce water pollution (Total cost: \$9,000 during years 1 and 2) Travel costs related to identifying and prioritizing NbS that could be incorporated in the operational rules and guidelines of public budgetary programs (Total cost: \$4,500 during year 2)		39,000			39,000			39,000	NAFIN
Travel	Travel costs for one person to participate in the Program Coordination Committee in coordination with the GCP (Total cost: \$15,000; \$3,000/year over 5 years) Travel costs for one person to participate in the CHO Annual Stocktaking Meetings (Total cost: \$15,000; \$3,000/year over 5 years)				30,000	30,000			30,000	NAFIN
Travel	Travel costs for the participation in pairing, learning trips, and other exchanges facilitated by the GCP to foster south-south and north-south knowledge sharing across the CHO regions (Total cost: \$50,000; \$10,000/year over 5 years) Travel costs related to the documentation, management, and sharing of lessons learned and project results in the three target landscapes (Total cost: \$12,000 during years 2 to 5) Travel costs related to project's communication and outreach activities (Total cost: \$20,000 during years 1 to 5) Travel expenses and DSA related to the development of social and environmental safeguard assessments and plans (Total cost: \$10,000; year 1)				102,000	102,000			102,000	NAFIN

	Travel expenses related to the implementation of SES-related management plans (Total cost: \$10,000; \$2,000/year over 5 years)								
Travel	Travel costs related to conducting a municipal-level gender-sensitive assessment of BMPs with different scenarios and expert advice (Total cost: \$9,000 during years 1 and 2) Travel costs related to providing financial advise and technical support to municipal projects for the adoption of best practices and NbS for the reduction of water pollution and marine hypoxia (Total cost: \$22,500 over 5 years) Travel cost related to monitoring and evaluating the impacts of BMPs and NbS (Total cost: \$9,000; \$3,000/year during years 3 to 5) Travel costs related to conducting a gender-sensitive assessment of BMPs at the community or local level (Total cost: \$9,000 during years 1 and 2) Travel costs related to providing financial advise and technical support to community or local level projects for the adoption of best practices and NbS for the reduction of water pollution and marine hypoxia (Total cost: \$22,500 over 5 years) Travel costs related to monitoring and evaluating the impacts of BMPs and NbS at the local level (Total cost: \$9,000; \$3,000/year during years 3 to 5) Travel cost related to exchanging experiences and lessons learned in the three landscapes and elsewhere in the country regarding the adoption of best practices and NbS for the reduction of water pollution and marine hypoxia (Total cost: \$22,500; \$7,500/year during years 3 to 5) Travel costs related to providing technical support for the implementation of conservation, restoration and hydrological rehabilitation actions in watersheds and marine-coastal zones in three target landscapes (Total cost: \$22,500 over 5 years) Travel cost related to the design and implementation of the participatory community and citizen science monitoring plan for biodiversity and water quality in watersheds and marine-coastal areas (Total cost: \$45,000 over 5 years) Travel costs to support demonstration of BMPs and investments that showcase innovative solutions to reduce marine hypoxia (Total cost: \$140,000; \$28,000/year over 5 years)			311,000		311,000		311,000	NAFIN

Travel	Travel costs related to participation in technical training workshops on “Nutrient Mitigation Opportunities” led by the INMS (Total cost: \$36,000; \$3,000/workshop-person for three persons, one per target landscape, during years 1 to 4) Travel costs related to assessing the impact of the capacity-building program (Total cost: \$4,500 during year 4) Travel related to the development of business plans and/or models, ideation tools, and local organizational manuals tailored to the needs of key stakeholders (Total cost: \$13,500; \$4,500/year during years 2 to 4) Travel costs for one person to participate in a workshop to design the learning priorities, governance structure, and workplan of thematic CoPs (Total cost: \$3,000 during year 1) Travel costs for one person to participate in the CoP annual workshop (Total cost: \$15,000; \$3,000/year over 5 years) Travel costs for one person to participate in the end of project workshop to design the sustainability strategy and continuation of thematic CoPs (Total cost: \$3,000 during year 5)			75,000		75,000			75,000	NAFIN
Travel	Travel expenses for Mid-Term Review (Total cost: \$4,000 during year 3) Travel expenses for Terminal Evaluation (Total cost: \$3,000 during year 5)					-	7,000		7,000	UNDP
Travel	Travel expenses for the identification of pollution sources and associated infrastructure in three target landscapes (Total cost: \$18,000; \$3,000/year-landscape during years 1 and 2) Travel expenses for training and the participatory monitoring of water quality from source-to-sea (Total cost: \$45,000; \$9,000/year during 5 years) Travel expenses for two experts to attend the summer schools organized by the GCP (Total cost: \$40,000; \$20,000/person-event during year 2) Travel expenses for two experts to participate in data management meetings (Paris, two workshops) 5 days per year to submit data to a national/ international repository compatible with GO2DAT (Total cost: \$30,000; \$3,000/meeting-each over 5 years) Travel expenses related to the development an information and analysis system for water quality data management and decision-making (Total cost: \$9,000; \$4,500/year during years 1 and 2)	142,000				142,000			142,000	NAFIN
Travel	Travel expenses related to the monitoring of GEF core indicators and the PRF, and social and environmental safeguards (Total cost: \$22,150; \$4,430/year for 5 years)					-	22,150		22,150	NAFIN
Office Supplies	Office and IT Supplies and Consumables (Total cost: \$7,500; \$1,500/year over 5 years)					-		7,500	7,500	NAFIN

Office Supplies	Office and IT supplies and consumables to support the strengthening of existing inclusive multi-stakeholder governance structures and mechanisms (Total cost: \$12,000; \$3,000/year during years 2 to 5)		12,000			12,000			12,000	NAFIN
Other Operating Costs	Audio visual and print production cost related to reporting on the results of community and citizen science monitoring of biodiversity and water quality in watersheds and marine-coastal areas (Total cost: \$31,500; \$10,500/year during years 3 to 5)			31,500		31,500			31,500	NAFIN
Other Operating Costs	Audio visual and publication costs regarding the reduction of nutrient pollution and marine hypoxia and innovative solutions, including contributions to IW:LEARN, the CHOP IP, and the Clean and Healthy Ocean Knowledge Atlas, among others (Total cost: \$60,000; \$15,000/year during years 2 to 5) Publication costs of project communication products regarding the reduction of nutrient pollution and marine hypoxia and innovative solutions, including to contribute to IP-level communications (Total cost: \$25,000 during years 1 to 5) Audio visual and printing materials related to social and environmental safeguards assessments and implementation Total cost: (\$25,000; \$5,000/year over 5 years)				110,000	110,000			110,000	NAFIN
Other Operating Costs	Material and goods (fuel, paper products, field/lab products, etc.) for the participatory monitoring of water quality from source-to-sea (Total cost: \$105,000; \$21,000/year for 5 years)	105,000				105,000			105,000	NAFIN
Other Operating Costs	Materials and goods (fuel, paper products, field/lab products, etc.) related to community and citizen science-based monitoring activities of biodiversity and water quality in watersheds and marine-coastal areas (Total cost: \$129,000, during years 1 to 5)			129,000		129,000			129,000	NAFIN
Other Operating Costs	Print production costs of the report on the inventory of water pollution sources and associated infrastructure for three target landscapes (Total cost: \$15,000 during year 2). Audiovisual and print production costs for sharing information generated by citizen science through the participatory community-based monitoring plan (Total cost: \$48,000; \$12,000/year during years 2 to 5). Production costs of materials for annual awareness raising campaign at the landscape level (Total cost: \$120,000; \$30,000/year during years 2 to 5)	183,000				183,000			183,000	NAFIN
Other Operating Costs	Printing and audiovisual production costs associated to developing and or updating planning, regulatory, land and/or marine management, and integrated watershed management instruments to include objectives for the reduction of water pollution through NbS (Total cost: \$36,000 over years 1 to 4)		36,000			36,000			36,000	NAFIN

Other Operating Costs	Printing and audiovisual production costs related to developing guidelines for sustainable and inclusive financing and reducing water pollution in the three target landscapes (Total cost: \$13,500 over years 1 to 3). Printing and production costs of results of the assessment for rehabilitating WWTPs and proposal of related-NbS to reduce water pollution (Total cost: \$10,000 during year 2)		23,500			23,500			23,500	NAFIN
Other Operating Costs	Printing costs of a catalog of BMPs and NbS to reduce land-based water pollution and marine hypoxia (Total cost: \$10,000 during year 2). Printing costs of a capacity-building curriculum on reducing land-based sources of nutrient pollution and marine hypoxia for various stakeholders and landscapes (Total cost: \$20,000 during year 2). Audio visual and print production costs related to the development of business plans and/or models, ideation tools, and local organizational manuals tailored to the needs of key stakeholders (Total cost: \$15,000; \$5,000/year during years 2 to 4)			45,000		45,000			45,000	NAFIN
Other Operating Costs	Project audits (Total cost: \$32,500; \$6,500/year over 5 years)					-		32,500	32,500	UNDP
Grand Total		1,730,563	913,238	8,860,766	1,046,697	12,551,264	269,205	641,000	13,461,469	

Annex 2: GEF Execution Support Letter

N/A

Annex 3: Project Map and Geospatial Coordinates of Project Sites

Please refer to Annex 12 for more detailed information on the three selected landscapes.

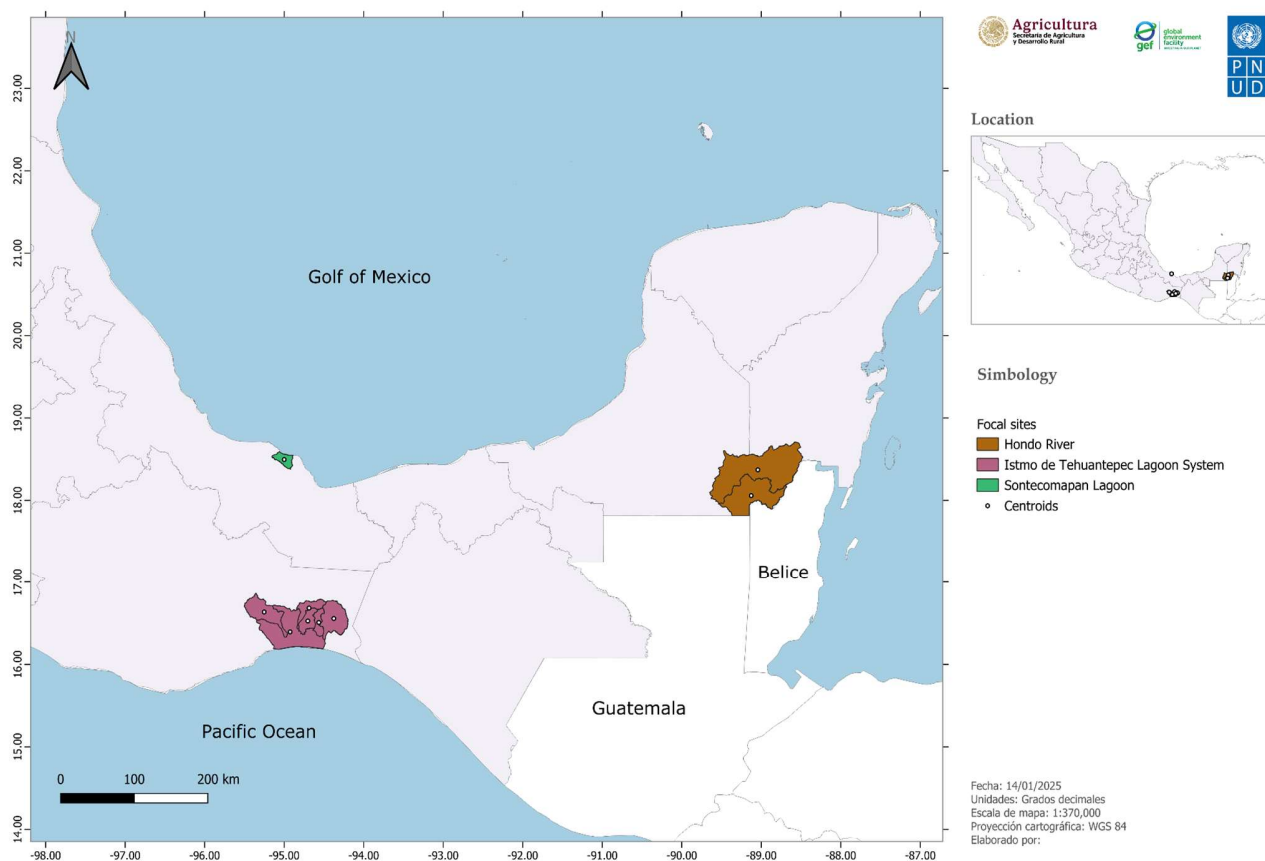


Figure 1. Selected landscapes for project implementation: Hondo Rive Basin, Isthmus of Tehuantepec Lagoon System, and Sontecompan Lagoon in Mexico. The map shows the sub-basins encompassed in each landscape.

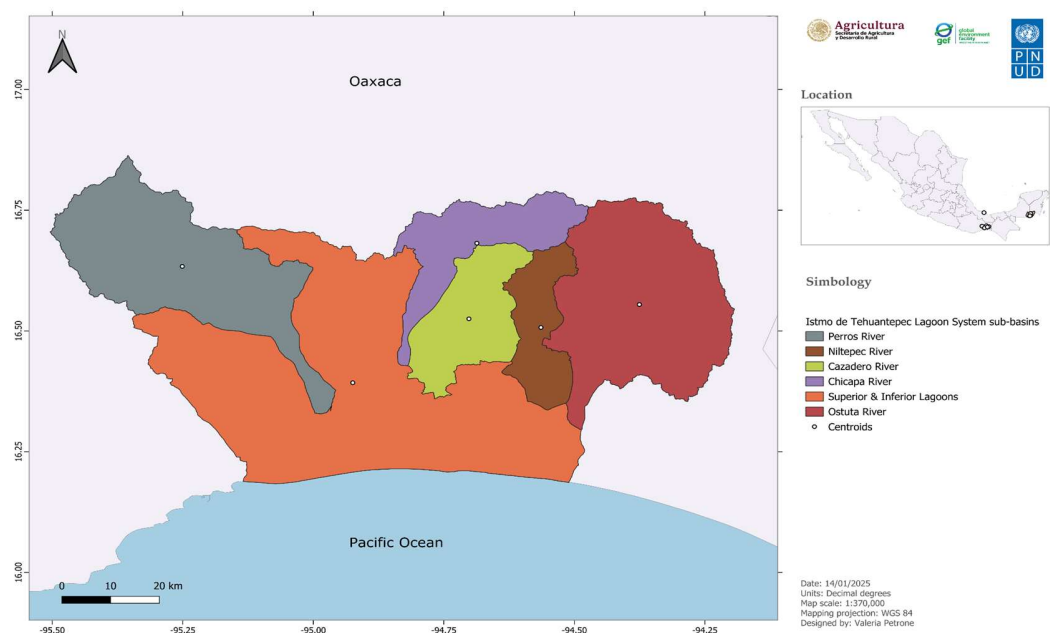


Figure 2. Isthmus of Tehuantepec Lagoon System in the state of Oaxaca, Mexico. The map shows the six sub-basins included in this landscape.

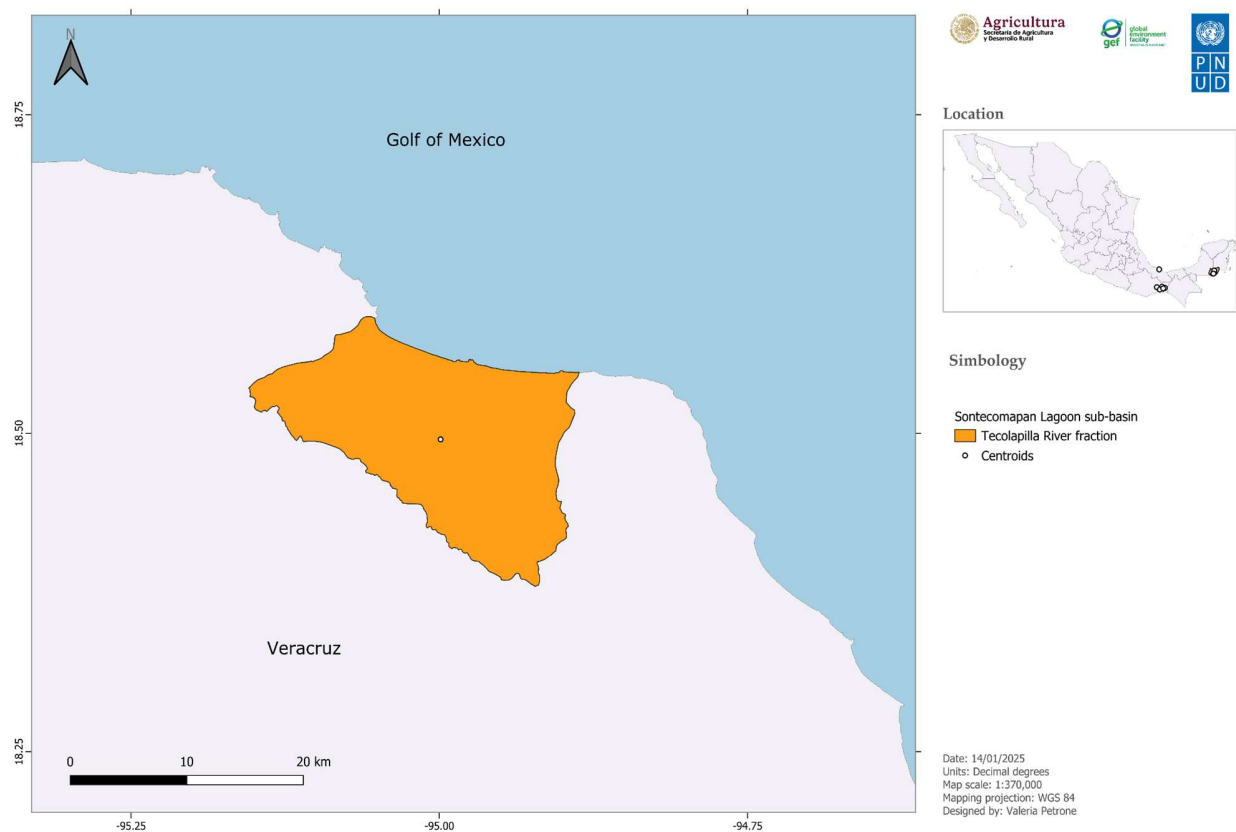


Figure 3. Sontecomapan Lagoon in the state of Veracruz, Mexico. The map shows part of the Tecolapilla River sub-basin, where the project will be implemented.

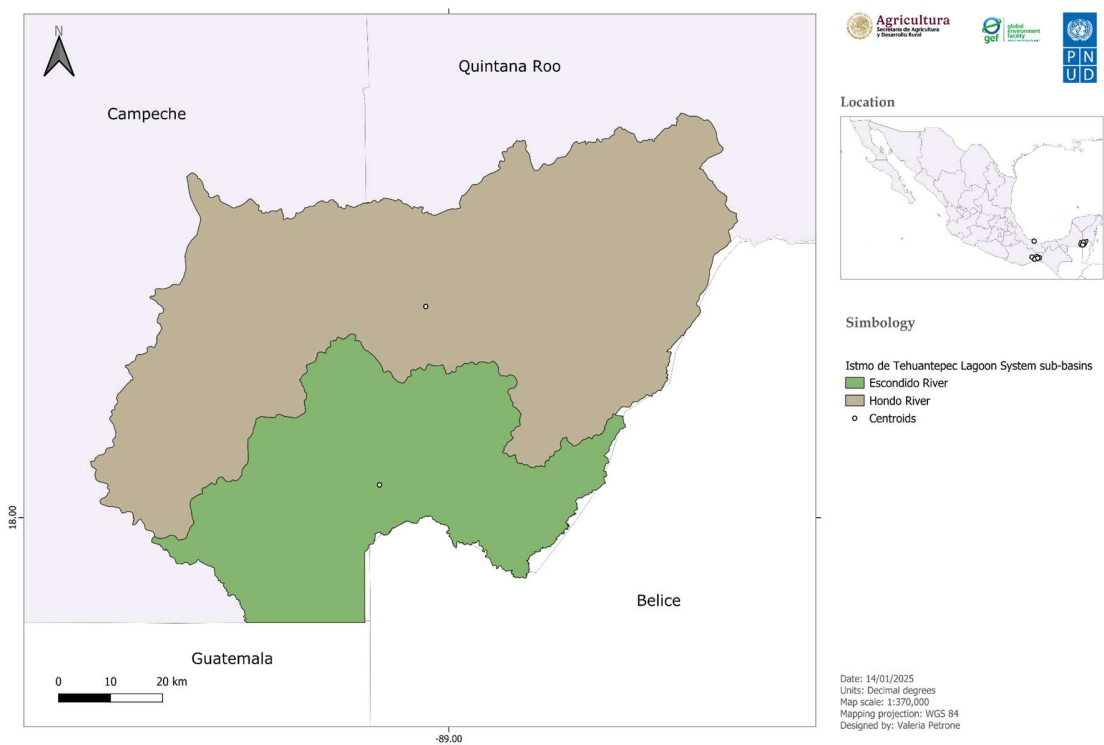


Figure 4. Hondo River Basin in the states of Campeche and Quintana Roo, Mexico. The map shows the two sub-basins included in this landscape.

Geo Name ID	Location name	Latitude	Longitude	Location Description
Tehuantepec_1_Perros	Perros River sub-basin	-95.2509	16.6337	Coordinates represent the centroid of the hydrological sub-basin “Río Perros”, included in the Isthmus of Tehuantepec Lagoon System Landscape.
Tehuantepec_2_Lagunas	Superior and inferior Lagoons sub-basin	-94.9243	16.3928	Coordinates represent the centroid of the hydrological sub-basin “Lagunas Superior e Inferior”, included in the Isthmus of Tehuantepec Lagoon System Landscape.
Tehuantepec_3_Chicapa	Chicapa River sub-basin	-94.6865	16.6818	Coordinates represent the centroid of the hydrological sub-basin “Río Chicapa”, included in the Isthmus of Tehuantepec Lagoon System Landscape.
Tehuantepec_4_Cazadero	Cazadero River sub-basin	-94.7017	16.5252	Coordinates represent the centroid of the hydrological sub-basin “Río Cazadero”, included in

Geo Name ID	Location name	Latitude	Longitude	Location Description
				the Isthmus of Tehuantepec Lagoon System Landscape.
Tehuantepec_5_Niltepec	Niltepec River sub-basin	-94.5638	16.5074	Coordinates represent the centroid of the hydrological sub-basin "Río Niltepec", included in the Isthmus of Tehuantepec Lagoon System Landscape.
Tehuantepec_6_Ostuta	Ostuta River sub-basin	-94.3752	16.5548	Coordinates represent the centroid of the hydrological sub-basin "Río Ostuta", included in the Isthmus of Tehuantepec Lagoon System Landscape.
Hondo_1_Hondo	Hondo River sub-basin	-89.0415	18.3707	Coordinates represent the centroid of the hydrological sub-basin "Río Hondo", included in the Hondo River Basin Landscape.
Hondo_2_Escodido	Escondido River sub-basin	-89.1252	18.0575	Coordinates represent the centroid of the hydrological sub-basin "Río Escondido", included in the Hondo River Basin Landscape.
Sontecomapan_1	Fraction of Tecolapilla River sub-basin	-89.1252	18.0575	Coordinates represent the centroid of the sub-basin "Río Tecolapilla" in the Sontecomapan Lagoon Landscape, where the project will be implemented.

Annex 4: Multi Year Work Plan

Component	Outcomes	Outputs	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Establishment of PMU																						
1. Improving the evidence base and raising awareness to more effectively address nutrient pollution and marine hypoxia	1.1. The quality, management, and availability of scientific and technical data required by decision-makers to address nutrient pollution and marine hypoxia are improved at the subnational and national levels, in particular, in three prioritized landscapes	1.1.1. Technical and participatory assessments of the status of water quality data from source-to-sea (water pollution and marine hypoxia) in three target landscapes, including monitoring of water pollution and marine hypoxia from four sources (municipal, agricultural, aquaculture and industrial), based on historical information																				
		1.1.2. Information and analysis system to collect, systematize and exchange knowledge on comprehensive river basin management, ocean health (marine hypoxia) and water quality (including nutrient and oxygen data) at a subnational level in operation, managed inter-institutionally, with assured interoperability, and accessible to different audiences																				
		1.1.3. Broad, permanent, and inclusive outreach, communication and awareness, and education campaigns promote linkages and commitments related to integrated basin																				

		management and pollution and hypoxia reduction in key areas of three large marine ecosystems - LMEs (Gulf of Mexico, Caribbean Sea and Pacific Central American Coastal, PACA).																				
Component 2. Supporting the strengthening of policy, regulatory and investment frameworks to incentivize and finance pollution mitigation	2.1. Improved governance at subnational and national levels to reduce water pollution through NbS	2.1.1. Existing inclusive multi-stakeholder governance structures and mechanisms and others deemed necessary strengthened and in operation to improve the integrated management of watersheds and marine-coastal zones and define goals and strategies to reduce deforestation, water pollution, and hypoxia.																				
		2.1.2. Planning, regulatory, land and/or marine management, and integrated watershed management instruments developed and/or updated with public participation and an inclusive approach, including objectives for the reduction of deforestation and of water pollution through NbS and a gender perspective.																				
	2.2. Enabling environment promoted to guide investments with water pollution and marine hypoxia reduction objectives	2.2.1. Guidelines for sustainable and inclusive financing and reducing water pollution in CIIT's development hubs (<i>polos de desarrollo</i>), the Isthmus of Tehuantepec Lagoon																				

		Complex, the Sontecomapán Lagoon, and the Hondo River Basin formulated in participatory manner and disseminated.																			
		2.2.2. Inclusive, sustainable mixed-financing and investment instruments available for water pollution reduction through public-private dialogues and multi-party collaboration agreements.																			
		2.2.3. Investment feasibility assessment for rehabilitating wastewater treatment plants (WWTPs) and other effective technologies to reduce water pollution developed. (Note: rehabilitation of WWTPs will be done through co-financing and other funding mechanisms)																			
		2.2.4. Recommendations for investing criteria in Nature-based Solutions (NbS) within the operational rules and guidelines of public budgetary programs prepared with a gender perspective and social inclusion criteria.																			
Component 3. Supporting demonstration of best management practices (BMP) and investments that showcase	3.1. Strengthened technical, organizational and financial capacities of local organizations to promote measures to reduce land-based	3.1.1. Organizational, technical, and financial capacity-building program to implement BMPs and NbS developed to reduce land-based water pollution and																			

innovative solutions to reduce marine hypoxia	water pollution and marine hypoxia through good practices and NbS	marine hypoxia and facilitate access to financing in the three target landscapes, with gender and social inclusion criteria.																				
		3.1.2. Plans, business models, and organizational manuals updated or developed for Organizations of the Social Sector of the Economy (OSSE), according to the scale of the project, to transition to best practices and NbS implementation, and facilitate access to financing.																				
		3.1.3. Inclusive thematic Communities of Practice (CoPs) promoting BMPs through exchange, peer-to-peer learning and capacity development to strengthen portfolio delivery and wider stakeholder engagement developed and deployed.																				
	3.2. The adoption of best practices and NbS contributes to the reduction of water pollution and marine hypoxia	3.2.1. Inclusive municipal projects in the three prioritized landscapes are supported for the adoption of BMPs and NbS to reduce water pollution and marine hypoxia, including pre-investment activities such as proof of concept, technical feasibility analysis, and environmental impact assessments, as well as pilot and demonstration cases featuring innovative, cost-effective, low-carbon water																				

		treatment technologies in prioritized rural and marine-coastal areas																				
		3.2.2. Projects with local organizations, Indigenous Peoples, and OSSEs are supported by grants and other financing sources to adopt BMPs and NbS aimed at reducing water pollution from agricultural and livestock production (nutrient runoff), aquaculture and fishing practices, and domestic sources in rural areas, while implementing pilot and demonstrative projects to showcase these practices																				
		3.2.3. Restoration and hydrological rehabilitation, and improved management to benefit biodiversity interventions in watersheds and marine-coastal zones supported in three target landscapes with collaboration from government institutions, civil society organizations, local organizations, OSSEs, and women's groups through grants and other funding sources.																				
		3.2.4. Participatory community monitoring plan for biodiversity and water quality in river basins and marine-coastal areas designed and implemented,																				

	adaptive management and lessons learned are ensured	developed and implemented																				
		5.1.2. Regular reporting to the program level ensured following GCP guidance and agreed reporting frameworks.																				

Annex 5: UNDP Social and Environmental Screening Procedure (SESP)

UNDP Social and Environmental Screening Template (v. July 2022)

The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document at the design stage. Note: this template will be converted into an online tool. The online version will guide users through the process and will embed relevant guidance.

Project Information

Project Information	
1. Project Title	GEF IP Clean and Healthy Oceans: Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions Child Project.
2. Project Number (i.e. Atlas project ID, PIMS+)	9744
3. Location (Global/Region/Country)	Mexico
4. Project stage (Design or Implementation)	Design
5. Date	January 22, 2025

Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?

Briefly describe in the space below how the project mainstreams the human rights-based approach

The project focuses on addressing marine hypoxic zones by curbing coastal pollution from agriculture, industrial and municipal sources through policy and regulatory measures and infrastructure investments combined with nature-based solutions³⁴. The Project's Objective is to combat degradation, eutrophication, and hypoxia in key LMEs through the promotion of integrated watershed and landscape management, improving governance models, establishing sustainable financing mechanisms, and advancing the adoption of NbS. This is coherent with international human rights principles and the Mexican Constitution, Chapter I: Human Rights and their Guarantees, article 1 paragraph five, states that "any discrimination based on ethnic or national origin, gender, age, disability, social condition, health conditions, religion, opinions, sexual preferences, marital status or any other that threatens dignity is prohibited." In Article 2, the Constitution recognizes and guarantees the rights and autonomy of the indigenous population, including the dignity and integrity of women and its right of participation in equal conditions as men. In addition, the Political Constitution of the United Mexican States recognises in article 4, paragraph five, the human right to a healthy environment for development and well-being, a legal provision that states the following: Every person has the right to a healthy environment for his or her development and well-being. The State shall guarantee respect for this right. Environmental damage and deterioration will generate responsibility for whoever causes it in terms of the law.

³⁴ Please see the GEF-8 programming directions for a full description of this IP: https://www.thegef.org/sites/default/files/2023-01/GEF-8_Programming_Directions.pdf

The project will adopt a fully inclusive approach to ensure that all key stakeholders are consulted and participate in the decision-making process related to the Project's outcomes, outputs and activities, including women, youth, indigenous/local communities and other groups. This will enable any concerns and grievances with regard to proposed project activities to be discussed and solutions sought to address them. Training will be provided to stakeholders to strengthen coordination and conflict resolution skills in communities. During the implementation, the project will apply the Free, Prior and Informed Consent (FPIC) protocols to develop the indigenous people plan (IPP) and other supportive plans on gender and stakeholder's engagement. Further, the Project's activities ensure that the expected social, economic and environmental benefits reach all the targeted population and particularly vulnerable groups.

The regulatory framework on Indigenous Peoples' Human Rights will support decisions regarding activities taking place in indigenous peoples' territories; and the FPIC approach will be applied to resolve any matters that may affect rights and interests, land, territories, resources, cultural heritage and traditional livelihoods, including the use of their traditional knowledge practices. Knowledge Management and awareness raising activities will reach out to all beneficiaries, including women, youth, and indigenous/local communities to increase understanding of opportunities with sustainable, legal and traceable use and trade of native species and landscape management (Activity 3.1.1.2). In addition, the Project's M&E/Reporting protocols will include the relevant human rights and gender (Activity 3.2.4.1).

Lastly, the project execution and implementation agencies will be held accountable for all activities implemented by the project, including human rights and gender approach. Regular project monitoring and evaluation and reporting will be carried out, including through GEF evaluations. Through this participatory approach, the project will contribute to

- **SDG Goal 3: Ensure healthy lives and promote well-being for all at all ages**, through minimizing the release of hazardous chemicals into the environment.
- **SDG Goal 14: Life Below Water**, through conserve and sustainably use the oceans, seas and marine resources for sustainable development
- **SDG Goal 15: Life on land**, protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
- **SDG Goal 8: Decent work and economic growth** through the reduction of exposure to UPOPs emissions.

Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment

The project is designed to support the equal participation of women and other vulnerable populations in decision-making about the reduction from coastal pollution from agricultural, industrial and municipal sources with integrated management measures. Activity 1.1.1.2 considers the incorporation of the gender perspective into the participatory inventory validation activities. Activity 1.1.2.6 considers socialization and training activities with a gender approach to the information and analysis system for watershed management. Activity 2.1.1.2 will develop specific strengthening of the governance structure and the participation of womens groups (Activity 2.1.1.2). Activity 2.2.2.2 will offer technical assistance for the access to financing instruments with a gender approach for the sustainability of water pollution reduction. Mexico is a signatory to international and national frameworks in promoting gender equality. A detailed gender analysis has been conducted to determine the role of women in local level activities and especially in watershed managemenet, including barriers they face in participating in such processes, challenges faced in deriving benefits from a project of this nature, and documenting the specific impacts for the sustainability of water pollution reduction. During the implementation phase the Gender Action Plan (GAP), which will be aligned with the UNDP Gender guidelines will ensure gender equality and women's empowerment throughout the implementation of project's activities.

Briefly describe in the space below how the project mainstreams sustainability and resilience

The project is focused on the development of planning, regulatory, and integrated watershed management instruments for the reduction of water pollution through NbS (Output 2.1.2) and will also contribute with intersectoral alliances for the implementation of conservation, restoration, and hydrological rehabilitation actions in watersheds and coastal marine zones in the intervention zones (Activity 3.2.3.3). In addition, through output 3.1.1 the project will develop organizational, technical and financial capacities to implement best practices in NbS and facilitate access to financing. Environmental sustainability is at the heart of the proposed project and one of the most important results to be delivered by projects financed by the Global Environment Facility. The stated objective is to focus on the Isthmus of Tehuantepec and Yucatan Peninsula region. In addition, Mexico will counter upstream municipal, agriculture and industrial pollution sources affecting Large Marine Ecosistemas via enhanced governance and policy frameworks, improved landscape management, deployment of nature-based solutions, and investment in infrastructure improvement. In line with the project's biodiversity conservation objectives, its environmental impacts are expected to contribute and generate lessons learned on the reduction of pollutants into superficial waters, which end up polluting Mexico's coastal

marine systems, at local, regional and national scales. The Project will ensure environmental sustainability by strengthening policy and legislative frameworks to support marine pollution prevention and control, benefiting a large number of people who depend on coastal marine ecosystem-based value chains.

Briefly describe in the space below how the project strengthens accountability to stakeholders

The project design aims to ensure full accountability for project activities. Stakeholder participation and consultation, including vulnerable groups, women, and indigenous peoples is not only a component of project design but will be implemented as a guiding principle throughout the project's implementation and mainstreamed into the governance principles promoted by the project. Consultations will ensure that both women and men are able to fully participate and voice their needs, concerns and interests. A comprehensive Stakeholder Engagement Plan has been developed during the PPG phase. The project developed a Grievance Redress Mechanism (GRM), which will be accessible to project stakeholders and the PMU will ensure that all grievances are addressed in a timely and acceptable manner in line with the UNDP SES. The details of the GRM are included in the SEP and ESMF. UNDP's Accountability Mechanism, which includes the Social and Environmental Compliance Unit (SECU) and Stakeholder Response Mechanism (SRM) will also serve as an additional layer of grievance redress and empower stakeholders to push for accountability. The project will ensure transparency by disclosing all the relevant project information to project stakeholders as needed.

Part B. Identifying and Managing Social and Environmental [Risks](#)

QUESTION 2: What are the Potential Social and Environmental Risks? Note: Complete SESP Attachment 1 before responding to Question 2.	QUESTION 3: What is the level of significance of the potential social and environmental risks? Note: Respond to Questions 4 and 5 below before proceeding to Question 5			QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High
Risk Description (broken down by event, cause, impact)	Impact and Likelihood (1-5)	Significance (Low, Moderate Substantial, High)	Comments (optional)	Description of assessment and management measures for risks rated as Moderate, Substantial or High
Risk 1 Investment requirements for the businesses' transition to best practices and the implementation of NbS (Output 3.1.2) could lead to the exclusion of small scale business groups/individuals (including women) that don't have the capacity to keep up with these requirements, leading to greater segregation and poverty levels Principle Leave No One Behind P5	I=4 L=2	Moderate		During the PPG phase a Stakeholder Engagement Plan (SEP) was developed, which includes means of disclosure of information in a format that is understandable, culturally sensitive, and gender responsive. The SEP will be updated during the implementation phase, which will ensure that vulnerable groups participate in these project activities. The project should ensure that the selection criteria for small scale businesses that it works with should not exclude those 'that cannot keep up with the requirements' and it should also target vulnerable communities.

Risk 2 Policy and legal framework amendments/updates (Output 2.1.2) could exclude affected stakeholders, including vulnerable groups (women, indigenous peoples) from participating in policy decisions that could impact on their lands, territories, and resources, increasing their vulnerability to climate change. Principle Leave No One Behind P4 Standard 6: Indigenous Peoples 6.1	I=3 L=3	Moderate		In order to assess the environmental and social effects of the policy and legal frameworks of the regulatory, land or marine management and integrated watershed management instruments developed, the project will support the governmental implementation parties to conduct the required environmental impact assessment as per national normative frameworks. The ESMF developed in the PPG identifies the regulations concerning EIA. The project will support the government in assessing the potential social impacts, if required, to complement the national EIA requirements, based on UNDP SES Policy. The project will assess the complementarity of the EIA policy to cover any gaps in social considerations. The Stakeholder Engagement Plan (SEP) developed under the PPG phase lays out the guidelines to engage all key stakeholders and to guarantee inclusive participation in policy decisions and activities under Output 2.1.2. During the PPG, indigenous peoples were identified in the targeted areas and an Indigenous Peoples Planning Framework (IPPF) has been developed and included in the ESMF outlining procedures to address the requirements of SES Standard 6, to ensure that indigenous peoples' rights are respected and that a meaningful, effective and informed stakeholder consultation takes place. During the implementation phase the project will develop the Indigenous Peoples plan (IPP). In addition, the project will follow national procedures regarding FPIC, and if required, the project will facilitate this process with the municipal government. UNDP will ensure that Indigenous Peoples are meaningfully consulted and that agreements are signed when required to work with these communities and engage with the indigenous communities following FPIC processes. The Project will develop a project-level Grievance Redress Mechanism (GRM) which will be accessible, and transparent, and it will ensure appropriate protection for claimants. The Project Technical Coordinator and Project Manager will ensure that information and guidance to local communities about the UNDP conflict resolution and grievance mechanism is provided.
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Risk 3 The implementation of planning instruments, regulations for marine and land management and integrated water management plans (Output 2.1.2) could restrict access to resources and cause economic displacement, impacting on the subsistence economies of communities, including vulnerable groups (women, indigenous peoples). The negative impacts of economic displacement could also include the exacerbation of gender-based violence. Standard 5. Displacement and Resettlement 5.2 Standard 6: Indigenous Peoples 6.1 Gender Equality and Women's empowerment P11. P12.	I=4 L=2	Moderate		In cases where restrictions to access resources are identified, a Process Framework will be implemented to establish dialogue and negotiation with local communities. The PF will be the basis for preparing a Livelihood Action Plan (LAP). The LAP will include compensation packages for affected individuals, ensuring the same or better income and livelihood status. During the PPG, indigenous peoples were identified in the targeted areas and an Indigenous Peoples Planning Framework (IPPF) has been developed and included in the ESMF outlining procedures to address the requirements of SES Standard 6, to ensure that indigenous peoples' rights are respected and that a meaningful, effective and informed stakeholder consultation takes place. During the implementation phase the project will develop the Indigenous Peoples plan (IPP). When economic displacement is unavoidable, the project will utilize experienced professionals in establishing baseline information, and assessing potential risks and impact based on the applicable UNDP guidance. If any displacement will be carried out, the UNDP project will work to avoid this option. If no other option is available, then UNDP will ensure it is conducted in a fully participatory manner and consent is provided by the impacted communities, and will be carefully planned through either Resettlement Action Plan and/or Livelihood Action Plan (that may be combined where appropriate) based on the applicable UNDP guidance. During the PPG phase a Gender Analysis and Gender Action Plan (GAP) have been developed to ensure that women's needs are considered, and specific measures are undertaken to mainstream gender within project's activities. The Gender analysis that was carried out ensures that the project activities: – Collect and generate new gender-disaggregated data, to the extent possible – Identify and address the different needs, constraints, concerns and priorities of women and men – Allow both women and men receive equal access to project resources and benefits
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				To address the potential risk of gender-based violence the project will develop and implement: – Protocols/ measures to respond to and prevent gender-based violence and/or harassment. The Project will develop a project-level Grievance Redress Mechanism (GRM) which will be accessible, and transparent, and it will ensure appropriate protection for claimants including paying particular attention to any concerns raised by women. The Project Technical Coordinator and Project Manager will ensure that information and guidance to local communities about the UNDP conflict resolution and grievance mechanism is provided. The project will set up a separate GRM for the GBV risks. This GRM will pay careful attention to any (even indirect) indications of sexual exploitation, abuse, harassment (SEAH) risks. This separate mechanism will ensure confidential reporting processes and referrals for safe and confidential survivor-centered assistance by institutions having GBV expertise. The project will build on knowledge learnt through to the Spotlight Initiative in Mexico, and request support. The Spotlight initiative focuses on eliminating violence against women and girls.
Risk 4 The development of mixed financing and investment instruments (Output 2.2.2), including the identification of financing sources and creation/ adaptation of investments instruments and mixed financing (Activity 2.2.2.1 and 2.2.2.3) could exclude women from participating in this activity, leading to less effective waste and watershed management and the persistence of pollution at the community level. Gender Equality and Women's empowerment P.9, P.10,	I = 3 L = 3	Moderate		During the PPG phase a Gender Analysis and Gender Action Plan (GAP) have been developed to ensure that women's needs are considered, and specific measures are undertaken to mainstream gender within project's activities. During project implementation, the GAP will ensure women and men have equal access to resources, services, and capacity development. The project will hire a gender expert that will supervise the implementation of the Gender Action Plan and will make sure that the project will offer equal opportunities for women to participate in and benefit from the project activities and participate in a meaningful way in the financing related deliberations. The Project shall: ▪ allow both women and men to participate meaningfully and equitably in project design and decision-making, ▪ allow both genders obtain comparable social and economic benefits from project interventions. The project might also follow the UN Global Compact Women's Empowerment Principles:

				- Principle 1: Establish high-level corporate leadership for gender equality - Principle 2: Treat all women and men fairly at work – respect and support human rights and non-discrimination - Principle 3: Ensure the health, safety and well-being of all women and men workers - Principle 4: Promote education, training and professional development for women - Principle 5: Implement enterprise development, supply chain and marketing practices that empower women - Principle 6: Promote equality through community initiatives and advocacy - Principle 7: Measure and publicly report on progress to achieve gender equality A gender analysis will be carried out to ensure that the project activities: - collect and / generate new gender-disaggregated data, to the extent possible - identify and address the different needs, constraints, concerns and priorities of women and men, - allow both women and men receive equal access to project resources and benefits. The project shall ensure that project-level GRM will pay particular attention to any concerns raised by women.
Risk 5 Climate change (floods, natural disasters, etc.) on near-shore ecosystems, could potentially affect the conservation, restoration and hydrological rehabilitation interventions in watersheds and the coastal marine zone (Output 3.2.3), worsening the economic situation and livelihoods of the communities involved. Standard 2: Climate Change and Disaster Risks 2.2	I = 3 L = 3	Moderate		To address this contextual risk , potentially affecting project activities, the project will develop a climate vulnerability assessment and the results will be considered for the selection of the intervention zones to mitigate this risk. In addition, the project will monitor climate change trends , allowing activities, such as the interventions in watersheds and in the coastal marine zone, to be climate-resilient. The SEP that has been developed in the PPG phase will serve as the basis for the consultation to the proper identification of priority sites subject to conservation, restoration and hydrological rehabilitation in watersheds and coastal marine zones (Activity 3.2.3.2).
Risk 6: The implementation of pilot projects with local organizations and indigenous peoples in Output 3.2.2 could negatively impact their	I = 4 P = 2	Moderate		During the PPG there has been some Indigenous Peoples' groups that were consulted and it will continue during the inception phase. FPIC will be ensured on any matters that may affect the rights and interests, lands, resources, territories (whether titled or untitled to

livelihoods leading to conflicts among indigenous peoples communities. Standard 6: Indigenous Peoples. 6.1, 6.3 P 1 Human Rights: exacerbation of existing conflicts				the people in question) and traditional livelihoods of the indigenous peoples concerned. The project will not take or appropriate the cultural, intellectual, religious and spiritual property of indigenous peoples without their FPIC. If FPIC is not secured, then the associated activities will not be pursued. During the PPG, indigenous peoples were identified in the targeted areas and an Indigenous Peoples Planning Framework (IPPF) has been developed and included in the ESMF outlining FPIC procedures. During the implementation phase the project will develop the Indigenous Peoples plan (IPP). The Grievance Redress Mechanism will provide an accessible and fair entry point for community members' potential complaints and/or grievances. In addition, the project will use the Stakeholder Engagement Plan to mitigate this risk.
Risk 7: Activity 3.1.1.2 aims to develop a catalog of best practices to reduce hydric pollution based among others on interculturality and ancestral knowledge (intangible cultural heritage). This could raise the following risks regarding the transmission of cultural heritage: (i) intellectual property rights might not apply as there are some requirements (i.e., the requirement of novelty) that cannot apply to most of the manifestations of intangible heritage that are based on the transmissions of practices and knowledge from generation to generation; (ii) preservation or integrity of the intangible cultural heritage as a result of misuse by third parties; (iii) commercial gain or wide scale distribution without knowledge or permission by indigenous peoples and (iv) misappropriation of traditional knowledge.	I = 4 L = 2	Moderate	The way in which the main intellectual property rights have been conceived and formulated in national legislation and international instruments seems to be in conflict with many of the peculiarities of the intangible cultural heritage and with the needs of the communities which create and transmit such heritage, especially the indigenous communities.	Regarding the use of traditional knowledge and practices (intangible cultural heritage), the project will conduct FPIC of indigenous peoples where such utilization or commercialization is to take place and consequently the project will develop an Indigenous Peoples Plan. The project will ensure the meaningful participation of concerned parties in identifying risks and impacts to their intangible cultural heritage – including its decontextualization, commodification and misrepresentation – and in determining appropriate mitigation and safeguarding process according to UNDP's Standard 4 procedures. This includes the identification, inventorying, documentation, research, preservation, protection, transmission and revitalization of the various aspects of such heritage. Where potential adverse impacts may be significant, the project shall undertake either Heritage Impact Assessment or develop a Cultural Heritage Management Plan (either as stand-one document or part of the project's overall Environmental and Social Management Plan ESMP).

Standard 4. Cultural Heritage 4.5 Standard 6: Indigenous Peoples 6.1, 6.3, 6.9				
Risk 8: Activities under Output 3.2.3 consider conservation, restoration and hidrologic rehabilitation activities in watersheds and marine-coastal zones could pose a risk for disruption of critical habitats for endangered species. Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management. 1.2,	I = 3 L = 3	Moderate		According to UNDP SES Standard 1 procedures, for activities in protected areas, the project will ensure that critical habitats requirements are followed and will ensure that activities are consistent with area management plans and will ensure that no invasive species are introduced without a risk assessment. The project shall review existing protected area management plans to ensure that its activities do not cause measurable adverse impacts on: – Biodiversity values/criteria that underpin designation of the relevant critical habitats, and – Ecological processes supporting these biodiversity values (determined on an ecologically relevant scale) Should any potentially significant impacts be found, the project shall implement a robust, appropriately designed, and long-term Biodiversity Action Plan to ensure that biodiversity and ecosystem functionality are maintained, and that project's activities will result in tangible benefits to the conservation objectives of the intervention areas.
Risk 9 The project will conduct activities in pilot sites based on Component 3. These pilots will be implemented through small grants and through direct funding through other sources, with support by the project. Inclusive NbS pilot and demonstration cases (Output 3.2.1) involve innovative, cost-effective, low-carbon water treatment technologies in rural areas which could lead to pollution, release of pollutants, other wastes and/or water-related and vector-borne diseases.	I = 3 L = 3	Moderate	As the nature of the pilot interventions is unknown to date, and will be defined during project implementation, this risk and the measures are precautionary.	All pilot projects will be screened by the Project Team and/or indications on the requirement of SES screening will be included in the contracts signed by local communities and businesses to receive a grant by this project, which requires the pilot intervention to screen for social and environmental impacts. The Project Team will monitor the pilot sites to ensure these negative impacts are managed based on UNDP SES standards. Depending on the scale and potential impact of the pilot project, it may be subject to targeted assessments and/or ESIA. The mitigation and management measures for these standards will be based on national regulations and UNDP SES Guidance,

There is uncertainty of the nature of the pilot projects, however, they may include, watershed rehabilitation, reforestation, small scale businesses focused on nature based solutions etc. These activities may potentially impact all principles and standards. In addition to the principles and standards identified, which are already subject to management measures that will also apply to pilot projects, specific standards that may be impacted by these small-scale community based pilot projects are: S7 and 8. S 3.2, 3.4.				The project will ensure that external/ third party contractors are bound to comply with the national and UNDP occupational health and safety requirements and standards. They will appoint a person responsible for environment/ health & safety, emergency constantly present on the sites where the pilot projects will take place in order to identify and assess potential hazards and risks. For reforestation activities the project shall: – Not use products that fall in Classes Ib (extremely hazardous) and Ib (highly hazardous) of the World Health Organization Recommended Classification of Pesticides by Hazard. – Will handle, store, apply and dispose of any allowable pesticides in accordance with the eligibility criteria for green practices established for the project and in accordance with international good practice such as the FAO International Code of Conduct on the Distribution and Use of Pesticides. For the innovative, cost-effective, low-carbon water treatment technologies in rural areas the project shall: – Assess the community health and safety risks through a simplified ESIA following the national sanitary and epidemiologic standards to avoid or minimize the potential for community exposure to health risks (including water-related and vector-borne diseases). – Explore where endemic diseases exist in the project area, ways to improve environmental conditions that could minimize the incidence of such diseases.
	QUESTION 4: What is the overall project risk categorization?			
	Low Risk		☐	
	Moderate Risk		X	nine potential risks have been identified for this project assessed as MODERATE. As a result, this project is rated overall as a MODERATE risk project. During the PPG, an ESMF, Stakeholder Engagement Plan and Gender Action Plan have been prepared to meet SES requirements.

	Substantial Risk	☐	
	High Risk	☐	
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are triggered? (check all that apply)		
	Question only required for Moderate, Substantial and High Risk projects		
	Is assessment required? (check if "yes")	☐	Status? (completed, planned)
	if yes, indicate overall type and status	☒	Targeted assessment(s)
☒		ESIA (Environmental and Social Impact Assessment)	Planned in the implementation Phase (if needed)
☐		SESA (Strategic Environmental and Social Assessment)	
	Are management plans required? (check if "yes")	☒	
	If yes, indicate overall type	☒	Gender Action Plan Completed
		☒	Stakeholder Engagement Plan Completed
		☒	Environmental and Social Management Plan (ESMP) Planned (implementation phase)
		☒	Environmental and Social Management Framework (ESMF) Completed
		☒	Indigenous Peoples Plan Framework (IPPF) Completed
		☒	Indigenous Peoples Plan (IPP) Planned (implementation phase)

Final Sign Off

Final Screening at the design-stage is not complete until the following signatures are included

Signature	Date	Description
QA Assessor		UNDP staff member responsible for the project, typically a UNDP Programme Officer. Final signature confirms they have “checked” to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have “cleared” the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks	
INSTRUCTIONS: The risk screening checklist will assist in answering Questions 2-6 of the Screening Template. Answers to the checklist questions help to (1) identify potential risks, (2) determine the overall risk categorization of the project, and (3) determine required level of assessment and management measures. Refer to the SES toolkit for further guidance on addressing screening questions.	
Overarching Principle: Leave No One Behind Human Rights	Answer (Yes/No)
P.1 Have local communities or individuals raised human rights concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)?	No
P.2 Is there a risk that duty-bearers (e.g. government agencies) do not have the capacity to meet their obligations in the project?	Yes
P.3 Is there a risk that rights-holders (e.g. project-affected persons) do not have the capacity to claim their rights?	Yes
<i>Would the project potentially involve or lead to:</i>	
P.4 adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	Yes
P.5 inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups, including persons with disabilities? ³⁵	No
P.6 restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalized individuals or groups, including persons with disabilities?	No
P.7 exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	yes
Gender Equality and Women's Empowerment	
P.8 Have women's groups/leaders raised gender equality concerns regarding the project, (e.g. during the stakeholder engagement process, grievance processes, public statements)?	No
<i>Would the project potentially involve or lead to:</i>	
P.9 adverse impacts on gender equality and/or the situation of women and girls?	Yes
P.10 reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	Yes
P.11 limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? <i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i>	Yes
P.12 exacerbation of risks of gender-based violence? <i>For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc.</i>	Yes

³⁵ Prohibited grounds of discrimination include race, ethnicity, sex, age, language, disability, sexual orientation, gender identity, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender and transsexual people.

Sustainability and Resilience: Screening questions regarding risks associated with sustainability and resilience are encompassed by the Standard-specific questions below	
Accountability	
<i>Would the project potentially involve or lead to:</i>	
P.13 exclusion of any potentially affected stakeholders, in particular marginalized groups and excluded individuals (including persons with disabilities), from fully participating in decisions that may affect them?	Yes
P.14 grievances or objections from potentially affected stakeholders?	Yes
P.15 risks of retaliation or reprisals against stakeholders who express concerns or grievances, or who seek to participate in or to obtain information on the project?	No
Project-Level Standards	
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management	
<i>Would the project potentially involve or lead to:</i>	
1.1 adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? <i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i>	No
1.2 activities within or adjacent to critical habitats and/or environmentally sensitive areas, including (but not limited to) legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	Yes
1.3 changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	No
1.4 risks to endangered species (e.g. reduction, encroachment on habitat)?	No
1.5 exacerbation of illegal wildlife trade?	No
1.6 introduction of invasive alien species?	No
1.7 adverse impacts on soils?	No
1.8 harvesting of natural forests, plantation development, or reforestation?	No
1.9 significant agricultural production?	No
1.10 animal husbandry or harvesting of fish populations or other aquatic species?	No
1.11 significant extraction, diversion or containment of surface or ground water? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i>	No
1.12 handling or utilization of genetically modified organisms/living modified organisms? ³⁶	No
1.13 utilization of genetic resources? (e.g. collection and/or harvesting, commercial development) ³⁷	No
1.14 adverse transboundary or global environmental concerns?	No
Standard 2: Climate Change and Disaster Risks	
<i>Would the project potentially involve or lead to:</i>	
2.1 areas subject to hazards such as earthquakes, floods, landslides, severe winds, storm surges, tsunamis or volcanic eruptions?	No
2.2 outputs and outcomes sensitive or vulnerable to potential impacts of climate change or disasters? <i>For example, through increased precipitation, drought, temperature, salinity, extreme events, earthquakes</i>	Yes
2.3 increases in vulnerability to climate change impacts or disaster risks now or in the future (also known as maladaptive or negative coping practices)?	No

³⁶ See the [Convention on Biological Diversity](#) and its [Cartagena Protocol on Biosafety](#).

³⁷ See the [Convention on Biological Diversity](#) and its [Nagoya Protocol](#) on access and benefit sharing from use of genetic resources.

<i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i>	
2.4 increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	No
Standard 3: Community Health, Safety and Security	
<i>Would the project potentially involve or lead to:</i>	
3.1 construction and/or infrastructure development (e.g. roads, buildings, dams)? (Note: the GEF does not finance projects that would involve the construction or rehabilitation of large or complex dams)	No
3.2 air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	Yes
3.3 harm or losses due to failure of structural elements of the project (e.g. collapse of buildings or infrastructure)?	No
3.4 risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	Yes
3.5 transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.6 adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification, natural buffers from flooding)?	No
3.7 influx of project workers to project areas?	No
3.8 engagement of security personnel to protect facilities and property or to support project activities?	No
Standard 4: Cultural Heritage	
<i>Would the project potentially involve or lead to:</i>	
4.1 activities adjacent to or within a Cultural Heritage site?	No
4.2 significant excavations, demolitions, movement of earth, flooding or other environmental changes?	No
4.3 adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	No
4.4 alterations to landscapes and natural features with cultural significance?	No
4.5 utilization of tangible and/or intangible forms (e.g. practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	Yes
Standard 5: Displacement and Resettlement	
<i>Would the project potentially involve or lead to:</i>	
5.1 temporary or permanent and full or partial physical displacement (including people without legally recognizable claims to land)?	No
5.2 economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	Yes
5.3 risk of forced evictions? ³⁸	No
5.4 impacts on or changes to land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples	
<i>Would the project potentially involve or lead to:</i>	

³⁸ Forced eviction is defined here as the permanent or temporary removal against their will of individuals, families or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection. Forced evictions constitute gross violations of a range of internationally recognized human rights.

6.1	areas where indigenous peoples are present (including project area of influence)?	Yes
6.2	activities located on lands and territories claimed by indigenous peoples?	No
6.3	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? <i>If the answer to screening question 6.3 is “yes”, then the potential risk impacts are considered significant and the project would be categorized as either Substantial Risk or High Risk</i>	Yes
6.4	the absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No
6.5	the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.6	forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? <i>Consider, and where appropriate ensure, consistency with the answers under Standard 5 above</i>	No
6.7	adverse impacts on the development priorities of indigenous peoples as defined by them?	No
6.8	risks to the physical and cultural survival of indigenous peoples?	No
6.9	impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? <i>Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.</i>	Yes
Standard 7: Labour and Working Conditions		
<i>Would the project potentially involve or lead to: (note: applies to project and contractor workers)</i>		
7.1	working conditions that do not meet national labour laws and international commitments?	No
7.2	working conditions that may deny freedom of association and collective bargaining?	No
7.3	use of child labour?	No
7.4	use of forced labour?	No
7.5	discriminatory working conditions and/or lack of equal opportunity?	No
7.6	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	yes
Standard 8: Pollution Prevention and Resource Efficiency		
<i>Would the project potentially involve or lead to:</i>		
8.1	the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	No
8.2	the generation of waste (both hazardous and non-hazardous)?	yes
8.3	the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	No
8.4	the use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol, Minamata Convention, Basel Convention, Rotterdam Convention, Stockholm Convention</i>	No
8.5	the application of pesticides that may have a negative effect on the environment or human health?	yes
8.6	significant consumption of raw materials, energy, and/or water?	No

Annex 6: UNDP Risk Register

Portfolio/Project Title: GEF IP Clean and Healthy Oceans: Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions Child Project.							Portfolio/Project Number: 9744	Date: January 6, 2025
#	Event	Cause	Impact(s)	Risk Category and Sub-category	Impact, Likelihood & Risk Level	Risk Valid From/To	Risk Owner	Risk Treatment
1	SESP Risk 1: Investment requirements for the businesses' transition to best practices and the implementation of NbS (Output 3.1.2) could lead to the exclusion of small-scale business groups/individuals (including women) that don't have the capacity to keep up with these requirements, leading to greater segregation and poverty levels	The project will develop activities to promote a transition to best practices and the implementation of NbS (output 3.1.2)	Small-scale businesses groups/ individuals (including women) could be excluded	1. SOCIAL AND ENVIRONMENTAL (1.2. Gender equality and women's empowerment) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 2 - Low likelihood Impact: 4 - Extensive Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 2026 To: 2031	SADER	During the PPG phase a Stakeholder Engagement Plan (SEP) was developed, which includes means of disclosure of information in a format that is understandable, culturally sensitive, and gender responsive. The SEP will be updated during the implementation phase, which will ensure that vulnerable groups participate in these project activities. The project should ensure that the selection criteria for small-scale businesses that it works with should not exclude those that are most likely to be less capable of keeping up with the requirements.
2	SESP Risk 2: Policy and legal framework amendments/updates (Output 2.1.2) could exclude affected stakeholders, including vulnerable groups (women, indigenous peoples) from participating in policy decisions that could impact on their lands, territories, and resources,	Policy and legal framework amendments/ updates	Exclusion of affected stakeholders, including vulnerable groups from participating in policy decisions that could affect them.	1. SOCIAL AND ENVIRONMENTAL (1.9. Indigenous peoples) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a	From: 2026 To: 2031	SADER	In order to assess the environmental and social effects of the policy and legal frameworks of the regulatory, land or marine management and integrated watershed management instruments developed, the project will support the governmental implementation parties to conduct the required environmental impact assessment as per national

	increasing their vulnerability to climate change.				risk appetite of EXPLORATORY)		normative frameworks. The ESMF developed in the PPG identifies the regulations concerning EIA. The Stakeholder Engagement Plan (SEP) developed under the PPG phase lays out the guidelines to engage all key stakeholders and to guarantee inclusive participation in policy decisions and activities under Output 2.1.2. During the PPG, indigenous peoples were identified in the targeted areas and an Indigenous Peoples Planning Framework (IPPF) has been developed and included in the ESMF outlining procedures to address the requirements of SES Standard 6, to ensure that indigenous peoples' rights are respected and that a meaningful, effective and informed stakeholder consultation takes place. During the implementation phase the project will develop the Indigenous Peoples Plan (IPP). In addition, the project will follow national procedures regarding FPIC, and if required, the project will facilitate this process with the municipal government. UNDP will ensure that Indigenous Peoples are meaningfully consulted and that agreements are signed when required to work with
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								these communities and engage with the indigenous communities following FPIC processes. The Project will develop a project-level Grievance Redress Mechanism (GRM) which will be accessible, and transparent, and it will ensure appropriate protection for claimants. The Project Technical Coordinator and Project Manager will ensure that information and guidance to local communities about the UNDP conflict resolution and grievance mechanism is provided.
3	SESP Risk 3: The implementation of planning instruments, regulations for marine and land management and integrated water management plans (Output 2.1.2) could restrict access to resources and cause economic displacement, impacting on the subsistence economies of communities, including vulnerable groups (women, indigenous peoples) The negative impacts of economic displacement could also include the exacerbation of gender-based violence.	Restrictions to the access to resources due to the implementation of new planning instruments, regulations for marine and land management and integrated water management plans	May cause economic displacement and have an impact on the subsistence economies of communities, including vulnerable groups (women, indigenous peoples)	1. SOCIAL AND ENVIRONMENTAL (1.9. Indigenous peoples) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 2 - Low likelihood Impact: 4 - Extensive Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 2026 To: 2031	SADER	The project shall: - In cases where restrictions to access resources are identified a Process Framework will be implemented to establish dialogue and negotiation with local communities. The PF will be the basis for preparing a Livelihood Action Plan (LAP). The LAP will include compensation packages for affected individuals, ensuring the same or better income and livelihood status. During the PPG, indigenous peoples were identified in the targeted areas and an

								Indigenous Peoples Planning Framework (IPPF) has been developed and included in the ESMF outlining procedures to address the requirements of SES Standard 6, to ensure that indigenous peoples' rights are respected and that a meaningful, effective and informed stakeholder consultation takes place. During the implementation phase the project will develop the Indigenous Peoples plan (IPP). When economic displacement is unavoidable, the project will utilize experienced professionals in establishing baseline information, and assessing potential risks and impact based on the applicable UNDP guidance. If any displacement will be carried out, the UNDP project will work to avoid this option. If no other option is available, then UNDP will ensure it is conducted in a fully participatory manner and consent is provided by the impacted communities and will be carefully planned through either Resettlement Action Plan and/or Livelihood Action Plan (that may be combined where appropriate) based on the applicable UNDP guidance. During the PPG phase a Gender Analysis and Gender Action Plan (GAP) have been developed to ensure that women's needs are
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								considered, and specific measures are undertaken to mainstream gender within project's activities. The Gender analysis that was carried out ensures that the project activities: – Collect and generate new gender-disaggregated data, to the extent possible – Identify and address the different needs, constraints, concerns and priorities of women and men – Allow both women and men receive equal access to project resources and benefits The Project will develop a project-level Grievance Redress Mechanism (GRM) which will be accessible, and transparent, and it will ensure appropriate protection for claimants. The Project Technical Coordinator and Project Manager will ensure that information and guidance to local communities about the UNDP conflict resolution and grievance mechanism is provided. The project will set up a separate GRM for the GBV risks. This GRM will pay careful attention to any (even indirect) indications of sexual exploitation, abuse, harassment (SEAH) risks. This separate mechanism will ensure confidential reporting processes and referrals for
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								safe and confidential survivor-centered assistance by institutions having GBV expertise. The project will build on knowledge learnt through to the Spotlight Initiative in Mexico, and request support. The spotlight initiative focuses on eliminating violence against women and girls.
4	SESP Risk 4: The development of mixed financing and investment instruments (Output 2.2.2), including the identification of financing sources and creation/ adaptation of investments instruments and mixed financing (Activity 2.2.2.1 and 2.2.2.3) could exclude women from participating in this activity, leading to less effective waste and watershed management and the persistence of pollution at the community level	Due to cultural traits in Mexico it's possible that women could be excluded of participating in this activity	Less effective waste and watershed management and the persistence of pollution at the community level.	1. SOCIAL AND ENVIRONMENTAL (1.2. Gender equality and women's empowerment) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 2026 To: 2031	SADER	During the PPG phase a Gender Analysis and Gender Action Plan (GAP) have been developed to ensure that women's needs are considered, and specific measures are undertaken to mainstream gender within project's activities. During project implementation, the GAP will ensure women and men have equal access to resources, services, and capacity development. The project will hire a gender expert that will supervise the implementation of the Gender Action Plan and will make sure that the project will offer equal opportunities for women to participate in and benefit from the project activities and participate in a meaningful way in the financing related deliberations. Project shall: - allow both women and men to participate meaningfully and equitably in project design and decision-making, - allow both genders obtain comparable social and economic benefits from project interventions.

								The project might also follow the UN Global Compact Women's Empowerment Principles: • Principle 1: Establish high-level corporate leadership for gender equality • Principle 2: Treat all women and men fairly at work – respect and support human rights and non-discrimination • Principle 3: Ensure the health, safety and well-being of all women and men workers • Principle 4: Promote education, training and professional development for women • Principle 5: Implement enterprise development, supply chain and marketing practices that empower women • Principle 6: Promote equality through community initiatives and advocacy • Principle 7: Measure and publicly report on progress to achieve gender equality A gender analysis will be carried out to ensure that the project activities: ▪ collect and / generate new gender-disaggregated data, to the extent possible ▪ identify and address the different needs, constraints, concerns and priorities of women and men,
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								allow both women and men receive equal access to project resources and benefits. The project shall ensure that project-level GRM will pay particular attention to any concerns raised by women.
5	SESP Risk 5: Climate change (floods, natural disasters, etc.) on near-shore ecosystems, could potentially affect the conservation, restoration and hydrological rehabilitation interventions in watersheds and the coastal marine zone (Output 3.2.3), worsening the economic situation and livelihoods of the communities involved.	Climate change-related events (floods, natural disasters, etc)	The conservation, restoration and hydrological rehabilitation interventions in watersheds and the coastal marine zone could be potentially affected.	1. SOCIAL AND ENVIRONMENTAL (1.5. Climate change and disaster risks) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 2026 To: 2031	SADER	To address this contextual risk, potentially affecting project activities, the project will develop a climate vulnerability assessment, and the results will be considered for the selection of the intervention zones to mitigate this risk. In addition, the project will monitor climate change trends, allowing activities, such as the interventions in watersheds and in the coastal marine zone, to be climate resilient. The SEP that has been developed in the PPG phase will serve as the basis for the consultation to the proper identification of priority sites subject to conservation, restoration and hydrological rehabilitation in watersheds and coastal marine zones (Activity 3.2.3.2).
6	SESP Risk 6: The implementation of projects with local organizations and indigenous peoples in Output 3.2.2 could negatively impact their livelihoods leading to conflicts among indigenous peoples' communities.	The project will implement pilot projects with local organizations and indigenous peoples and the agreements/activities could	Negative impact on livelihoods leading to conflicts among indigenous peoples' communities	1. SOCIAL AND ENVIRONMENTAL (1.1. Human rights) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 2 - Low likelihood Impact: 4 - Extensive Risk level:	From: 2026 2031	SADER	During the PPG there has been some Indigenous Peoples' groups that were consulted, and it will continue during the inception phase. FPIC will be ensured on any matters that may affect the rights and interests, lands, resources, territories (whether titled or untitled to the people in question) and traditional

		cause disagreements among community members.			MODERATE (equates to a risk appetite of EXPLORATORY)			livelihoods of the indigenous peoples concerned. The project will not take or appropriate the cultural, intellectual, religious and spiritual property of indigenous peoples without their FPIC. If FPIC is not secured, then the associated activities will not be pursued. During the PPG, indigenous peoples were identified in the targeted areas and an Indigenous Peoples Planning Framework (IPPF) has been developed and included in the ESMF outlining FPIC procedures. During the implementation phase the project will develop the Indigenous Peoples plan (IPP). The Grievance Redress Mechanism will provide an accessible and fair entry point for community members' potential complaints and/or grievances. In addition, the project will use the Stakeholder Engagement Plan to mitigate this risk.
7	SESP Risk 7: Activity 3.1.1.2 aims to develop a catalog of best practices to reduce water pollution based, among others, on interculturality and ancestral knowledge (intangible cultural heritage). This could raise the following risks regarding the transmission of cultural heritage : (i) intellectual property rights might not	The catalog of best practices to reduce hydric pollution that the project aims to develop is based on interculturality and ancestral knowledge	There could be a risk regarding the transmission of cultural heritage.	1. SOCIAL AND ENVIRONMENTAL (1.7. Cultural heritage) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 2 - Low likelihood Impact: 4 - Extensive Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 2026 To: 2031	NAFIN/ SADER	The project shall Regarding the use of traditional knowledge and practices (intangible cultural heritage), the project will conduct FPIC of indigenous peoples where such utilization or commercialization is to take place and consequently the project will develop an Indigenous Peoples Plan.

	apply as there are some requirements (i.e., the requirement of novelty) that cannot apply to most of the manifestations of intangible heritage that are based on the transmissions of practices and knowledge from generation to generation; (ii) preservation or integrity of the intangible cultural heritage as a result of misuse by third parties; (iii) commercial gain or wide scale distribution without knowledge or permission by indigenous peoples and (iv) misappropriation of traditional knowledge.	(intangible cultural heritage).						The project will ensure the meaningful participation of concerned parties in identifying risks and impacts to their intangible cultural heritage – including its decontextualization, commodification and misrepresentation – and in determining appropriate mitigation and safeguarding process according to UNDP's Standard 4 procedures. This includes the identification, inventorying, documentation, research, preservation, protection, transmission and revitalization of the various aspects of such heritage. Where potential adverse impacts may be significant, the project shall undertake either Heritage Impact Assessment or develop a Cultural Heritage Management Plan (either as stand-alone document or part of the project's overall Environmental and Social Management Plan ESMP).
8	SESP Risk 8: Activities under Output 3.2.3 consider conservation, restoration and hydrologic rehabilitation activities in watersheds and marine-coastal zones could pose a risk for disruption of critical habitats for endangered species.	The project will implement activities of conservation, restoration and hydrologic rehabilitation of watershed and marine-coastal zones	Could pose a risk for disruption of critical habitats for endangered species.	1. SOCIAL AND ENVIRONMENTAL (1.4. Biodiversity conservation and sustainable natural resource management) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 2026 To: 2031	SADER	According to UNDP SES Standard 1 procedures, for activities in protected areas, the project will ensure that critical habitats requirements are followed and will ensure that activities are consistent with area management plans and will ensure that no invasive species are introduced without a risk assessment. The project shall review existing protected area management plans to ensure that its activities do not cause

								measurable adverse impacts on: - Biodiversity values/criteria that underpin designation of the relevant critical habitats, and - Ecological processes supporting these biodiversity values (determined on an ecologically relevant scale) Should any potentially significant impacts be found, the project shall implement a robust, appropriately designed, and long-term Biodiversity Action Plan to ensure that biodiversity and ecosystem functionality are maintained, and that project's activities will result in tangible benefits to the conservation objectives of the intervention areas.
9	SESP Risk 9: The project will conduct activities in pilot sites based on Component 3. These pilots will be implemented through small grants and through direct funding through other sources, with support by the project. Inclusive NbS pilot and demonstration cases (Output 3.2.1) involve innovative, cost-effective, low-carbon water treatment technologies in rural areas which could lead to pollution, release of pollutants, other wastes and/or water-related and vector-borne diseases. There is uncertainty of the nature of the pilot projects, however, they may include watershed rehabilitation,	The pilot projects that will be implemented in targeted landscapes based on Component 3.	There is uncertainty of the nature of the pilot projects, however, they may include watershed rehabilitation, reforestation, small scale businesses focused on nature-based solutions etc. These activities may potentially impact all principles and standards.	1. SOCIAL AND ENVIRONMENTAL (1.11. Pollution prevention and resource efficiency) - UNDP Risk Appetite: CAUTIOUS	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 2026 To: 2031	SADER	All pilot projects will be screened by the Project Team and/or indications on the requirement of SES screening will be included in the contracts signed by local communities and businesses to receive a grant by this project, which requires to pilot intervention to screen for social and environmental impacts. The Project Team will monitor the pilot sites to ensure these negative impacts are managed based on UNDP SES standards. Depending on the scale and potential impact of the pilot project, it may be

	reforestation, small scale businesses focused on nature-based solutions etc. These activities may potentially impact all principles and standards. In addition to the principles and standards identified, which are already subject to management measures that will also apply to pilot projects, specific standards that may be impacted by these small-scale community-based pilot projects are: S3, 7 and 8.							subject to started assessments and/or ESIA. The mitigation and management measures for these standards will be based on national regulations and UNDP SES Guidance. The project will ensure that external/ third party contractors are bound to comply with the national and UNDP occupational health and safety requirement and standards. They will appoint a person responsible for environment/ health & safety, emergency constantly present on the sites where the pilot projects will take place in order to identify and assess potential hazards and risks. For reforestation activities the project shall: – Not use products that fall in Classes Ib (extremely hazardous) and Ib (highly hazardous) of the World Health Organization Recommended Classification of Pesticides by Hazard. – Will handle, store, apply and dispose of any allowable pesticides in accordance with the eligibility criteria for green practices established for the project and in accordance with international good
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								practice such as the FAO International Code of Conduct on the Distribution and Use of Pesticides. For the innovative, cost-effective, low-carbon water treatment technologies in rural areas the project shall: – Assess the community health and safety risks through a simplified ESIA following the national sanitary and epidemiologic standards to avoid or minimize the potential for community exposure to health risks (including water-related and vector-borne diseases). – Explore where endemic diseases exist in the project area, ways to improve environmental conditions that could minimize the incidence of such diseases.
10	Other Risks 1: Lack of political and other stakeholder commitment	Changes in key officers, ministers in each country	Increased or decreased support to the proposed updates/ amendments of laws and regulations for marine and land management and integrated water management plans.	7. STRATEGIC (7.6. Change/turnover in government) - UNDP Risk Appetite: OPEN TO SEEKING	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 2026 To: 2031	SADER	To mitigate this risk, the project will conduct consultations directly with local stakeholders to ensure their participation in the project. In addition, the project will engage regularly with local governments in each country and will ensure appropriate lobbying and advocacy targeting local and national decision-makers.

11	Other Risks 2: Lack of technical capacity of local government personnel in the implementation of best practices and NbS for marine and land management and integrated watershed management plans.	Local authorities and organizations don't have the expertise in NbS for marine and integrated watershed management plans.	Delays in implementation as capacities need to be built first.	3. OPERATIONAL (3.8. Capacities of the partners) - UNDP Risk Appetite: EXPLORATORY TO OPEN	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 2026 To: 2031	SADER	The project will mitigate this risk by developing adequate training for all relevant stakeholders on integrated watershed management plans. Given the expertise needed, the project will hire an expert to deliver the trainings. The project will also develop guidelines and brochures to facilitate learning (including videos and other visual resources).
12	Other Risks 3: The successful implementation of the project largely depends on effective sectoral coordination and communication from different governmental parties, and departmental and local governments. There is a risk that this coordination among so many stakeholders become challenging and time consuming to take decisions relevant to the project's activities causing delays in the implementation and increasing costs if more workshops/ meetings than expected are necessary.	Intersectoral coordination is challenging due to constant changes/ turnover in key personnel.	Delays in implementation and lack of support in regulatory amendments.	7. STRATEGIC (7.5. Government commitment) - UNDP Risk Appetite: OPEN TO SEEKING	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 2026 To: 2031	SADER	During the PPG, a stakeholder analysis was conducted, which served as the basis for the development of the Comprehensive Stakeholder Engagement Plan (Annex 8) and where the main stakeholders of the project, participation mechanisms and consultations during project formulation, governance aspects of the project, the communication and information management strategy, dispute resolution mechanisms, among others, are identified. In addition, the role of each stakeholder in project implementation is detailed. Various mechanisms depending on the degree of involvement required of the stakeholders and their role in the project will be used, these may include workshops, meetings, field visits, and interviews, among others.

13	Other Risks 4: Staff turnover and limited numbers of government extension staff impedes retention skills and knowledge in the relevant sectors/ institutions.	Political volatility/ Changes in local politics/ local governments	Undermined operational effectiveness and efficiency as well as responsiveness.	7. STRATEGIC (7.6. Change/turnover in government) - UNDP Risk Appetite: OPEN TO SEEKING	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 2026 To: 2031	SADER	The project will work with governemnt institutions at the national and local levels to keep them informed on a regular basis about the project and its progress. Use will be made of the Project Board as part of the management measures. In addition, the project will undertake regular training to ensure sustainability and accessibility of training to all stakeholders and support south-south exchanges in coodination with the GCP. Further more, the project will involve local NGOs and community-based organizations who are also providing support for the implementation of the project's activities.
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Annex 7: Overview of Technical Consultancies/Subcontracts

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management		
Local / National contracting		
Technical Coordinator and Project Manager Rate: \$58,100/year	5 years	The Project Technical Coordinator and Project Manager will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. <u>Project Management Duties and Responsibilities</u> • Manage the overall conduct of the project; • Plan the activities of the project and monitor progress against the approved workplan; • Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work; • Monitor events as determined in the project's monitoring plan, and update the plan as required; • Provide support for completion of assessments required by UNDP, spot checks and audits; • Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form; • Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports; • Monitor progress, watch for plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results; • Ensure that changes are controlled and problems addressed; • Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities; • Prepare and submit financial reports to UNDP on a quarterly basis; • Manage and monitor the project risks – including social and environmental risks - initially identified and submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log; • Capture lessons learned during project implementation; • Prepare revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required; • Prepare the inception report no later than one month after the inception workshop; • Ensure that the project results framework's indicators are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR; • Assess major and minor amendments to the project within the parameters set by UNDP-GEF; • Prepare the GEF PIR jointly with the M&E Specialist;

		- Support the Mid-term review and Terminal Evaluation process. The PTM will be the primary contact for the Mexico Child Project and will be responsible for the following: Identify appropriate staff to participate in meetings; Identify the correct counterparts for capacity building needs assessment; Help identify trainees for capacity building events; Identify opportunities for peer-to-peer exchanges, study tours and other capacity building events; Participate in the SC meetings and other cohort events; Identify the right counterpart to help organize training events sponsored by the Global Platform; Help with the transfer of lessons learned to the Global Platform and support communications products; liaise for the preparation of the annual Programme reporting and; For other organizational or coordination issues between the Global Platform and the Country Child Projects; represent the country in meetings and events related to the Programme as needed to discuss results, share good practices and lessons learned. <u>Project Technical Responsibilities</u> - Assess water quality capacity and training needs of key institutions and to develop and supervise the participatory monitoring of water quality program from source-to-sea; - Develop, in collaboration with IOC and FAO, a national strategy for ocean oxygen and nutrient data management and to support the management and availability of scientific and technical data.
Operations Officer Rate: 39,550/year	5 years	Under the guidance and supervision of the Project Technical Coordinator and Project Manager, the Project Finance Officer will carry out the following tasks: <u>Duties and Responsibilities</u> - Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the Project Technical Coordinator and Project Manager; - Review project expenditures and ensure that project funds are used in compliance with the Project Document and GoI financial rules and procedures; - Validate and certify FACE forms before submission to UNDP; - Provide necessary financial information as and when required for project management decisions; - Provide necessary financial information during project audit(s); - Review annual budgets and project expenditure reports, and notify the Project Technical Coordinator and Project Manager if there are any discrepancies or issues; - Consolidate financial progress reports submitted by the responsible parties for implementation of project activities;

		• Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports.
Project Administrator Rate: \$47,350/year	5 years	Under the guidance and supervision of the Project Technical Coordinator and Project Manager , the Project Assistant will carry out the following tasks: <u>Duties and Responsibilities</u> • Assist the Project Technical Coordinator and Project Manager in day-to-day management and oversight of project activities; • Assist the M&E officer in matters related to M&E and knowledge resources management; • Assist in the preparation of progress reports; • Ensure all project documentation (progress reports, consulting and other technical reports, minutes of meetings, etc.) are properly maintained in hard and electronic copies in an efficient and readily accessible filing system, for when required by PB, TAC, UNDP, project consultants and other PMU staff; • Provide PMU-related administrative and logistical assistance.
For Technical Assistance		
Local / National contracting		
Governance and Public Policy Specialist Rate: \$39,600/year	5 years	Under the guidance and supervision of the Project Technical Coordinator and Project Manager , the Governance and Public Policy Specialist will carry out the following tasks: <u>Duties and Responsibilities</u> • Support the strengthening of existing inclusive multi-stakeholder governance structures and mechanisms to improve the integrated management of watersheds and marine-coastal zones and to define goals and strategies to reduce water pollution and hypoxia; • Support the developed and/or updating of planning, regulatory, land and/or marine management, and integrated watershed management instruments with public participation.
Sustainable Financing Specialist Rate: \$39,600/year	5 years	Under the guidance and supervision of the Project Technical Coordinator and Project Manager , the Sustainable Financing Specialist will carry out the following tasks: <u>Duties and Responsibilities</u> • Make available inclusive mixed-financing and investment instruments for sustainable water pollution reduction; • Support the development of investment feasibility assessments for rehabilitating WWTPs in selected municipalities and other effective technologies to reduce water pollution; • Develop recommendations for investing criteria in NbS; • Support financial capacity-building to implement BMPs and NbS to reduce land-based nutrient pollution and marine hypoxia and to facilitate access to financing in the three target landscape; • Support the update and/or development of plans, business models, and organizational manuals for OSSEs to transition to best practices and NbS implementation; • Facilitate access to financing by key project stakeholders;

		• Provide financial advise for the implementation of inclusive municipal projects for the adoption of best practices and NbS for the reduction of water pollution and marine hypoxia; • Support the selection and implementation of projects with local organizations, indigenous peoples and OSSEs for the adoption of best practices and NbS supported by grants and other sources of financing.
Field Officer (3) Rate: \$2,727.50/month- each	60 months over 5 years	Under the guidance and supervision of the Project Technical Coordinator and Project Manager , the Field Officers will carry out the following tasks: <u>Duties and Responsibilities</u> • Support the collection and analysis of data to address nutrient pollution and marine hypoxia, and the participatory water quality monitoring activities including training; • Support improved governance at subnational I levels to reduce NbS water pollution; • Provide technical support to municipal projects for the adoption of best practices and NbS for the reduction of water pollution and marine hypoxia; • Support the selection and implementation of projects with local organizations, indigenous peoples and OSSEs for the adoption of best practices and NbS; • Support conservation, restoration and hydrological rehabilitation interventions in watersheds and marine-coastal zones in three target landscapes; • Support the implementation of the community and citizen science monitoring plan for biodiversity and water quality in watersheds and marine-coastal areas; • Support the documentation, management and sharing of knowledge for the reduction of nutrient pollution and marine hypoxia and of innovative solutions.
Social and Environmental Safeguards Specialist Rate: \$19,775/year	5 years	Under the guidance and supervision of the Project Technical Coordinator and Project Manager , the Gender /Safeguards Expert will carry out the following tasks: <u>Duties and Responsibilities</u> • Monitor progress in development/implementation of the project ESMP/ESMF ensuring that UNDP's SES policy is fully met and the reporting requirements are fulfilled; • Oversee/develop/coordinate implementation of all safeguard related plans; • Ensure social and environmental grievances are managed effectively and transparently; • Review the SESP annually, and update and revise corresponding risk log; mitigation/management plans as necessary; • Ensure full disclosure with concerned stakeholders; • Ensure environmental and social risks are identified, avoided, mitigated and managed throughout project implementation; • Monitor progress in implementation of the project Gender Action Plan ensuring that targets are fully met and the reporting requirements are fulfilled; • Oversee/develop/coordinate implementation of all gender-related work; • Review the Gender Action Plan annually, and update and revise corresponding management plans as necessary;

		• Work with the M&E officer to ensure reporting, monitoring and evaluation fully address gender and safeguard issues of the project.
Indigenous Peoples Expert Rate: \$39,550/year	5 years	Under the guidance and supervision of the Gender /Safeguards Expert and the Project Technical Coordinator and Project Manager , the Indigenous Peoples Expert will carry out the following tasks: <u>Duties and Responsibilities</u> • Develops guidelines and ensure FPIC in line with the IPPF; • Contribute to the development Project IPP and other related plans, as needed; • Support implementation of project activities with IPs including the implementation of the IPP; • Coordinates with the Social and Environmental Safeguards Specialist to ensure compliance with the UNDP SES standards.
Knowledge Management and Capacity Building Specialist Rate: \$39,600/year	5 years	Under the guidance and supervision of the Project Technical Coordinator and Project Manager , the Knowledge Management and Capacity Building Specialist will carry out the following tasks <u>Duties and Responsibilities</u> • Lead the organizational, technical, and financial capacity-building program to implement BMPs and NbS and other project training-related activities; • Assess the impact of capacity building activities and document lessons learned; • Support thematic CoPs for BMPs • Identify and systematize information on lessons learned and best practices related to the project components; • Develop knowledge management and communication tools and other related products for sharing information, and monitor their use; • Coordinate activities with the GEF-8 GCP/CHO IP Team and promote the use IP knowledge management and communication tools; • Contribute to monitoring, evaluation, and learning within the framework of the CHO IP; • Promote participation in knowledge management platforms; • Work with the M&E officer to ensure reporting, monitoring and evaluation fully address KM and communication issues of the project.
Project Monitoring and Evaluation (M&E) Officer Rate: \$33,145/year	5 years	Under the guidance and supervision of the Project Technical Coordinator and Project Manager , the M&E Officer will carry out the following tasks: <u>Duties and Responsibilities</u> • Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards; • Ensure project's M&E meets the requirements of the Government, the UNDP Country Office, and UNDP-GEF; develop project-specific M&E tools as necessary; • Oversee and ensure the implementation of the project's M&E plan, including periodic appraisal of the Project's Theory of Change and Results Framework with reference to actual and potential project progress and results;

		• Update and coordinate the implementation of the stakeholder engagement plan; • Oversee and guide the design of surveys/ assessments commissioned for monitoring and evaluating project results; • Facilitate mid-term and terminal evaluations of the project; including management responses; • Facilitate annual reviews of the project and produce analytical reports from these annual reviews, including learning and other knowledge management products; • Support project site M&E and learning missions; • Visit project sites as and when required to appraise project progress on the ground and validate written progress reports. • Prepare the GEF PIR jointly with the Project Technical Coordinator and Project Manager ; • Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans; • Monitor and track progress against the GEF Core indicators; • Support the Mid-term review and Terminal Evaluation process.
National Expert in Monitoring and Evaluation Rate: \$11,000 lump sum	Year 3	<u>Duties and Responsibilities</u> • Support the mid-term project review as required by the Government, UNDP Country Office, and UNDP-GEF. Support the preparation project mid-term review report, including responses to senior staff comments.
National Expert in Monitoring and Evaluation Rate: \$8,000 lump sum	Year 5	<u>Duties and Responsibilities</u> • Support the Terminal Evaluation of the project as required by the Government, UNDP Country Office, and UNDP-GEF. Support the preparation project mid-term review report, including responses to senior staff comments.
Field Assistant Rate: \$14,205/year	5 years	Under the guidance and supervision of the Project Technical Coordinator and Project Manager and the Project Monitoring and Evaluation Officer, the Field Assistant will carry out the following tasks: <u>Duties and Responsibilities</u> · Support the implementation of the participatory community and citizen science monitoring plan for biodiversity and water quality in watersheds and marine-coastal areas · Provide field support to project site M&E and learning missions; · Provide field support to the Mid-term review and Terminal Evaluation process.
International contracting		
International Safeguards Expert Rate: \$700/day	120 days; year 1	Under the guidance and supervision of the Project Technical Coordinator and Project Manager , the International Safeguards Expert will carry out the following tasks <u>Duties and Responsibilities</u> • Develop the ESMP, IPP and other SES-related plans in line with the ESMF/IPPF.

International Expert in Monitoring and Evaluation Rate: \$20,000 lump sum	Year 3	<u>Duties and Responsibilities</u> • Conduct mid-term project review as required by the Government, UNDP Country Office, and UNDP-GEF. • Prepares project mid-term review report, including responses to senior staff comments.
International Expert in Monitoring and Evaluation Rate: \$18,000 lump sum	Year 5	<u>Duties and Responsibilities</u> • Conduct Terminal Evaluation of the project as required by the Government, UNDP Country Office, and UNDP-GEF. Prepares project final evaluation report, including responses to senior staff comments.

Annex 8: Stakeholder Engagement Plan

1. Introduction/ Project Description

The "Forging Alliances for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions" project will be responsible for the development of a country-level detailed SAEP covering geographically the source-to-sea continuum, which will be refined and operationalized at the start of the project. The country-level SAEP will include: (1) a stakeholder mapping and identification; (2) a stakeholder analysis characterization, including the following parameters: stakeholder type, sectors, stakeholder tiers, importance, interest, influence, action arena, positionality, and gender flag; (3) a stakeholder grouping to identify key categories of stakeholder to be prioritized; (4) the development of an engagement strategy with specific mechanisms and activities per key stakeholder groups. A template database to use for the stakeholders grouping, analysis and characterization will be provided by the GCP and used by the CPs to enable the development of an IP level database to be used for Communication activities as well as Stakeholder Engagement activities at the Global, Regional, and CP levels.

As part of the SAEP, the "Forging Alliances for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions" project will develop and implement a Private Sector Engagement Strategy (PSES) to ensure collaboration with key private sector entities, such as fertilizer companies, agri-food businesses, water supply firms, tourism businesses, fishing companies, the banking industry etc. As for the SAEP, the PSES at country level will need a detailed process for stakeholder mapping, characterization, categorization, leading to a comprehensive plan with specific engagement mechanisms and activities per key private sector groups that will be identified.

The "Forging Alliances for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions" project will work with the GCP to ensure a harmonized approach to developing, reviewing, and implementing the SAEP and the PSES. Towards this end, the CP will dedicate time to support the GCP revise the SEAP at GCP/IP level. The "Forging Alliances for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions" will use its own financial support from the IA to develop and implement these plans but may require additional technical support from the CGP, which would require additional financial contribution from the "Forging Alliances for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions" project budget.

1.1. Project Background

The project "Forging Alliances for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions" (Ocean Alliances) is part of the Clean and Healthy Oceans Integrated Program (CHO IP) under the eighth replenishment cycle of the Global Environment Facility (GEF-8). The objective of this project is to address marine hypoxic zones by mitigating coastal pollution from agricultural, industrial, and municipal sources through a combination of harmonized regulatory and policy measures, infrastructure investments, and Nature-based Solutions (NbS). The initiative focuses on three intervention zones: the lagoon system of the Isthmus of Tehuantepec in the Pacific, the Sontecomapan Lagoon in the Gulf of Mexico, and the Río Hondo basin in the Caribbean. The goal in these areas is to promote sustainable blue economies by reducing land-based pollution to prevent the harmful effects of eutrophication and hypoxia on coastal and marine environments, thereby supporting the ecological, social, and economic well-being of countries and large marine ecosystems (LMEs) with a watershed-based approach.

To achieve its objective, the project includes five components in line with the CHO IP:

- Component 1: Improvement of information and resources to guide actions for the prevention and reduction of water pollution and marine hypoxia (Component type: technical assistance)
- Component 2: Support for strengthening policy, regulatory, and investment frameworks to encourage and finance water pollution mitigation (technical assistance)
- Component 3: Support for demonstrating best management practices (BMP) and investments showcasing innovative solutions to reduce marine hypoxia (technical assistance and investment)
- Component 4: Ensure the integration of knowledge management, communications, gender, and stakeholder engagement throughout the integrated program (IP) (technical assistance)
- Component 5: Project monitoring and evaluation (technical assistance)

The expected outcomes will contribute to the following key GEF indicators:

Key Indicators	Estimates
Land and ecosystems under restoration (hectares)	11,000
Landscape area under improved practices (hectares)	211,277
Marine habitat area under improved practices (hectares)	590,377
Greenhouse gas emissions mitigated (metric tons of CO ₂ e)	5,994,766
Shared water ecosystems under new or improved cooperative management (count)	3
Beneficiaries disaggregated by gender (number of people)	67,065 people (50% women)

The project duration is five years, with GEF funding of \$13,461,469 USD and national co-financing of \$83,961,898 USD, totaling \$97,423,367 USD

The project is led by the Secretariat of Agriculture and Rural Development (SADER), leveraging its territorial capacity for implementation, with the United Nations Development Programme (UNDP) as the GEF Implementing Agency. SADER will allocate significant resources through subsidy programs to support small and medium-scale agricultural and fisheries producers, facilitating a transition to sustainable practices and improving well-being. The project also seeks to align economic growth with ecosystem service conservation and restoration, with the Interoceanic Corridor of the Isthmus of Tehuantepec (CIIT) promoting private investment through investment hubs. These hubs will create green jobs and support sustainable livelihoods.

1.2. Purpose of the Comprehensive Stakeholder Engagement Plan

The Comprehensive Stakeholder Engagement Plan (SEP) aims to identify various stakeholders and establish a strategy to engage each subgroup effectively. Simply put, it sets out a suitable approach for participation, consultations and engagement activities for each stakeholder and between each group of stakeholders. This is intended to foster a climate of understanding that actively involves people impacted by the project, as well as other interested parties, reaching them promptly and ensuring each group has a chance to express their views and concerns. The SEP has several key functions:

- i) identifying and analyzing stakeholders.
- ii) planning engagement methods, such as using effective communication for consultations and disclosure.
- iii) creating platforms for influencing decisions.
- iv) outlining roles and responsibilities of different parties in implementing the Plan, and
- v) establishing a grievance redress mechanism (GRM).

1.3. Project Beneficiaries

The project aims to directly benefit 25,218 people. Due to the project's diverse objectives, we engage with multiple types of stakeholders across various government levels, including federal, state, and municipal entities, CSO, and indigenous organizations. Federal institutions are involved in the project in two ways: some play a direct role in implementation, while others participate indirectly through partnerships. In contrast, state and municipal governments are actively involved in executing region-specific strategies and play a crucial role in local environmental governance. Additionally, indigenous territories and their organizations — which often include parallel structures led by both men and women — are essential for project implementation, particularly for the management of lands designated for improvement. Finally, productive organizations focused on sustainable practices for the cultivation and extraction of non-timber products are also key participants. The Stakeholder Analysis conducted during the PPG phase identified the following relevant stakeholders for the project:

Stakeholder	How they Benefit from the project
Federal level institutions	National environmental authorities will gain opportunities for policy analysis and dialogue around environmental regulations regarding water pollution (eutrophication) and marine hypoxia, as well as strengthened intersectoral collaboration. This includes tools to address eutrophication in rivers and coastal areas, enabling improved monitoring and management of nutrient loads. Additionally, intersectoral collaboration fostered by the project will facilitate coordinated action across sectors to mitigate these environmental challenges.
State level institutions	State governments will receive technical support to implement targeted measures addressing eutrophication in their regional watersheds. Resources will enable these states to improve wastewater management, reduce agricultural runoff, and implement policies to prevent nutrient overloading in critical water bodies. This will enhance their capacity to address marine hypoxia along coastal areas.
Municipal level institutions	Local governments will receive resources and training that empower them to address local environmental challenges effectively and integrate sustainable practices into community planning. In addition, these stakeholders will benefit from insights on monitoring and mitigating water pollution at the watershed level. Resources provided will empower municipalities to implement localized solutions, such as improved waste management and eco-friendly agricultural practices, reducing nutrient inflow into rivers and estuaries that contribute to marine hypoxia.
Indigenous Authorities	These groups will receive support for sustainable land management practices aimed at reducing nutrient runoff from indigenous territories. The recognition and integration of traditional ecological knowledge will be central to addressing water pollution, fostering the restoration of natural filtration systems that help mitigate eutrophication.
Farmer Organizations	Farmers will receive training and resources to adopt sustainable agricultural practices, enhancing land productivity and long-term environmental sustainability. These practices will include nutrient-efficient agriculture, reducing fertilizer use, and implementing sustainable irrigation, directly lowering nutrient runoff into water systems, addressing eutrophication at the source, and protecting aquatic ecosystems.
Producer Organizations	These organizations will receive guidance and resources to adopt sustainable fishing practices, reducing the impact of hypoxia on fish stocks. Support will include capacity-building for ecosystem management, ensuring long-term viability of fishing activities.
Fishing organizations	Fishing communities will be educated on the impacts of marine hypoxia on fish populations and trained to adapt practices to minimize ecological disruption. The project will also facilitate the implementation of strategies to restore oxygen levels in affected marine ecosystems.
Private Companies	Private companies involved in the project will benefit from new opportunities to implement sustainable business practices, reducing their environmental footprint and enhancing their market appeal. They may have the opportunity to participate in innovative water treatment technologies and nutrient management solutions. By adopting these approaches, companies can contribute to reducing water pollution and gain a competitive edge in sustainable practices.
Civil Society Organizations (CSOs) and Academic Institutions	NGOs and academic institutions will gain access to valuable data, collaborative networks, and support for research, empowering them to advocate for and implement evidence-based environmental solutions. These stakeholders will be considered for advanced research and evidence-based advocacy efforts, enabling these organizations to play a pivotal role in addressing water pollution and hypoxia through community engagement and scientific innovations.

Note. The list of potential beneficiaries can be consulted in Sub-Annex 8.1.

1.4. Potential Environmental and Social Risks and Management Measures

The project adheres to UNDP's Social and Environmental Standards (www.undp.org/ses), ensuring meaningful, effective, and informed engagement with stakeholders. For details on the Social and Environmental Standards Procedure (SESP) and the identification of environmental and social risks associated with the project, please refer to Annex 6 of the Project Document.

2. Regulations and Requirements

2.1. UNDP's Social and Environmental Standards Requirements Related to Stakeholder Engagement

The UNDP Social and Environmental Standards (SES), Part C, on the Social and Environmental Management System, mandates meaningful, effective, and informed participation of stakeholders in developing and implementing UNDP programs and projects. Stakeholder engagement is an ongoing process that may include various elements: stakeholder analysis and planning, information disclosure and dissemination, consultation and meaningful participation, dispute resolution and grievance redress, continuous reporting to affected communities and stakeholders, and involvement of stakeholders in monitoring and evaluation.

Stakeholder analysis and engagement must be conducted in a gender-responsive, culturally sensitive, non-discriminatory, and inclusive manner, ensuring that vulnerable and marginalized groups are identified and provided with opportunities to participate. Where conditions are not conducive to inclusive participation, measures are taken to facilitate effective engagement.

The objective of meaningful, effective, and informed stakeholder engagement and participation is to build and sustain a constructive relationship with stakeholders, aiming to prevent or address any potential risks in a timely manner. The scale and frequency of engagement should correspond to the activity's nature, the magnitude of potential risks and impacts, and any concerns raised by affected communities.

UNDP consultation processes are designed to identify stakeholder priorities and offer them opportunities to voice their views at every stage of the decision-making process on issues affecting them, allowing project teams to consider and respond to those views. In alignment with UNDP's Information Disclosure Policy, UNDP is committed to ensuring that pertinent information about its programs and projects is disclosed to assist affected communities and other stakeholders in understanding the opportunities, risks, and impacts of the proposed activities. It also ensures that information about a program or project's purpose, scope, duration, risks, and potential impacts is made available promptly, in accessible locations, and in a format and language understandable to affected persons and other stakeholders, including the public. This approach enables stakeholders to provide meaningful input into the design and implementation of programs and projects.

2.2. National Legislation on Stakeholder Engagement

National regulations and sector-specific guidelines governing citizen participation processes and access to public information, including those related to complaints and grievance handling, have been carefully considered. Both gender and intercultural approaches are also incorporated. The table below provides a summary of the consolidated national regulations:

List of regulations related to NGOs, productive sectors, interested parts, and citizen participation and consultation.

Law
Political Constitution of the United Mexican States
General Law of Ecological Balance and Environmental Protection
General Law on Climate Change

Law
General Law for Equality between Women and Men
Federal Law for the Promotion of Activities Carried Out by CSOs
General Law on Sustainable Fisheries and Aquaculture
General Wildlife Law
General Law on Sustainable Forest Development
General Law on Women's Access to a Life Free of Violence
Federal Environmental Responsibility Law
Sustainable Rural Development Law
National Water Law
Regulation of the National Water Law
Law of the National Institute of Indigenous Peoples
Agrarian Law
Planning Law
Guidelines for Promoting, Forming, Organizing, and Operating Mechanisms for Citizen Participation in Federal Public Administration Agencies and Entities
Official Mexican Norm NOM-001-SEMARNAT-2021
Official Mexican Norm NOM-003-SEMARNAT-1997
Official Mexican Norm NOM-127-SSA1-2021

Note. The description of each regulation related to NGOs, productive sectors, interested parts, and citizen participation and consultation can be found in Sub-Annex 8.2.

2.3. National Legislation on Indigenous Peoples

Mexico's national legislation on Indigenous Peoples is rooted in the principles of recognizing and protecting the rights, cultures, and territories of Indigenous communities. Key frameworks, such as Article 2 of the Constitution and the General Law on Linguistic Rights of Indigenous Peoples, establish the foundation for safeguarding Indigenous autonomy, cultural preservation, and participation in national development. These laws emphasize the right to self-determination, access to justice, and equitable opportunities while mandating government institutions to respect Indigenous customs and traditions. Additionally, Mexico's legislation aligns with international commitments, such as the International Labor Organization's Convention 169, ensuring that Indigenous Peoples have a voice in decision-making processes affecting their communities and promoting an inclusive society that values diversity and intercultural dialogue.

List of regulations related to indigenous peoples' rights and participation

Political Constitution of the United Mexican States
Law of the National Institute of Indigenous Peoples
General Law on the Linguistic Rights of Indigenous Peoples

Note. The description of each regulation related to indigenous peoples' rights and participation can be found in Sub-Annex 8.3.

2.4. National Legislation on Gender

Mexico's national legislation on gender is designed to promote gender equality, protect women's rights, and prevent gender-based discrimination and violence. Key laws such as the General Law for Equality between Women and Men and the General Law on Women's Access to a Life Free of Violence establish the foundation for gender equality in all areas of public and private life. These laws mandate actions to eliminate discrimination, foster equitable opportunities, and ensure women's active participation in social, economic, and

political spheres. Additionally, Mexico's legislation aligns with international commitments to gender equity, incorporating a human rights-based and intersectional approach to address the specific needs of marginalized groups, and to create a safer, more inclusive society for all genders.

List of regulations related to gender equality and women participation

Law
General Law of Ecological Balance and Environmental Protection
General Law for Equality between Women and Men
General Law on Sustainable Forest Development
Agrarian Law
Sustainable Rural Development Law
General Law on Sustainable Fisheries and Aquaculture
National Water Law
General Law on Climate Change
Planning Law

Note. The description of each regulation related to gender equality and women participation can be found in Sub-Annex 8.4.

3. Comprehensive Stakeholder Engagement Plan (SEP)

UNDP is committed to addressing the interests and expectations of project stakeholders by developing an approach that engages each group according to their role and connection with the project. The objective is to foster an environment of inclusivity and understanding that encourages active involvement from affected communities and other stakeholders, ultimately supporting better decision-making. The Stakeholder Engagement Plan (SEP) is designed to:

- Identify the stakeholders, their key interests, and the rationale for their involvement.
- Steps and actions to ensure meaningful consultation and inclusive participation, including effective information sharing.
- Define roles and responsibilities for implementing the engagement plan.
- Provide an estimated timeline for engagement activities across the project lifecycle.
- Estimate a budget allocation for stakeholder engagement throughout the project, including capacity-building support where needed.
- Establish key indicators to monitor stakeholder engagement, along with measures to track and report on progress and address arising issues.

3.1 Identification of stakeholders

The Stakeholder Engagement Plan (SEP) starts with a comprehensive identification of the various stakeholders that will play critical roles throughout the project's lifecycle. Recognizing the diversity and complexity of stakeholder interests, the SEP seeks to understand not only the identity of each stakeholder but also their core interests, influence, and level of impact or benefit derived from the project.

In the initial stages, a rigorous mapping exercise was conducted, resulting in the identification of 222 institutions across seven main categories: Federal Government (30 institutions), International Cooperation (7), Private Sector (9), NGOs (59), State Governments (45), Municipal Governments (35), and Productive Organizations (37). Each group brings unique perspectives and contributions to the project, ranging from policy support and resource allocation to technical expertise, local knowledge, and community mobilization. A detailed analysis of each institution is presented in Annex 8, outlining their roles, descriptions, and assessments of their importance, influence, and priority within the project. Stakeholders are classified as either direct beneficiaries or interested parties, helping define the engagement strategy and effectively target resources and communication to foster active

participation and address key interests and expectations. By distinguishing between beneficiaries and interested parties and continuously analyzing their priorities and roles, the SEP can adapt engagement strategies to maximize the project's impact, keeping stakeholders informed, consulted, and involved throughout the project. This identification process is essential for creating a responsive, inclusive engagement framework that supports meaningful collaboration during implementation.

3.2 Inclusive participation and information sharing

Inclusive participation and effective information sharing are critical components of the project's engagement strategy, ensuring that all stakeholders, particularly marginalized and vulnerable groups, including women, indigenous peoples, and individuals with disabilities, are adequately informed and actively involved throughout the project lifecycle. The project will employ accessible, culturally appropriate, and context-sensitive methods for disseminating information to foster transparency and enable meaningful engagement.

Tailored Information Channels. To meet the diverse needs of stakeholders, the project will use various information-sharing channels, including audiovisual materials, printed brochures, local community radio, and accessible online platforms. Communication materials will be gender-sensitive and inclusive, addressing challenges faced by women such as limited technology access, time constraints, and low literacy rates. Information will be provided in local languages and formats for populations with limited literacy and digital access, including visual storytelling and practical examples for rural women. Local actors and project counterparts will ensure equitable outreach, and dedicated workshops will be held to familiarize women with the project's goals, methodologies, and resources, empowering them to participate meaningfully.

Women's Participation and Gender Integration. The project recognizes the findings of the Gender Analysis, which highlight systemic barriers to women's participation in decision-making processes, particularly in rural areas. To address these challenges, the project will implement specific measures drawn from the Gender Action Plan, such as:

- **Capacity Building for Women:** Tailored training sessions will be held to strengthen women's leadership skills and technical knowledge, enabling their active participation in decision-making forums. These sessions will be timed and located to accommodate women's schedules and responsibilities.
- **Gender-Specific Community Mobilization:** The project will establish women-focused community groups to act as a platform for collective action and dialogue. These groups will be integral in disseminating project updates and gathering feedback from women participants.
- **Gender-Sensitive Monitoring and Evaluation:** Indicators will be developed to measure the participation and impact of women in project activities. For instance, the project aims to achieve gender parity in community workshops and ensure that at least 50% of community representatives consulted are women.

Free, Prior, and Informed Consent (FPIC). The project will adhere to UNDP's Social and Environmental Standards by implementing the principles of Free, Prior, and Informed Consent (FPIC) with indigenous and rural women as a priority. Following international best practices, FPIC consultations will include gender-sensitive strategies, ensuring that women are not only informed but also empowered to voice their perspectives. Key FPIC principles include:

- **Free:** Participation will be voluntary, free from coercion, and held in safe and comfortable environments for women.
- **Prior:** Consultations will be scheduled well in advance of project activities to allow women sufficient time for deliberation and collective decision-making.
- **Informed:** Information will be shared in formats accessible to women, including visual aids and community meetings conducted in local languages.
- **Consent:** Women will have an equal role in making decisions, respecting their traditional and cultural decision-making processes.

The FPIC process will be led by culturally and gender-sensitive personnel, trained to understand the unique needs and challenges faced by women in project areas. Indigenous women will play an active role in shaping the FPIC approach to align with their cultural practices and expectations. Building on the Gender Analysis, the project will address structural inequalities limiting women's participation by encouraging their representation in governance structures for gender parity in leadership roles, prioritizing women-led initiatives in the project's implementation, and using the Gender Action Plan to ensure women in rural and Indigenous communities have equal access to project benefits, such as financial resources, training, and decision-making opportunities. These measures will amplify women's voices and recognize their contributions, ensuring a more inclusive and effective implementation process.

Project outputs that require consultation and FPIC

Output	Requirements
Outcome 1.1: Increased availability of technical and scientific information at the subnational and national levels informs decision making and promotes collaborative action to reduce water pollution and marine hypoxia in three prioritized landscapes	<u>Consultation Requirement:</u> • Consult with indigenous peoples and local communities on the collection, use, and dissemination of environmental data, ensuring transparency about the purposes and implications of such data. • Incorporate traditional knowledge regarding water resources only with explicit community approval, ensuring that local knowledge is contextualized appropriately in outputs. • Integrate culturally tailored participatory approaches when designing and implementing community-based water resource monitoring systems. <u>FPIC Requirement:</u> • Required if indigenous traditional knowledge, practices, or specific cultural references are incorporated into technical and scientific documentation or shared publicly. This includes securing documented community consent for the collection and use of such data. • Necessary for activities involving geographic mapping of indigenous territories if they overlap with sensitive cultural or sacred sites.
Outcome 2.1: Improved regional and national governance to reduce water pollution with NbS.	<u>Consultation Requirement:</u> • Conduct thorough consultations with indigenous communities and relevant governmental and non-governmental stakeholders when drafting governance frameworks for water resource management. • Ensure that the governance mechanisms reflect local traditions and practices related to resource stewardship and align with existing communal norms. <u>FPIC Requirement:</u> • Mandatory when governance policies or regulatory measures directly impact indigenous lands, territories, or culturally significant water sources. • Activities affecting customary land tenure systems, community decision-making structures, or traditional water rights require prior consent.
Outcome 2.2: Enabling environment strengthened to promote investments with water pollution reduction objectives.	<u>Consultation Requirement:</u> • Engage communities in discussions around investment projects, emphasizing transparency in financial flows, potential environmental impacts, and long-term benefits. • Collaborate with indigenous leaders and community representatives to ensure investments align with cultural values and address socio-environmental concerns. <u>FPIC Requirement:</u> • Required for investment activities impacting indigenous lands, natural resources, or traditional livelihood practices. • Consent is also essential for initiatives introducing new technologies or practices within indigenous territories.
Outcome 3.1: Technical, organizational and financial capacities of local organizations strengthened	<u>Consultation Requirement:</u> • Facilitate consultations with local organizations, including indigenous-led groups, to identify capacity-building needs and align training programs with community priorities.

to promote land-based water pollution reduction measures through good practices and NbS.	• Ensure training materials and methodologies are culturally appropriate and accessible in indigenous languages. <u>FPIC Requirement:</u> • Necessary if capacity-building activities involve training on traditional ecological practices or access to indigenous lands for demonstration purposes. • Required for activities that may introduce changes to traditional land use practices or involve the adoption of new techniques within community territories.
Outcome 3.2: Adoption of good practices and NbS contributes to the decrease of water pollution and hypoxia.	<u>Consultation Requirement:</u> • Collaborate with indigenous communities and stakeholders to co-design best practices for sustainable water use and pollution reduction. • Utilize participatory approaches to ensure practices are environmentally sustainable and culturally sensitive. <u>FPIC Requirement:</u> • Required for the adoption of practices involving significant alterations to traditional ecological practices, natural resource management systems, or the use of community land and water resources. • Consent must also be secured if practices involve sensitive cultural or spiritual sites.

3.3 Roles and responsibilities implementing the SEP

The SEP for this project will be implemented through a coordinated effort led by UNDP and supported by key federal institutions, primarily SADER, which has direct responsibility over the project. Additional support will come from SEGOB, CIIT, and SEMARNAT, each of which will contribute according to their areas of expertise and influence. These institutions have specific roles in ensuring that the SEP is executed effectively and inclusively, aligning with the overall objectives of the project. UNDP, the lead implementing agency, will oversee all stakeholder engagement activities throughout the project cycle. Its responsibilities will include:

- **Coordination and Monitoring.** Ensuring that SEP actions are conducted in alignment with project objectives and timelines, including coordinating with other implementing partners and stakeholders.
- **Capacity Building and Inclusivity.** Organizing training and informational sessions to engage diverse stakeholder groups, including Indigenous Peoples, local communities, and marginalized groups, ensuring inclusivity.
- **Communication and Information Sharing.** Utilizing multiple communication channels to disseminate information and receive feedback, including managing virtual communication platforms and digital engagement strategies.
- **Grievance Redress Mechanism.** Establishing and overseeing a robust grievance redress mechanism to address any concerns from stakeholders and affected communities throughout the project lifecycle.

SADER, as the main federal agency with oversight of the project, will play a central role in implementing SEP activities. Its responsibilities include:

- **Stakeholder Engagement.** Leading consultations and outreach with agricultural stakeholders and coordinating with local governments, NGOs, and community organizations.
- **Technical Support.** Providing expertise on sustainable agricultural practices, supporting local capacity-building initiatives, and guiding productive organizations in sustainable practices.
- **Policy Alignment.** Ensuring that project activities align with national agricultural and environmental policies, contributing to the effectiveness and sustainability of the project's outcomes.

SEGOB, as one of the main coordinating and supporting federal institutions, will play an essential role in facilitating stakeholder engagement through governance and policy channels, supporting:

- Institutional Coordination. Facilitating communication and cooperation among federal, state, and municipal governments, ensuring alignment and coordination across government levels.
- Social Inclusion and Community Engagement. Supporting inclusive engagement strategies to ensure active participation from Indigenous communities, vulnerable groups, and local authorities.
- Support in Conflict Resolution. Acting as an intermediary to resolve any disputes or conflicts that may arise between stakeholders, ensuring constructive dialogue and collaborative decision-making.

CIIT, in its role of the other main coordinator and supporting federal institution, will support the project by facilitating engagement in its regions of influence, particularly with local economic and productive stakeholders. CIIT's responsibilities include:

- Regional Stakeholder Coordination. Acting as a liaison between local stakeholders in the Istmo de Tehuantepec region, fostering collaboration with municipal governments, Indigenous communities, and local organizations.
- Economic Development Initiatives. Identifying opportunities to integrate sustainable practices into local economic development and resource management within this area.
- Facilitating Local Partnerships. Engaging with the private sector and productive organizations, including cooperatives and industry groups, to promote sustainable practices in alignment with project goals.

SEMARNAT, as the federal authority on environmental policy, will support SEP implementation through:

- Environmental Oversight. Ensuring that project activities meet national environmental standards and safeguarding biodiversity and natural resources in project areas.
- Technical Guidance on Environmental Practices. Providing expertise on environmental conservation practices, guiding project stakeholders on compliance with relevant policies and regulations.
- Public Awareness and Outreach. Collaborating with UNDP to develop accessible materials and resources to raise environmental awareness among stakeholders.

CONAGUA, as the federal authority responsible for water management in Mexico, will play a key role in the implementation of the SEP by ensuring water-related project components align with national regulations and strategies for sustainable water resource management. CONAGUA's responsibilities include:

- Regulatory Compliance. Ensuring that project activities comply with federal water laws, policies, and technical guidelines related to water quality and pollution reduction.
- Technical Expertise and Support. Providing technical input and guidance for the design and implementation of water pollution mitigation measures, including NbS and other best management practices.
- Stakeholder Engagement. Facilitating consultations and engagement with stakeholders directly impacted by water-related issues, including municipal governments, state agencies, and community organizations.
- Data and Monitoring Systems. Supporting the collection, analysis, and dissemination of hydrological and water quality data to inform decision-making processes and enhance transparency.

These institutions will collaborate closely to integrate stakeholder engagement across all project aspects. By combining their expertise, resources, and networks, they will ensure that engagement activities are cohesive, culturally appropriate, and responsive to stakeholders' needs. This collaborative approach is essential for transparency, building trust, and maximizing the project's impact.

The following principles will guide the activities to ensure an effective stakeholder engagement aligned with best practices throughout the project implementation phase:

- **Openness:** Public consultations will be conducted openly across the project cycle, ensuring an environment free from manipulation, coercion, or undue influence, fostering transparency and trust.
- **Informed Participation and Feedback:** Information will be shared widely with all stakeholders in accessible and appropriate formats. Mechanisms will be established for stakeholders to provide feedback, with a structured process to assess and address their comments and concerns.
- **Inclusiveness and Sensitivity:** A thorough stakeholder analysis will support clear communication and foster strong relationships. The project will promote an inclusive consultation process, encouraging the participation of all stakeholders and ensuring equal access to information. Engagement methods will be chosen with sensitivity to specific stakeholder needs, especially for communities at risk of exclusion from project benefits, such as women, youth, indigenous groups, and people with disabilities.
- **Flexibility:** The project will adopt flexible communication channels to accommodate diverse stakeholder preferences. Virtual platforms, digital tools, and in-person meetings will be utilized to facilitate accessible and adaptable engagement opportunities.

During the Informative Sessions and Results Framework Review Workshops, the participation actions and communication channels were identified for each stakeholder group. This information may guide future engagement throughout the project's implementation phase and ensure effective communication is aligned with project needs.

Participation actions:

- **Inform.** Regularly update stakeholders with project information to keep them informed of progress and developments.
- **Training.** Provide capacity-building sessions to ensure stakeholders understand project processes, goals, and roles.
- **Inquiries.** Offer channels for stakeholders to ask questions, seek clarification, and give feedback on project activities.
- **Involve.** Actively engage stakeholders in project activities and consultations, ensuring their input is considered.
- **Decision-Making.** Include stakeholders in decision-making processes on project priorities, strategies, and adjustments.

Communication channels:

- **Virtual Channels.** Online platforms for real-time engagement, such as virtual meetings and webinars.
- **Institutional.** Direct communication through official project channels and organizational websites.
- **Social media and Messaging Apps.** Engage and disseminate updates through platforms like WhatsApp, Facebook, and X.
- **Printed material.** Distribute informational materials like newsletters, pamphlets, and reports in print form.
- **Broadcast media.** Use radio, TV, and local press for broad public engagement and announcements.
- **Technical documents.** Share in-depth technical reports and documentation for stakeholders requiring detailed project data.
- **Video content.** Produce short, informative videos to visualize project impact, updates, or instructions.

Participation actions, communication channels and engagement activities for each stakeholder group.

Concept	Federal Govt.	International Cooperation	Private Sector	NGOs		State Govt.	Municipal Govt.	Producers Organizations
				CSOs	Academy			
Participation actions								
Inform	X	X	X	X	X	X	X	X
Training	X		X	X	X	X	X	X
Inquiries	X	X	X	X	X	X	X	X
Involve	X	X	X	X	X	X	X	X
Decision-making	X	X				X		
Communication channels								
Virtual channels	X	X	X	X	X	X	X	X
Institutional	X	X			X	X	X	

Social media and messaging apps	X		X	X	X	X	X	X
Printed material	X			X		X	X	X
Broadcast media	X			X		X	X	
Technical documents	X	X	X	X	X	X	X	
Video content	X		X	X	X	X	X	X
Engagement activities								
Interviews	X	X	X	X	X	X		
Official meetings	X	X	X		X	X	X	
Focus groups			X	X	X		X	X
Training workshops	X	X	X	X	X	X	X	X
On-site visits	X		X		X	X	X	X
Knowledge exchange seminars	X	X			X	X	X	X
Community networks			X	X		X	X	X
Expert advisory sessions	X	X	X		X	X		

3.4 Estimated timeline for engagement activities

This schedule for stakeholder engagement ensures timely, relevant information and participation opportunities, from consultation and planning to implementation and evaluation. Key activities like meetings, workshops, site visits, and advisory sessions are scheduled over five years to align with project milestones and ensure responsive communication. This approach promotes inclusivity, collaboration, and adaptive management based on feedback and emerging needs.

Project Component	Project Outcomes	Engagement activities	Responsible organization	Target stakeholder group	Year 1	Year 2	Year 3	Year 4	Year 5
COMPONENT 1: Improvement of information and resources to guide actions for the prevention and reduction of water pollution and marine hypoxia	Outcome 1.1: Increased availability of technical and scientific information at subnational and national levels supports decision-making and promotes collaborative action to reduce water pollution and marine hypoxia in three prioritized landscapes.	Official Meetings, Focus Groups, Knowledge Exchange Seminars	UNDP, SADER, CONABIO, CONAGUA	Federal Government, State Governments, NGOs, Private Sector, Municipal Governments					
COMPONENT 2: Support for strengthening policy, regulatory, and investment frameworks to encourage and finance water pollution mitigation	Outcome 2.1: Improved regional and national governance to reduce water pollution through Nature-based Solutions (NbS).	Expert Advisory Sessions, Focus Groups, Official Meetings	UNDP, SEMARNAT, CIIT	Federal Government, State Governments, NGOs, International Cooperation					
	Outcome 2.2: An enabling environment promoted to guide investments aimed at reducing water pollution.	Expert Advisory Sessions, Official Meetings, Knowledge	UNDP, SADER, SEGOB	Private Sector, Federal Government, NGOs					

Project Component	Project Outcomes	Budget in USD
COMPONENT 1: Improving the evidence base and raising awareness to more effectively address nutrient pollution and marine hypoxia	Outcome 1.1: Increased availability of technical and scientific information at subnational and national levels supports decision-making and promotes collaborative action to reduce water pollution and marine hypoxia in three prioritized landscapes.	\$95,000 (Included in the TBWP)
COMPONENT 2: Supporting the strengthening of policy, regulatory and investment frameworks to incentivize and finance pollution mitigation	Outcome 2.1: Improved regional and national governance to reduce water pollution through Nature-based Solutions (NbS).	\$93,000 (Included in the TBWP)
	Outcome 2.2: An enabling environment promoted to guide investments aimed at reducing water pollution.	\$73,000 (Included in the TBWP)
COMPONENT 3: Supporting demonstration of best management practices (BMP) and investments that showcase innovative solutions to reduce marine hypoxia	Outcome 3.1: Technical, organizational, and financial capacities of local organizations are strengthened to promote water pollution reduction measures from terrestrial sources using best practices and NbS.	\$653,000 (Included in the TBWP)
	Outcome 3.2: Adoption of best practices and NbS contributes to reduced water pollution and hypoxia.	\$118,500 (Included in the TBWP)
COMPONENT 4: Ensuring knowledge management and learning, communications, gender and stakeholder engagement are integrated across the IP, including programmatic coordination and reporting (TA)	Outcome 4.1: Knowledge management and learning, communication, gender integration, and stakeholder engagement effectively support the program and project objectives and are fully integrated throughout the entire integrated program.	\$94,340 (Included in the TBWP)
Component 5: Project Monitoring and Evaluation (M&E) (TA)	Outcome 5.1: M&E assesses project impact and guides adaptive management	\$17,330 (Included in the TBWP)
Total		\$1,144,170

3.6 Key indicators for the SEP

Monitoring is essential for effective project management, ensuring continuous stakeholder engagement and addressing emerging needs. UNDP, in collaboration with the project governance body, will oversee the Stakeholder Engagement Plan with relevant working groups and sector representatives. Regular updates will be provided to the Project Steering Committee for accountability and transparency. All project staff will receive training on the SEP, including the grievance mechanism, to handle and address stakeholder feedback appropriately. To measure the effectiveness of the SEP, the following indicators will be used to track engagement and satisfaction levels among stakeholders, with monitoring and reporting conducted on a regular basis:

SEP indicators

Indicator	Monitoring Responsibility	Reporting Period
Number of institutions (government agencies, NGOs, private sector, etc.) actively participating in governance structures and mechanisms for the project.	UNDP and the governance body of the project	Annual
Number of stakeholders (disaggregated by gender and sector) participating in project activities, including consultations, training, and implementation.		Annual
Number of interinstitutional agreements for information exchange signed and operationalized.		Annual
Number of communication campaigns and diffusion activities conducted, with a focus on gender sensitivity.		Annual
Number of individuals (disaggregated by gender) who received technical training and subsequently implemented NbS or best practices.		Annual
Number of local initiatives (50% led by women) receiving financial support promoted by the project.		Annual

3.7 Grievance Redress Mechanisms (GRM)

The objective of the GRM is to facilitate the timely, effective, and efficient resolution of complaints. This mechanism serves as a primary channel for stakeholders in Mexico to voice issues or concerns related to the project, ensuring a transparent and credible process that promotes fair, effective, and sustainable outcomes. By fostering trust and cooperation, it supports broader stakeholder engagement, empowering the community to feel ownership and involvement in the project's progress. The GRM has been designed in alignment with UNDP's Social and Environmental Standards (SES) to benefit all stakeholders affected by the project. In addition, it provides a structured avenue for managing social and environmental risks and impacts, while also enhancing stakeholder engagement. It is not, however, a substitute for proactive outreach aimed at informing stakeholders about the project, gathering their input, and addressing their suggestions or concerns related to social and environmental risks and benefits.

UNDP's SES, effective since January 1, 2015, include a mandatory Accountability Mechanism that has two key components:

- A compliance review to address claims of non-compliance with applicable social and environmental policies.
- A Stakeholder Response Mechanism (SRM) that ensures affected individuals, communities, and stakeholders have access to fair grievance resolution processes for addressing project-related complaints and disputes.

For additional recourse, the UNDP Accountability Mechanism (www.undp.org/secu-srm) offers an option for stakeholders who are dissatisfied with the Project GRM response or concerned about potential adverse actions from the GRM. The project will establish a field-level grievance mechanism in consultation with beneficiaries, including Indigenous populations during FPIC processes. Contact information and instructions for filing complaints will be provided once the mechanism is operational. This information will be shared in project meetings, workshops, and awareness materials throughout the project duration.

The general grievance resolution process should include the following stages:

- **Submission.** Complaints are submitted through any of the GRM's available channels, directed to the Environmental and Social Safeguards Specialist, who will assess their eligibility. Confidentiality of the complaint is maintained throughout the process.
- **Resolution.** The project team, in coordination with the Environmental and Social Safeguards Specialist, addresses eligible complaints. The Specialist is responsible for documenting the grievance and any agreed-upon resolution.
- **Escalation.** If the issue is complex or if the complainant does not accept the proposed resolution, the complaint will be escalated to a higher level for further review and resolution.
- **Response Timeframe.** Written acknowledgment of receipt will be provided to the complainant within ten (10) business days, followed by a proposed resolution within thirty (30) business days.
- **Engagement.** In working toward a resolution, the person handling the complaint may reach out to the complainant directly or conduct interviews and meetings to better understand the issues involved.
- **Documentation.** All complaints and resolutions will be systematically recorded for accountability and transparency.

The GRM will be a crucial element of the project's engagement framework, ensuring that concerns are addressed constructively and effectively, contributing to the project's success.

To ensure the GRM is inclusive and accessible, the project will integrate a gender-sensitive grievance mechanism, considering the specific needs of women, Indigenous Peoples, and other vulnerable groups. This includes safeguarding against barriers that may prevent these groups from voicing concerns, such as social stigma, lack of accessibility, or fear of retaliation. In alignment with the Spotlight Initiative, a global UN partnership to eliminate all forms of violence against women and girls, the project will take proactive measures to prevent gender-based violence (GBV) and discrimination throughout its implementation. This includes fostering safe spaces for women to report grievances, strengthening institutional mechanisms for addressing gender-related complaints, and ensuring that all stakeholders—especially women, youth, and Indigenous communities—have equitable access to redress mechanisms. The grievance mechanism will be adapted to the cultural contexts of each landscape, ensuring that traditional governance structures and Indigenous consultation frameworks are respected.

4. Summary of Previous Stakeholder Engagement Activities

The project undertook stakeholder engagement activities to establish collaboration and participation during implementation. These efforts aimed to gather insights, address key concerns, and build trust while ensuring inclusivity and alignment with project objectives. Below is an overview of key activities from the inception phase, including consultations, workshops, and bilateral meetings.

4.1. Inception Phase – consultations

Date	Institutions	Key points raised
July 2, 2024	• UNDP	Session on stakeholder participation and its relevance to the project. Guidelines were established to address their involvement and promote active participation
July 24, 2024	• UNDP • FGM	Gather information about the Laguna de Sontecomapan landscape in Veracruz for context analysis and identification of key FPIC stakeholders.
July 25, 2024	• SEGOB • CIIT • UNDP	Dialogue on the activities carried out by SEGOB, the public and private institutions with which they collaborate, and how these can align with the CHO project.
July 25, 2024	• SEGOB • UNDP	Gather information on target area activities to develop an engagement strategy and stakeholder mechanisms for FPIC workshops. Request support to 1) create a stakeholder directory, and 2) coordinate with Regional Centers (Oaxaca) for inviting representatives and consulting on participation methods.
July 29, 2024	• UNDP • CIIT	Identify key Indigenous Peoples stakeholders and activities conducted by the CIIT in the territory to create a list of representatives and local organizations for the workshops.
August 14, 2024	• UNDP	Collect information on the Río Hondo Basin landscape in Quintana Roo and Campeche for context analysis and the identification of key FPIC stakeholders.
August 27, 2024	• CIIT • UNDP	Representatives from the Oaxaca government presented the State Water Plan, discussing potential synergies between the Plan and the CHO project.
September 26, 2024	• CIIT • Oaxaca GOV • SEFADER	A key meeting on the Oaxaca region involved discussions with SEMARNAT and local representatives to align priorities for sustainable water management.
October 2, 2024	• UNDP • SEGOB • CIIT	Inti Escalona emphasized that the INPI requires the role of Indigenous Peoples to be highlighted and clearly reflected in the results framework before it is shared with these stakeholders.
October 3, 2024	• UNDP	Gather information about local organizations that could be invited to the workshops for the Laguna de Sontecomapan landscape.
October 3, 2024	• Sendas • UNDP	Obtain details about relevant stakeholders in Veracruz, as well as the activities carried out by civil society in the state.
October 3, 2024	• UNDP	Hold a UNDP meeting to update on ongoing projects and formally introduce Jesús Alarcón to the other members of the UNDP team.
October 11, 2024	• UNDP • CIIT	Present the descriptive letter to CIIT detailing the planned activities for the regional workshops, including the agenda and itinerary, to prepare logistics for each landscape.

Date	Institutions	Key points raised
October 14, 2024	• UNDP • SEGOB • CIIT • INPI	Presentation of the project to the Directorate of Indigenous Participation and Consultation of INPI, including an agreement for support in identifying the civil and agrarian authorities of indigenous communities present in the target landscapes.
October 16, 2024	• UNDP • CIIT • SEGOB • SEDECOP	Review of the work agenda, dissemination materials, and the guest list for workshops involving state and municipal authorities as well as indigenous peoples and local communities.
October 18, 2024	• UNDP • CIIT	Request support to invite indigenous authorities and coordinate with the institution to host regional workshops in the Complex Lagunar Landscape of the Isthmus of Tehuantepec.
October 22, 2024	• CIIT • UNDP • INPI	Request for support in convening civil and agrarian authorities of indigenous peoples from the municipalities of Catemaco, Mecayapan, and San Andrés Tuxtla.
October 29, 2024	• SEGOB • UNDP • INPI	Request for assistance in issuing invitations to indigenous authorities of the municipalities of Othón P. Blanco and Bacalar to participate in the regional workshops for the Río Hondo Basin landscape.

Note. The list of representatives of the institutions that participated in the consultations can be found in Sub-Annex 8.5.

4.2. Consultation process during PPG phase

Date and place	Target and results
August 21, 2024 Mexico City	<u>Target:</u> Project kick-off meeting to introduce the objectives, identify relevant stakeholders, and introduce the UNDP team responsible for developing the PRODOC. <u>Results:</u> Stakeholders were informed about the project's water basins and intervention regions, fostering shared understanding and initial engagement. A total of 15 institutions participated in this activity, where high-level officials representing the main institutions responsible for the project participated in the meeting. *
October 22, 2024 Mexico City	<u>Target:</u> Complete the development of the internal Results Framework <u>Results:</u> Building on the work previously carried out by UNDP's national and international consultants, the Results Framework was finalized for presentation to stakeholders for their review. One institution participated in this activity. *
October 23 and 24, 2024 Mexico City	<u>Target:</u> Federal-Level informative session and Results Framework development and review Workshop. <u>Results:</u> The project's results framework was presented and validated through a participatory process, integrating stakeholder input for alignment with project goals. On the second day of the workshop, project activities were reviewed and further developed. A total of 14 institutions participated in this activity. *
October 25, 2024 Xalapa, Veracruz	<u>Target:</u> State-Level informative session and Results Framework Review Workshop. <u>Results:</u> The project's results framework was introduced and confirmed through an inclusive process, enabling state government stakeholders to share important insights and suggestions. This collaborative effort ensured that a wide range of perspectives were incorporated, creating a well-rounded results framework that reflects the project's objectives and effectively considers the priorities of state-level stakeholders. A total of 13 institutions participated in this activity. *
October 26, 2024 Catemaco, Veracruz	<u>Target:</u> Municipal-Level informative session and Results Framework Review Workshop. Informative session and Results Framework Review Workshop for CSOs and Productive Sectors (Agriculture, Livestock, and Fishing). <u>Results:</u> The project's results framework was validated in a workshop with municipal representatives, CSOs, and productive sector stakeholders. This participatory process ensured alignment with municipal priorities and sector needs, creating a comprehensive framework that reflects the project's objectives and diverse perspectives.

Date and place	Target and results
	A total of 5 institutions and the representatives of 2 municipalities participated in this activity. * <u>Target:</u> Indigenous People informative session and Workshop. <u>Results:</u> The project's results framework was validated in a workshop with Indigenous Peoples representatives, integrating their insights, cultural values, and priorities. This collaborative process ensured the framework aligns with project goals while addressing the needs of Indigenous communities. A total of 5 institutions and the representatives of 2 municipalities participated in this activity. *
October 28, 2024 Juchitán, Oaxaca	<u>Target:</u> Informative session and Results Framework Review Workshop for Municipal-Level and Ejido Authorities. <u>Results:</u> The project's results framework was reviewed in a workshop with 17 municipal representatives and ejido authorities, incorporating their input to align the framework with project objectives and local priorities. The representatives of 4 ejidos and 9 municipalities participated in this activity. *
October 29, 2024 Juchitán, Oaxaca	<u>Target:</u> Informative session and Results Framework Review Workshop for CSOs and Productive Sectors (Agriculture, Livestock, and Fishing). <u>Results:</u> The workshop allowed civil society and productive sector representatives from Juchitán and 16 other municipalities to review and provide feedback on the project's results framework, ensuring it reflects sector-specific priorities and aligns with project goals. A total of 9 institutions and the representatives of 22 communities participated in this activity. * <u>Target:</u> Indigenous People informative Session and Workshop. <u>Results:</u> The project's results framework was confirmed in a workshop with Indigenous community representatives, incorporating their cultural values and priorities. This collaborative effort ensures the framework aligns with project objectives while respecting Indigenous needs and perspectives. A total of 9 institutions and the representatives of 22 communities participated in this activity. *
October 30, 2024 Oaxaca City, Oaxaca	<u>Target:</u> State-Level informative session and Results Framework Review Workshop. <u>Results:</u> In a combined session, state representatives, civil society, and productive sector stakeholders (agriculture, livestock, and fishing) reviewed and validated the project's results framework. This workshop encouraged open dialogue, allowing participants to provide essential feedback and ensure that the framework

Date and place	Target and results
	aligns with both state-level goals and sector-specific priorities. A total of 25 institutions participated in this activity. *
November 4, 2024 Chetumal, Quintana Roo	<u>Target:</u> Informative session and Results Framework Review <u>Target:</u> Workshop at the State and Municipal Levels. <u>Results:</u> This joint workshop united state and municipal representatives, CSOs, and productive sectors to review the project's results framework. Participants shared insights, shaping a framework that aligns with local governance needs, sector priorities, and project objectives. A total of 15 institutions participated in this activity. *
November 5, 2024 Chetumal, Quintana Roo	<u>Target:</u> Indigenous People informative session and Municipal Level Workshop. <u>Results:</u> The project's results framework was reviewed in a dedicated workshop with Indigenous community representatives. This session allowed Indigenous participants to share key insights, ensuring their cultural values and priorities are reflected in the framework, aligning it closely with the project's goals and Indigenous needs. One institution and the representatives of 2 municipalities and IP communities participated in this activity. *
December 12, 2024 Mexico City	<u>Target:</u> Final Validation Session of the Results Framework. <u>Results:</u> The preliminary and summarized version of the PRODOC was presented to the federal and state authorities responsible for the project's implementation to obtain their final comments and the eventual approval of the results framework. A total of 24 institutions participated in this activity. *

Note. The list of representatives of the institutions that participated in the consultation process during PPG phase can be found in Sub-Annex 8.6.

4.3 Methodology for the consultation process

The first part of the process involved desk research and interviews to identify and map project stakeholders, conducted over five phases:

1. Identification of key institutions. A preliminary list of responsible, co-financing, executing, and project-design institutions was created. This initial phase included institutions with prior involvement in the project, ensuring that stakeholders with financial, operational, or strategic commitments were recognized as essential.
2. Inclusion of recommended organizations. The stakeholder list was expanded based on suggestions from previously involved participants. This participatory approach allowed for the addition of public and private organizations, NGOs, and local community associations that, while not initially involved, could have strategic relevance for the project's development and implementation.
3. Institutions related to regulatory and public programs. An in-depth analysis of the current regulatory framework and relevant public programs at the federal and regional levels was conducted by UNDP consultants. This review helped identify additional institutions with mandates or relevance in the project's action sectors, ensuring alignment with existing policies and fostering synergies with ongoing governmental initiatives.

4. Validation and feedback through interviews and workshops in Mexico City. Interviews and workshops were organized in Mexico City and at the state and municipal level as part of the validation process. These sessions allowed participants to review and add to the stakeholder list, highlighting additional actors and underscoring the importance of including underrepresented organizations.
5. State and municipal validation and final list completion. Complementary workshops and interviews were held in each region where the project will be implemented. This local validation provided a clearer understanding of the specific needs and stakeholders in each region, ensuring that local challenges were considered. The list was then refined based on feedback from these sessions.

Note. Phases 4 and 5 were conducted as part of the Results Framework Review Workshops.

The second part of the process involved informative sessions and participatory Results Framework Review Workshops to assess the project's significance, local community needs, and socio-environmental issues. Using interactive tools and techniques, these workshops identified key needs, threats, solutions, and challenge.

Working groups formed by project component, with attention to gender and Indigenous representation, enabled stakeholders to share insights and align project activities with their expectations. Each component's results and indicators were presented, analyzed, and refined collaboratively to ensure relevance.

Techniques included Stakeholder Mapping, influence dialogue, SWOT analysis of past projects, and participatory issue prioritization, enriching the consultation process and laying a strong foundation for implementation.

The third part of the process involved an online session to validate the Results Framework, allowing stakeholders to review and approve the project's goals, components, and expected outcomes, ensuring alignment with proposed actions and indicators.

The session included an overview of the objectives and framework components, highlighting adjustments based on workshop feedback. Stakeholders could ask questions, clarify details, and share final comments. This transparent process facilitated consensus and unified endorsement, concluding with formal stakeholder support and a solid foundation for implementation.

4.4 Implementation of the consultation process

1. Identifying and mapping the project stakeholders.³⁹

A comprehensive stakeholder mapping exercise was conducted during the initial phase to identify key organizations and programs at the national and regional levels. This effort established a foundation for consultation workshops by outlining a network of collaborators, supporters, and entities aligned with the project's objectives, components, and planned actions.

National Context. At the federal level, 29 government institutions with mandates aligned with the project's goals were identified. Seven international cooperation organizations were recognized for their contributions to areas such as environmental protection, sustainable development, and social impact. From the private sector, four companies with a focus on sustainability and social responsibility were identified as relevant stakeholders. Additionally, 12 NGOs—including CSO and academic institutions—were noted for their expertise and potential contributions to the project's implementation; in addition, 17 federal programs were identified, offering opportunities for resource alignment and shared objectives.

³⁹ Note. The comprehensive stakeholder map developed in this phase served as a crucial reference for the Results Framework Review Workshops, helping to guide the structure of discussions and target areas for input. By identifying relevant stakeholders in advance, the project team was able to promote effective dialogue and interaction among workshop participants. This mapping process ensured that a diverse array of perspectives, including those from governmental bodies, civil society, academia, productive sectors, and Indigenous organizations, was represented in the consultation process, enriching the project's design and increasing stakeholder buy-in from the outset.

Sistema Lagunar del Istmo de Tehuantepec. In Oaxaca, stakeholder mapping identified five state institutions playing key roles in governance and development. Seventeen of the region's 29 municipalities were included to ensure local government participation in project activities. Sixteen NGOs were identified, comprising four CSOs or academic organizations and 12 representatives from productive sectors linked to the region's socio-economic dynamics. Additionally, six state programs aligned with the project's objectives were identified, highlighting opportunities for collaboration at the state level.

Laguna de Sontecomapan, Catemaco. In Veracruz, nine state institutions were identified for their expertise and resources supporting the project's goals. Three municipalities were included to facilitate local strategy implementation. Among NGOs, 15 CSOs and academic organizations were recognized for their potential in knowledge-sharing, community mobilization, and capacity-building. One representative from the productive sectors was also included to address economic dynamics. Nine state programs were identified as aligned with the project, ensuring regional policy coherence and efficient resource use.

Cuenca del Río Hondo. In the Cuenca del Río Hondo region, 10 state institutions from Quintana Roo and Campeche were identified for their complementary mandates. Three municipalities were engaged to support local governance integration. Eleven NGOs, including eight civil society or academic organizations and three productive sector representatives, were recognized to ensure diverse community, academic, and economic input. Additionally, 20 state programs—seven from Quintana Roo and 13 from Campeche—were noted for their compatibility with the project framework, demonstrating strong regional alignment and collaboration potential.

2. Informative sessions and Results Framework Review Workshops.

The second phase of consultations included informative sessions and Results Framework Review Workshops to gather input from diverse stakeholders. Using a participatory diagnostic methodology, these workshops reviewed the project's goals, components, and outcomes while integrating feedback from federal, state, and municipal institutions, Indigenous communities, civil society organizations, and productive sectors.

To maximize engagement, key participants were identified through an initial analysis, including municipal technicians (particularly from areas with subnational protected areas), Indigenous leaders, local productive sector representatives, NGOs, and informants familiar with local dynamics. Invitations, sent at least a week in advance, clearly outlined objectives and offered travel expense coverage to encourage attendance. Central locations were chosen to minimize travel time and costs.

On October 23–24, 2024, a Federal-Level Informative Session and Results Framework Review Workshop was held in Mexico City with 38 participants from 14 institutions. Running from 8:30 a.m. to 5:30 p.m. on the first day and 9:00 a.m. to 3:30 p.m. on the second, the workshop followed a structured agenda to ensure collaboration and clarity on key project areas.

Note. The details and relevant aspects of the activities can be found in Sub-Annex 8.7.

Between October 25 and November 5, 2024, seven Informative Sessions and Results Framework Review Workshops were held across project locations, engaging 228 participants from public institutions and NGOs. Each workshop, held from 9:00 a.m. to 2:00 p.m., followed a structured agenda to foster collaboration and clarify key project areas.

Note. The details and relevant aspects of the activities can be found in Sub-Annex 8.8.

The following activities were conducted as part of the consultation process:

- October 25, 2024: A State-Level Informative Session and Results Framework Review Workshop took place in Xalapa, Veracruz, with 22 participants representing 13 institutions or organizations.

- October 26, 2024: In Catemaco, Veracruz, a workshop for Municipal-Level, Civil Society, Indigenous People, and Productive Sectors was held, engaging 53 participants from 5 institutions or organizations and 3 municipalities.
- October 28, 2024: An Informative Session and Results Framework Review Workshop for Municipal-Level and Ejido Authorities was conducted in Juchitán, Oaxaca, bringing together 31 participants from 4 ejidos and 9 municipalities.
- October 29, 2024: A workshop for Civil Society, Productive Sectors, and Indigenous People was held in Juchitán, Oaxaca, with 31 representatives from 8 institutions or organizations.
- October 30, 2024: In Oaxaca, Oaxaca, a session for Civil Society, Academia, Productive Sectors, and State-Level representatives was organized, involving 47 participants from 26 institutions or organizations.
- November 4, 2024: A State and Municipal-Level Informative Session and Results Framework Review Workshop was held in Chetumal, Quintana Roo, with 18 participants representing 15 institutions or organizations.
- November 5, 2024: An Indigenous People Informative Session and Municipal-Level Workshop took place in Chetumal, Quintana Roo, engaging 26 participants, including social representatives and ejido authorities from 2 municipalities.

The workshops prioritized the inclusion of Indigenous organizations and leaders, representing both men's and women's groups to ensure gender-sensitive input. Indigenous representatives shared insights on cultural values, traditional knowledge, and needs, aligning the Results Framework with their perspectives. Separate focus group sessions for Indigenous women provided a dedicated space to address their views on project-related issues, opportunities, and challenges.

Essential feedback gathered during the workshops was directly incorporated into the Results Framework. Each component was analyzed and refined with stakeholder input to ensure relevance to local needs and alignment with project goals. This approach allowed stakeholders to express expectations and commitments, creating a comprehensive, inclusive framework responsive to diverse priorities.

The workshop outcomes laid a foundation for the final validation phase, ensuring stakeholders were well-informed, actively contributed to the framework, and were prepared for the following online session for formal approval.

3. Online session to validate the Results Framework.

In the final phase of the consultation process, an online session was held to validate the Results Framework with 61 representatives from 24 institutions, covering the project's national scope and three implementation areas. This virtual meeting provided an inclusive platform to review and validate the summarized PRODOC, focusing on the Results Framework before finalization.

The session ensured broad representation from federal and state authorities and other institutions involved in the project. Participants received a detailed presentation on the project's components, outcomes, and indicators, emphasizing alignment with national and regional priorities.

The session focused on three main objectives:

- a) Collect final comments. Participants were encouraged to provide feedback and suggestions on the Results Framework, ensuring that the project accurately reflects stakeholder needs and priorities while maintaining consistency with national policies and environmental goals.
- b) Facilitate approval. Federal and state authorities reviewed the framework in detail, offering input to refine it. This process strengthened its alignment with institutional mandates and regional dynamics, preparing it for approval.
- c) Present project safeguards analysis. Key findings from safeguard analyses on gender, Indigenous Peoples, and stakeholder participation were shared, highlighting commitments to gender equity, respecting Indigenous rights and practices, and fostering inclusive stakeholder engagement throughout the project.

A participatory and interactive format was employed to encourage engagement and active contributions. Key stakeholders shared observations regarding specific project goals, results, and indicators, while also reflecting on the safeguards analysis and its implications for the project's implementation. Special emphasis was placed on areas for improvement and alignment with ongoing programs, especially those addressing water resource management, environmental conservation, and social inclusion.

By the conclusion of the session, a consensus was reached on the Results Framework's structure and content. The incorporation of feedback, alongside the presentation of the safeguards analysis, ensured a comprehensive and inclusive approach to the project's planning phase. This collaborative effort facilitated institutional ownership, strengthened stakeholder confidence, and created a solid foundation for the project's implementation.

4.5 Key issues discussed, and key concerns raised

During the Informative Sessions and Results Framework Review Workshops, dedicated spaces were created to gather valuable input from stakeholders, focusing on assessing their primary needs and concerns related to the project's implementation. This process was conducted using a participatory approach, featuring roundtable discussions that encouraged open dialogue among participants. These discussions allowed stakeholders to share their perspectives on the critical needs they felt the project should address, ensuring that their voices and insights were integrated into the project's framework for effective and relevant implementation.

4.5.1 Sistema Lagunar del Istmo de Tehuantepec (Oaxaca)

Stakeholders in Oaxaca, including municipal authorities, Indigenous communities, CSOs, and productive sector representatives, identified key needs and concerns related to sustainable development, environmental conservation, and community health.

Main needs and concerns

- **Strengthening Local Governance and Community Participation:** Participants stressed engaging local authorities, including municipal agents, ejido leaders, and community committees, to ensure meaningful participation. Involving groups such as water, health, and environmental committees would align project activities with community priorities.
- **Waste Management and Pollution Control:** Concerns were raised about water pollution from untreated wastewater and agricultural runoff, particularly in rivers like the Río de los Perros. Communities highlighted the urgent need for solid waste management solutions, including improved collection systems, recycling incentives, and stricter controls on industrial pollutants affecting water sources.
- **Support for Sustainable Economic Activities:** There is a strong interest in developing sustainable productive activities, including ecotourism, aquaculture, and handicrafts. Stakeholders requested resources to strengthen local businesses, especially those led by women and Indigenous groups, to reduce dependency on environmentally harmful practices like illegal logging and unregulated fishing.
- **Technical Assistance Improvements:** Communities requested assistance for establishing biofactories to produce organic fertilizers and promoting wastewater treatment systems to prevent direct discharge into rivers. Participants also highlighted the need for flood control infrastructure and septic systems in areas lacking adequate sanitation.

Data analysis with a gender perspective

- **Access to Resources and Training:** Both men and women expressed the need for greater access to resources, training, and tools for sustainable agriculture, ecotourism, and waste management. Women emphasized the need for training in sustainable practices that align with their roles in agriculture, handicrafts, and small-scale commerce.
- **Empowering Women in Local Governance:** Women's participation in decision-making roles remains limited. To address this, stakeholders suggested initiatives to increase women's involvement in community committees and local governance structures, ensuring their voices are included in project activities.
- **Balancing Domestic and Productive Roles:** Many women are engaged in both household and economic activities, such as making handicrafts and managing small

agricultural plots. Participants emphasized that project activities should consider women's time constraints and provide training sessions that accommodate their schedules.

Expectations and benefits analysis

- Stakeholders expressed high expectations for the project to enhance local economic development, improve environmental quality, and strengthen community resilience.
- Integrated Vision for Sustainable Economic Development: The project is seen as an opportunity to build sustainable value chains that improve the quality of local products, particularly in sectors like honey, textiles, and ecotourism. Improving product standards and market access is viewed as essential for enhancing competitiveness in national and international markets.
- Alignment with Global Conservation Standards: Participants emphasized the importance of aligning the project with international conservation goals to protect Oaxaca's diverse ecosystems, especially in mangrove and forested areas. There is strong interest in attracting international support to strengthen local conservation initiatives.
- Transparent Communication and Collaborative Management: Stakeholders underscored the need for clear, transparent communication regarding project objectives, tools, and strategies, particularly in conservation areas. Effective collaboration between local authorities and CSOs groups was emphasized as essential for achieving sustainable outcomes.

Indigenous Peoples participants

- Increase understanding among the local population about the various sources of water pollution, providing greater clarity on those that directly contribute to marine hypoxia.
- If Indigenous Peoples' consultation and decision-making timelines are not respected, their participation in intersectoral governance mechanisms will be adversely affected.
- Create culturally appropriate spaces for dialogue and listening, as well as working groups, to facilitate the participation of community authorities in identifying priority actions.
- Strengthening Conservation Efforts and Sustainable Resource Management: Participants identified the need for cooperative agreements between Indigenous communities and government agencies to support environmental management and ensure sustainable resource use. Involving local communities in conservation initiatives and enforcing environmental regulations are seen as critical.
- Addressing Wildfire Risks: Wildfire prevention is a top priority for stakeholders, especially due to recent fires affecting Indigenous territories. Participants requested support for community-based firefighting brigades, training, and resources to prevent and manage wildfires.
- Promoting Sustainable Land Use: Illegal logging and excessive use of agrochemicals were noted as pressing issues that threaten biodiversity and public health. Stakeholders expressed interest in training for sustainable land use practices, as well as incentives for organic farming and agroforestry.
- Unified Vision for Conservation: A shared vision for multi-stakeholder collaboration in managing Oaxaca's ecosystems was emphasized. Stakeholders, including Indigenous authorities, municipal leaders, and civil society, underscored the importance of inclusive participation to achieve long-term conservation goals and address pressing environmental challenges effectively.

4.5.2 Laguna de Sontecomapan (Veracruz)

Stakeholders in Veracruz, spanning municipal-level authorities, CSOs, Indigenous communities, and productive sectors, have expressed significant needs and concerns regarding the project's potential impact on environmental conservation, sustainable development, and community well-being.

Main needs and concerns

- Community Engagement and Local Authority Involvement: There is a strong emphasis on involving community authorities, such as municipal agents and ejido

representatives, to ensure meaningful participation and enhance local ownership. Stakeholders noted the importance of working through established community structures like health, water, and environmental committees to facilitate communication and action.

- **Waste Management and Pollution Control:** Concerns were raised about waste pollution, particularly from livestock and agricultural activities, which affects local water bodies like the Huazuntlán River in Mecayapan. Communities highlighted the need for resources and support to mitigate pollution from plastic waste, agrochemicals, and untreated wastewater.
- **Access to Resources and Capacity Building:** Participants expressed a need for training programs focused on sustainable agriculture, waste management, and conservation techniques, emphasizing practical, short-format sessions that accommodate community schedules. Additionally, support for establishing water quality monitoring systems, biofertilizer production, and other sustainable practices was identified as essential.
- **Support for Productive Projects:** There is strong interest in sustainable income-generating activities that align with environmental goals, such as honey production, aquaculture, and ecotourism. Stakeholders requested project incentives, including seed funding and training to expand local sustainable businesses.
- **Environmental Conservation and Health Risks:** Concerns were raised about water contamination's health impacts, especially in areas with high livestock activity and untreated wastewater. Priorities include improving access to health services for contamination-related illnesses and implementing localized conservation and reforestation efforts.

Data analysis with a gender perspective

- **Access to Resources and Information:** Both men and women recognize the critical need for access to resources, training, and information on sustainable practices. Women emphasized a need for resources to support their economic activities, such as crafts, small-scale agriculture, and food production, and requested accessible training that accommodates their schedules.
- **Support for Women's Participation:** Women emphasized the need for community-based training and projects to enhance their roles in environmental stewardship and productive activities. The project should ensure equitable access to resources, training, and participation for both genders, promoting gender equality in conservation efforts.
- **Inclusive Decision-Making:** Ensuring that both women's and men's perspectives are included in decision-making processes was highlighted as a priority. Strategies to encourage women's active involvement in community committees and project implementation are needed to foster balanced participation.

Expectations and benefits analysis

- **Stakeholders in Veracruz** have strong expectations that the project will contribute positively to local conservation efforts, sustainable development, and community resilience.
- **Integrated Vision for Sustainable Development:** The project is seen as an opportunity to strengthen local value chains, enhance product quality, and boost competitiveness in markets, especially for honey and handicrafts. Improving standards is expected to support the local economy and promote sustainable livelihoods.
- **Incorporation of International Conservation Standards:** Participants expressed a desire for the project to align with international conservation strategies to protect local ecosystems, particularly in areas like the Sontecomapan Lagoon. There is interest in securing international support to strengthen protected areas and preserve critical ecosystems.
- **Enhanced Communication and Participatory Governance:** Stakeholders highlighted the need for clear, transparent communication about project goals, tools, and strategies, particularly in municipal protected areas. Effective, participatory governance was emphasized as essential for long-term project success.

Indigenous Peoples participants

- **Engage local authorities** from the initial diagnostic phase to ensure their ownership of the project and to facilitate field visits for verifying pollution sources, particularly in cases where these are located on communal or ejido lands.
- **Clearly identify gaps** in access to financing for associative entities involving Indigenous Peoples, ensuring that the financial instruments created address these gaps in their design.
- **Develop a truly inclusive capacity-building program** that incorporates culturally appropriate pedagogical mechanisms to ensure the effective participation of women, youth, and various productive sectors.

- **Strengthening Conservation Efforts and Environmental Management:** Stakeholders stressed the importance of creating binding agreements between Indigenous territories and protected areas to support coordinated environmental management. There is a need for collaborative approaches that consider traditional Indigenous knowledge and practices.
- **Wildfire Prevention and Community Involvement:** Wildfire mitigation was highlighted as a critical priority due to the region's vulnerability to fires, which severely impact Indigenous territories. Stakeholders requested support for community-based firefighting brigades, training, and resources to manage and prevent fires.
- **Sustainable Resource Management:** Indigenous and local communities highlighted the need for resources to manage natural resources sustainably, noting the profitability of illegal extraction compared to sustainable alternatives. Support for community-led initiatives like reforestation and watershed protection is crucial to tackle this issue.
- **Collaborative Vision for Conservation:** There is a shared desire for a multi-stakeholder approach to managing and conserving natural resources in Veracruz. Local authorities, Indigenous representatives, CSOs, and the productive sector all emphasized the need for a collective vision that includes input from various actors to protect ecosystems effectively.

4.5.3 Cuenca del Río Hondo (Quintana Roo and Campeche)

Stakeholders in Quintana Roo and Campeche, including municipal authorities, Indigenous communities, and civil society organizations, have expressed specific needs and concerns regarding environmental protection, sustainable resource management, and community involvement in project activities.

Main needs and concerns

- **Address Industrial Pollution Sources:** Concerns were raised about pollution from the sugar refinery, a major industrial site contributing to water contamination and fertilizer runoff. Stakeholders urged the project to manage these impacts and consider monitoring or excluding the refinery to protect water and soil quality.
- **Leverage Existing Knowledge and Data:** Civil society participants stressed the importance of utilizing existing data from local organizations to avoid duplication. They recommended integrating this information to better address socio-environmental challenges and leverage community knowledge.
- **Strengthen Local Governance Structures:** The need for collaboration with key local figures, such as municipal agents and ejido commissioners, was emphasized. These representatives hold decision-making authority on land and community issues, making their involvement critical for effective project implementation and community buy-in.
- **Enhance Public Awareness and Participation:** Participants recommended using accessible community spaces—such as schools, community kitchens, and health centers—as points for project information dissemination. They suggested using methods like WhatsApp, community announcements, and posters in strategic locations to ensure all community members are informed and engaged.

Data analysis with a gender perspective

- **Active Participation of Women in Community Structures:** Women in Quintana Roo are heavily involved in community roles and are viewed as organized, committed, and less prone to corruption. They actively participate in community kitchens, local committees, and environmental initiatives. Female participants indicated a preference for women-only training sessions to foster a supportive environment for capacity-building.
- **Access to Resources for Women's Initiatives:** Women highlighted the need for training and resources in sustainable practices like eco-tourism, rainwater harvesting, and small-scale agriculture. They requested flexible, concise training formats to accommodate their household and community responsibilities.
- **Equal Access to Decision-Making:** While women are active in various community roles, there is still a need for increased representation in decision-making positions. Efforts to ensure women's participation in land and environmental governance were highlighted as important for promoting equitable involvement in project activities.

Expectations and benefits analysis

- Stakeholders in Quintana Roo have high expectations for the project to create sustainable development opportunities, improve environmental quality, and support community resilience.
- Integration with Local Biofactory Initiatives: Stakeholders expressed interest in incorporating the state-level biofactory project for organic fertilizers, led by the agriculture department, into the GEF project. This synergy would provide farmers with eco-friendly fertilization options, promoting sustainable agriculture.
- Increased Support for Eco-Tourism Projects: Participants expressed a desire to enhance eco-tourism efforts, particularly in areas with natural attractions like cenotes and lagoons. They envision the project to create job opportunities through eco-tourism while raising awareness of environmental conservation.
- Transparent Communication and Community-Led Management: Stakeholders highlighted the need for clear communication regarding the project's goals, resources, and expected outcomes. They emphasized the importance of community-driven management approaches, including regular updates and feedback mechanisms to ensure transparency and accountability.

Indigenous Peoples participants

- Create culturally appropriate dissemination materials tailored to diverse audiences (children, youth, women, farmers, ranchers, the tourism sector, and fishers) to amplify the campaign's impact and leverage the willingness of community authorities to promote and participate in it.
- If financing needs and access gaps for Indigenous Peoples are not properly mapped, efficient use of resources will not be achieved.
- Ensure the acquisition of Free, Prior, and Informed Consent (FPIC) from Indigenous Peoples before integrating their knowledge and practices into the catalog of best practices.
- Sustainable Resource Management and Conservation Support: Indigenous communities expressed the need for sustainable resource management support, particularly in managing natural resources such as water and land. They noted that illegal resource extraction poses challenges to long-term conservation efforts, and requested assistance with implementing sustainable practices that can provide alternative sources of income.
- Promoting Collaboration between Protected Areas and Indigenous Lands: Stakeholders emphasized the need for collaborative approaches to conservation that bridge Indigenous lands and protected areas. They recommended establishing agreements that respect Indigenous knowledge and cultural practices while promoting shared responsibility for environmental management.

5. Project Stakeholders

5.1. Stakeholders in the intervention area of the project

The project engages a diverse range of stakeholders who bring unique expertise, resources, and perspectives essential for its success. These include government bodies at federal, state, and municipal levels, each contributing to policy alignment, resource management, and regulatory support. International cooperation provides technical and financial assistance, supporting environmental conservation and community resilience efforts.

The stakeholders for the project were identified for each implementation area to ensure region-specific needs and resources are addressed effectively. At the national level, stakeholders include federal government entities and institutions with a broad scope that may operate across all three implementation areas, providing overarching policy alignment and support.

Summary of Stakeholders *

Area of implementation	Federal Govt.	International Cooperation	Private Sector	NGOs/ CSO	State Govt.	Municipal Govt.	Indigenous Communities / Representatives	Producers Organizations
National	30	7	7	13				

Sistema Lagunar del Istmo de Tehuantepec (Oaxaca)				13	13	29	21
Laguna de Sontecomapan (Veracruz)			2	22	15	3	12
Cuenca del Río Hondo (Quintana Roo and Campeche)				11	17	3	4
Total	30	7	9	59	45	35	37

* The number of municipalities considered in the project aligns to the number of indigenous communities for each landscape; however, the specific number of indigenous communities will be defined in the IPP during the first year of project implementation. It's important to mention that some NGOs/CSOs and Producers Organizations also serve as indigenous representatives, as described in the next section and the "interest and influence on the project" tables.

The following outlines the institutions by stakeholder type and implementation area.

5.1.1 National Stakeholders

Public Institutions (federal government)

No.	Institution	Main actions
1	Comisión Nacional de Acuacultura y Pesca (CONAPESCA)	It is a decentralized entity of SADER that promotes legality, quality, and transparency in the fishing and aquaculture sector. It collaborates with institutions to implement policies and regulations that support sustainable development, improving the welfare of the people.
2	Comisión Nacional de Áreas Naturales Protegidas (CONANP)	It is a federal entity focused on conserving and managing protected natural areas in Mexico. Its mission is to preserve biodiversity and ecosystems through protection, restoration, and sustainable use, with a focus on safeguarding marine biodiversity impacted by hypoxia and nutrient runoff.
3	Comisión Nacional del Agua (CONAGUA)	This public body regulates water use and coordinates distribution across sectors. It enforces wastewater discharge regulations (e.g., NOM-001-SEMARNAT-2021), monitors water quality, and promotes integrated strategies to address nutrient pollution and its effects on marine environments.
4	Comisión Nacional Forestal (CONAFOR)	It is a federal entity responsible for promoting the sustainable development of Mexico's forest ecosystems. Its work includes the protection, conservation, and restoration of forests, as well as the promotion of sustainable forest management and reforestation.
5	Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO)	Its role is to promote, coordinate, support, and carry out activities oriented towards the understanding, conservation, and sustainable use of biodiversity for the benefit of society. CONABIO contributes to the conservation of ecosystems affected by eutrophication and hypoxia. It supports biodiversity monitoring and promotes the sustainable use of natural resources, helping to address the ecological consequences of water pollution.
6	Consejo Consultivo Nacional del Sector Ambiental (CCNSA)	It is a consultative body of SEMARNAT that aims to promote the participation of experts to provide opinions in the formulation and implementation of federal environmental policy

		on topics not assigned to other consultative or advisory bodies or social participation organizations established in environmental regulations.
7	Consejo Nacional de los Pueblos Indígenas (CNPI)	It is a collaborative, participatory, specialized advisory body that links Indigenous and Afro-Mexican communities with the Institute and federal agencies. It analyzes, proposes, and monitors policies and programs to ensure recognition of rights and the comprehensive welfare of these communities.
8	Comisión Nacional de Mejora Regulatoria (CONAMER)	It focuses on improving regulations to enhance government efficiency and reduce bureaucratic burdens. It simplifies regulations, fosters transparent frameworks, and promotes public participation. By working with federal, state, and municipal authorities, it encourages investment, reduces costs, and aligns policies with national development goals.
9	Corredor Interoceánico Istmo de Tehuantepec (CIIT)	Its institutional objective is to implement a multimodal logistics platform that integrates the services of the national port system administration, including Coatzacoalcos, Salina Cruz, Dos Bocas, and Puerto Chiapas.
10	Instituto Mexicano de Investigación en Pesca y Acuicultura Sustentables (IMIPAS)	Its main function is to direct, coordinate, and guide scientific and technological research in the field of fishing and aquaculture.
11	Instituto Mexicano de Tecnología del Agua (IMTA)	Its mission is to develop new research and technology strategies to safeguard this resource, ensuring its efficient and fair distribution among various users. IMTA develops innovative research and technological solutions to improve water quality management. Its contributions include creating tools and technologies for monitoring nutrient loads and supporting projects that aim to reduce eutrophication in water bodies.
12	Instituto Nacional de Ecología y Cambio Climático (INECC)	It is a government research organization in Mexico focused on ecology and climate change. It generates knowledge to support decision-making and public policies addressing water pollution, nutrient loading, and marine hypoxia, while proposing mitigation measures.
13	Instituto Nacional de Estadística y Geografía (INEGI)	Its primary responsibility is to regulate and coordinate the National Statistical and Geographic Information System, conduct national censuses, integrate the national accounts system, and produce the national consumer price and producer price indices.
14	Instituto Nacional de las Mujeres (INMUJERES)	Its mission is to promote and create conditions that foster non-discrimination and equality of opportunity and treatment between genders.
15	Instituto Nacional de los Pueblos Indígenas (INPI)	It is a government research organization in Mexico dedicated to generating and integrating technical and scientific knowledge in the fields of ecology and climate change to support decision-making.
16	Nacional Financiera (NAFIN)	It is a development bank that supports the country's economic policy, focusing on promoting comprehensive growth in the industrial sector and encouraging investment in projects that are strategic and high priority for Mexico.
17	Petroleos Mexicanos (PEMEX)	It is a state-owned Mexican company involved in the production, transportation, refining, and commercialization of oil and natural gas.
18	Procuraduría Agraria (PA)	It specializes in defending agrarian stakeholders' rights by providing legal advice, arbitration, and representation. It promotes conciliation, rural property regularization, and

		legal security to enhance land and resource use, supporting sustainable rural development and social welfare.
19	Procuraduría Federal de Protección al Ambiente (PROFEPA)	It supervises and evaluates compliance with laws on restoring, conserving, and protecting natural resources. It handles inspections, responds to complaints, and promotes public involvement in environmental protection. As SEMARNAT's enforcement arm, PROFEPA ensures adherence to environmental laws, inspecting and sanctioning entities that violate water pollution standards to address nutrient runoff causing hypoxia.
20	Secretaría de Agricultura y Desarrollo Rural (SADER)	It is dedicated to implementing support policies to improve agricultural and livestock production, optimize sector advantages, and link rural activities to broader economic value chains. Its work includes proposing and coordinating agri-food strategies centered on innovation, productivity, inclusion, and sustainability, aiming to achieve food self-sufficiency, improve public welfare, and ensure the production and supply of safe, healthy food.
21	Secretaría de Bienestar (BIENESTAR)	It is undergoing a transformation process with the objective of improving the quality of life for Mexicans.
22	Secretaría de Desarrollo Agrario, Territorial y Urbano (SEDATU)	Its mission is to establish an effective, coordinated, and sustainable institutional framework for implementing territorial policies.
23	Secretaría de Economía (SE)	Its mission is to create and implement comprehensive policies that promote innovation, diversification, and inclusion in both production and trade. It aims to encourage national and foreign investment, maximize the use of mineral resources, and enhance productivity and competitiveness in the industrial sectors.
24	Secretaría de Gobernación (SEGOB)	It is responsible for the country's political development and collaborates in managing the Federal Executive's relationships with other branches of government and different levels of governance.
25	Secretaría de Hacienda y Crédito Público (SHCP)	Its primary function is to propose, direct, and oversee the Federal Government's policy on financial, fiscal, expenditure, revenue, and public debt matters.
26	Secretaría de Marina (SEMAR)	Its main objective is to exercise National Maritime Power, safeguard maritime interests, and ensure the rule of law in Mexico's marine areas, as well as on coasts, rivers, lakes, and ports.
27	Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT)	It integrates criteria and tools into public and societal functions to protect, conserve, and sustainably use natural resources. Its goal is to promote inclusive environmental policies for sustainable development. SEMARNAT collaborates with consultative committees, such as the National Environmental Sector Committee, to involve experts and citizens in policymaking. It oversees policies to prevent water contamination, works with agencies to enforce norms, and develops strategies to mitigate eutrophication and marine hypoxia impacts.
28	Secretaría de Relaciones Exteriores (SRE)	It directs Mexico's foreign policy, promoting dialogue and cooperation, representing the country, and supporting Mexicans abroad. It also coordinates the international actions of the Government of the Republic.

29	Secretaría de Turismo (SECTUR)	Its role is to design and implement public policies to drive tourism development in Mexico. Its mission includes promoting innovation in the sector, improving service quality, and enhancing national tourism competitiveness. It coordinates efforts between the government, private sector, and civil society, contributing to sustainable and inclusive growth in tourism.
30	Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria (SENASICA)	It is responsible for protecting agricultural, aquaculture, and livestock resources from pests and diseases that are of quarantine relevance.

International Cooperation

No.	Institution	Main actions
1	Agencia de los Estados Unidos para el Desarrollo Internacional (USAID)	It is an independent federal entity responsible for planning and managing economic and humanitarian assistance on a global scale.
2	Agencia Francesa de Cooperación (AFD)	It is dedicated to financing, supporting, and accelerating transitions toward a more just and sustainable world.
3	Banco Interamericano de Desarrollo (BID)	It has focused on improving the quality of life for millions in its 26 borrowing countries since 1959, supported by 48 member nations. It offers financial and technical support to governments, conducts research, and advances areas like health, education, infrastructure, climate action, and diversity to reduce poverty and enhance living conditions.
4	Banco Mundial (BM)	Its mission is to eradicate extreme poverty and promote equitable development within a sustainable environment. However, this mission faces interconnected crises that threaten progress, making urgent action necessary.
5	CAF - Banco de Desarrollo de América Latina	It is a development institution supporting Latin America and the Caribbean to improve quality of life. Its initiatives focus on sustainable development and regional integration, aiming to lead in green and sustainable growth.
6	Programa de las Naciones Unidas para el Desarrollo (PNUD)	It is the leading United Nations agency responsible for promoting sustainable development and reducing global poverty. As an Implementing Agency of the Global Environment Facility (GEF), UNDP plays a central role in facilitating access to financing and implementing projects aimed at environmental protection and combating climate change.
7	Sociedad Alemana de Cooperación Internacional (GIZ)	It is a German state entity focused on international cooperation for sustainable development. Its mission is to improve the living conditions of people facing difficult situations or undergoing transformative contexts.

NGOs (Civil Society and Academic Institutions)

No.	Institution	Main actions
1	Conservation International (CI)	It is founded on a strong base of science, collaboration, and on-the-ground demonstration projects to empower communities to manage nature responsibly and sustainably, thus protecting our global biodiversity for the benefit of humanity.

2	Facultad Latinoamericana de Ciencias Sociales (FLACSO)	It is an international entity dedicated to providing high-quality education and research in the field of Social Sciences, with a presence in 15 Latin American countries.
3	Fondo Mexicano para la Conservación de la Naturaleza (FMCN)	It is an organization that mobilizes financial resources and connects various stakeholders with the purpose of safeguarding the country's natural wealth.
4	Fondo Mundial para la Naturaleza (WWF)	It aims to ensure a healthy planet that fosters prosperity by optimizing resource production and distribution, reducing waste and environmental impact, and improving how resources are produced, transported, and consumed.
5	Fundación Coca Cola México (FCCM)	It addresses water scarcity through innovative initiatives that positively impact lives. Committed to improving water access, it collaborates with communities, social organizations, and partners, providing resources and leadership. Its goal is to ensure more people gain access to this vital resource, creating lasting impacts through concrete actions.
6	Fundación FEMSA	It invests in social initiatives to positively impact lives and build sustainable communities where it operates. Collaborating with over 250 partners in 18 countries, it identifies and scales innovative solutions. Founded in 2008, it operates on the belief that sustainable companies thrive in sustainable communities.
7	Fundación Gonzalo Río Arronte (FGRA)	It is a private, non-profit organization founded in 2000 and headquartered in Mexico City, operating nationwide. Established by Gonzalo Río Arronte's will in 1993, its mission is to provide resources to public and private institutions and non-profit organizations eligible for tax-deductible donations. Its focus areas include health, addiction, and water access.
8	Fundación W.K Kellogg (WKKF)	It is dedicated to supporting children, families, and communities, with the goal of creating conditions that enable vulnerable children to succeed both individually and as active members of society.
9	Global Green Growth Institute (GGGI)	It is an international intergovernmental organization, established through treaties, dedicated to fostering robust, inclusive, and sustainable economic growth in developing countries and emerging economies.
10	Instituto de Recursos Mundiales (WRI)	It is a global technical organization that transforms innovative ideas into concrete actions. Its focus lies in establishing connections between environmental conservation, economic opportunities, and human well-being.
11	Instituto Politécnico Nacional (IPN)	It is an educational institution in Mexico offering high school, undergraduate, graduate, and complementary educational services. It is considered one of the most important educational institutions in the country and Latin America.
12	The Nature Conservancy (TNC)	It is a non-profit environmental organization operating globally, focused on fostering a balance in which people and nature can thrive together.
13	Universidad Nacional Autónoma de México (UNAM)	This public, secular, and autonomous institution is centered on three key functions: teaching, research, and cultural dissemination.

Private Sector

No.	Institution	Main actions
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1	Citibanamex	It is a financial entity that provides banking, credit, insurance, and retirement fund management (AFORE) services. It is the fourth largest bank in Mexico and is headquartered in Mexico City.
2	Grupo Rotoplas	It is a leading company with nearly 40 years of experience in developing and commercializing water solutions. Focused on innovation and sustainability, it covers all phases of the water cycle, offering individual and integrated solutions for water storage, transportation, and quality improvement. As a private-sector leader, it provides technologies for water treatment and reuse, helping reduce nutrient discharges that cause eutrophication and hypoxia.
3	Innovaciones Alumbra (iAlumbra)	It is a group of organizations dedicated to demonstrating and promoting economic growth models that support environmental restoration, respect communities, and encourage health and well-being.
4	KfW Bank	It is a leading development bank with decades of experience, dedicated to improving economic, social, and environmental conditions in Germany and globally. It operates on behalf of the German Federal Government and federal states.
5	Sociedad Financiera Agropecuaria S.A. de C.V. SOFOM E.N.R. (SOFAGRO)	It is a Non-Regulated Entity Multiple Purpose Financial Company (SOFOM ENR) specialized in financing the sugarcane sector, however it also finances agricultural, agroindustrial and livestock projects.
6	Mision de Desarrollo Micro Empresarial Mexico, S.A. de C.V., SOFOM ENR (MIDEMI)	It is a microfinance company whose objective is to promote economic and social development in semi-marginalized sectors in Mexico through the granting of group loans, covering and exceeding the needs of micro businesswomen.
7	Consejo de Asistencia al Microemprendedor S.A. de C.V. S.F.P. (CAME)	It is a financial community with 30 years of experience granting productive loans. It contributes to strengthening communities through financial education, linking solidarity groups and promoting savings.

5.1.2 Local Stakeholders in Sistema Lagunar del Istmo de Tehuantepec (Oaxaca)

Public Institutions (State)

No.	Institution	Main actions
1	Comité de Cuenca del Río Los Perros -Guigu Bicu- (CtC Los Perros)	It is a watershed committee dedicated to conserving the Río Los Perros basin through sustainable practices and stakeholder collaboration. CtC Los Perros works to reduce agricultural runoff, a major source of nutrient pollution and eutrophication, by fostering community engagement and implementing nutrient management strategies.
2	Comité de Cuenca del Río Tehuantepec (CtC Tehuantepec)	It is a watershed committee focused on the sustainable management of the Río Tehuantepec basin. CtC Tehuantepec collaborates with local communities to promote conservation, control pollution, improve water quality, and reduce sediment and nutrient discharge, addressing downstream marine hypoxia.
3	Comité Estatal de Prevencion y Combate de Incendios	A state committee responsible for the prevention and combat of forest fires in Oaxaca. It develops and implements strategies to reduce the risk of wildfires, provides training to local communities, and coordinates rapid response efforts to protect forests and biodiversity.

	Forestales de Oaxaca (CEPCIFO)	
4	Consejo de Cuenca de la Costa de Oaxaca (CCCO)	It is a coastal watershed council in Oaxaca dedicated to managing water resources and promoting sustainable practices in the coastal region. CCCO addresses pollution from agricultural and urban areas by coordinating multi-sector efforts to conserve watersheds and reduce nutrient inflows into coastal ecosystems.
5	Organismo Público Descentralizado para el Manejo Integral de los Residuos Sólidos Urbanos en Oaxaca (ODP-RSU)	Processes more than 1,200 tons of waste daily, serving over 800,000 residents in the city of Oaxaca and surrounding municipalities.
6	Procuraduría de Protección al Ambiente del Estado de Oaxaca (PROPAEO)	It is an environmental protection agency in Oaxaca that enforces environmental regulations, conducts inspections, addresses complaints, and promotes public participation in conserving natural resources. PROPAEO monitors water quality compliance and penalizes violations related to nutrient pollution from industrial and municipal wastewater sources.
7	Secretaría de Fomento Agroalimentario y Desarrollo Rural (SEFADER)	An organization dedicated to promoting rural and agri-food development in Mexico. This institution is relevant to the project as its focus on rural development can facilitate the implementation of sustainable practices in watershed areas along coastal regions.
8	Secretaría de Gobierno (SEGOB Oaxaca)	The entity responsible for ensuring political and social stability in the state, thereby promoting sustainable development.
9	Secretaría de Igualdad de Género (SEIGEN)	Its goal is to promote and ensure the rights of all women, who face significant barriers and challenges in accessing education, employment, economic empowerment, sexual and reproductive health, as well as in living free from violence and participating in politics.
10	Secretaría de Interculturalidad, Pueblos Indígenas y Comunidades Indígenas y Afromexicanas (INTERCULTURALIDAD Oaxaca)	An entity dedicated to fostering the comprehensive and sustainable development of Indigenous and Afro-Mexican communities in the state.
11	Secretaría de las Mujeres (MUJERES Oaxaca)	The entity responsible for leading equality policy in the state of Oaxaca. Its mission is to integrate a gender perspective across state and municipal public administration in a transversal manner, and to implement actions that help prevent, address, sanction, and eliminate gender-based violence in all its forms.
12	Secretaría de Medio Ambiente, Biodiversidad, Energías y Sostenibilidad (SEMAEDES)	It is responsible for conserving, restoring, and protecting natural resources and ecosystem services while encouraging citizen participation. SEMAEDES leads efforts in Oaxaca to reduce water pollution and rehabilitate ecosystems impacted by eutrophication and hypoxia.
13	Sistema Operador de los Servicios de Agua Potable y	It is responsible for managing potable water and sewage services in Oaxaca, focusing on clean water access and maintaining wastewater treatment systems. SOAPA ensures

	Alcantarillado de Oaxaca (SOAPA)	wastewater treatment complies with standards, reducing nutrient pollution in water bodies and supporting environmental sustainability.
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Public Institutions (Municipalities)

No.	Institution	Main actions
1	Asunción Ixaltepec	The relevance of municipal authorities lies in their close connection with local communities and their capacity to address and manage issues that directly affect the population. As the government body closest to the people, municipal authorities play a crucial role in implementing and enforcing policies that impact public services, resource management, and environmental conservation. Municipal authorities are also responsible for overseeing infrastructure development, regulating land use, and managing public utilities, such as water and sanitation services. Their actions in these areas are pivotal to creating sustainable communities, as they work to improve public health, access to clean water, and the conservation of natural resources. Additionally, specific institutions at the municipal level, such as Municipal Committees, Work Committees, Rural Committees, and the Water Department, will be important partners in the project. Local governments play a vital role in implementing policies for water treatment, regulating land use to prevent runoff, and promoting public awareness of pollution prevention.
2	Ciudad Ixtepec	
3	El Espinal	
4	Guevea de Humboldt	
5	Juchitán de Zaragoza	
6	Magdalena Tlacotepec	
7	Reforma de Pineda	
8	Salina Cruz*	
9	San Blas Atempa	
10	San Dionisio del Mar	
11	San Francisco del Mar	
12	San Francisco Ixhuatán	
13	San Mateo del Mar	
14	San Miguel Chimalapa	
15	San Pedro Comitancillo	
16	San Pedro Huilotepec	
17	Santa María Chimalapa	
18	Santa María Guienagati	
19	Santa María Jalapa del Marqués	
20	Santa María Mixtequilla	
21	Santa María Xadani	
22	Santiago Lachiguiri	
23	Santiago Laollaga	
24	Santiago Niltepec	
25	Santo Domingo Chihuitán	
26	Santo Domingo Ingenio	
27	Santo Domingo Tehuantepec	
28	Santo Domingo Zanatepec	
29	Unión Hidalgo	

* It belongs to another basin; but the municipality will be considered for its political relevance (without adding information about the basin to which it belongs)

NGOs (Civil Society and Academic Institutions)

No.	Institution	Main actions
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1	Centro de Investigación y Educación del Politecnico (CIDIR)	It is an educational and research center dedicated to scientific and technological advancement, focusing on applied research and the development of practical solutions to address local and regional challenges.
2	Centros de Estudios Tecnológicos del Mar (CETMAR)	It provides technical education specializing in marine and coastal studies, preparing students for careers in maritime industries, marine conservation, and coastal resource management
3	Colegio de Bachilleres del Estado de Oaxaca (COBAO)	An institution that offers high school education in the state of Oaxaca, providing young people with the academic foundation and skills needed for higher education or entry into the workforce.
4	Colegio de Estudios Científicos y Tecnológicos del Estado de Oaxaca (CECyTEO)	A public high school institution that focuses on scientific and technological education, preparing students for technical careers and higher education with an emphasis on practical skills and innovation.
5	Comité Autonomista Zapoteca Che Gorio Melendre, A.C. (Comité Melendre)	It is a civil association aimed at fostering change in Zapotec society through initiatives that promote comprehensive community development.
6	Foro Ecológico Juchiteco (F Ecológico)	It is a CSO in Juchitán de Zaragoza, Oaxaca, focused on raising community awareness about environmental protection and ecology. It involves communities in environmental education and conservation activities to address water pollution and promote sustainable practices.
7	Instituto De Estudios De Bachillerato Del Estado De Oaxaca (IEBO)	A high school education institution in Oaxaca that provides educational opportunities for students in rural and underserved areas, aiming to improve access to education and support community development.
8	Tecnológico Nacional de México (TECNM)	A national network of technological institutes offering higher education in engineering, science, and technology, dedicated to training professionals who contribute to the country's industrial and economic development.
9	Unión de Comunidades Indígenas (UCIRI)	It is the oldest coffee organization in Oaxaca, established in 1982 by 17 communities to improve coffee production, marketing, and farmer welfare, with support from the Diocese of Tehuantepec and European NGOs. Today, it has 2,600 members from 56 communities, including Zapotec, Mixtec, Chontal, Chatino, and Mixe groups across Oaxaca.
10	Universidad del Istmo (UNISTMO)	A regional university in Oaxaca that offers undergraduate and postgraduate programs aimed at contributing to the social and economic development of the Isthmus of Tehuantepec through education and research.
11	Universidad del Mar (UMAR)	It is an educational institution in Oaxaca specializing in marine sciences, environmental mgt., and sustainable coastal development. UMAR conducts research on nutrient pollution impacts and develops innovative solutions to mitigate water pollution and marine hypoxia.
12	Universidad del Papaloapan (UNPA)	This university focuses on education and research in fields related to the sustainable development of the Papaloapan Basin, offering programs in environmental sciences, social sciences, and technology.
13	Universidad Veracruzana (UV)	A public, autonomous higher education institution in Veracruz, Mexico, known for its significant role in educational development and research in the region. It has multiple

		campuses across the state and includes the Universidad Veracruzana Intercultural (UVI), which offers higher education programs tailored to rural and Indigenous contexts.
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Producers Organizations (farmers, livestock and fishing)

No.	Institution	Main actions
1	Alianza Ganadera del Sur Sureste (AGSS)	A livestock alliance in southeastern Mexico focused on supporting cattle ranchers through initiatives that promote sustainable livestock management, resource access, and community welfare within the region.
2	Cooperativa Fuerza del Pueblo (CFP)	A cooperative that works to improve economic opportunities for members, often focused on small-scale agriculture or other local products, aiming to enhance the community's economic resilience and self-sufficiency.
3	Cooperativa Fuerza Manglar del Istmo (CFMI)	A cooperative focused on mangrove conservation and sustainable management within the Isthmus region, providing alternative livelihoods to protect these critical ecosystems.
4	Ecotierra	It supports sustainable land management and climate action projects, working with rural communities to implement environmental conservation and carbon reduction practices.
5	F.S.C.P.P. Bahía de Paredón	A regional cooperative involved in small-scale fisheries along the Bahía de Paredón, promoting sustainable fishing practices and supporting local fishermen's livelihoods.
6	F.S.C.P.P. Cuenca del Río Ostuta	A fishing cooperative in the Ostuta River Basin area, focusing on managing and conserving riverine resources while supporting the economic needs of its members.
7	F.S.C.P.P. del Pacífico.	A fishing cooperative along Mexico's Pacific coast, focusing on sustainable fishing practices and economic initiatives for coastal communities.
8	F.S.C.P.P. Fuerza Ikoots	A cooperative composed of Ikoots (Huave) Indigenous fishers, focused on sustainable resource use and economic empowerment within Indigenous coastal communities.
9	F.S.C.P.P. Mar Muerto	A cooperative dedicated to sustainable fishing and resource management in the Mar Muerto area, supporting local fishermen and promoting environmental conservation.
10	S.C.P.P. Huazantlan del Rio	A fishing cooperative in the Huazantlan del Rio area that supports local fishers in maintaining sustainable practices and contributing to local food security and income.
11	S.C.P.P. Ribereña Alianza Integral	A small-scale coastal fishing cooperative that fosters sustainable fishing practices and collective action for economic support and resource management.
12	S.C.P.P. Ribereña Barra de Santa Teresa	A cooperative supporting fisher in the Barra de Santa Teresa area, focused on community-based resource management and income generation.
13	S.C.P.P. Ribereña Cerro Chico	A community fishing cooperative from Cerro Chico, supporting sustainable fisheries and economic development for local fishing families.
14	S.C.P.P. Ribereña Ixhuatán	A fishing cooperative based in Ixhuatán, dedicated to sustainable fishing practices and supporting community livelihood initiatives.
15	S.C.P.P. Ribereña Pescadores e Río Viejo	A cooperative focused on sustainable fishing in Río Viejo, promoting environmental stewardship and income generation for local fishers.
16	Unión de Artesanos y Campesinos "Tona Taati" (UAC TT)	An organization dedicated to supporting artisans and farmers, providing training and resources to enhance craft production, sustainable agriculture, and economic resilience in rural communities.

17	Unión de Comunidades Indígenas de la Región del Istmo (UCIRI)	It is Oaxaca's oldest coffee organization, founded in 1982 by 17 communities to improve coffee production, marketing, and farmer welfare, with support from the Diocese of Tehuantepec and European NGOs. Today, it includes 2,600 members from 56 communities, representing Zapotec, Mixtec, Chontal, Chatino, and Mixe groups across Oaxaca.
18	Unión de Cooperativas Pesqueras del Istmo de Tehuantepec (UCPIT)	An alliance of fishing cooperatives in the Isthmus of Tehuantepec, promoting sustainable fishing practices, resource sharing, and economic development among member cooperatives.
19	Unión de Ejidos y Comunidades del Istmo de Tehuantepec (UECIT)	An organization of ejidos and communities in the Isthmus region, focusing on sustainable land use, communal resource management, and promoting agricultural and economic initiatives.
20	Unión Ganadera Regional de la Costa de Oaxaca (UGRCO)	A regional livestock association in Oaxaca's coastal region, supporting cattle ranchers through resources, training, and sustainable practices aimed at improving economic resilience.
21	Unión Ganadera Regional del Istmo De Tehuantepec (UGR)	A livestock union representing ranchers in the Isthmus of Tehuantepec, focused on sustainable livestock management, resource access, and community support.

Note. The acronym S.C.P.P stands for Sociedad Cooperativa de Producción Pesquera (Fishing Production Cooperative Society), and the acronym F.S.C.P.P. stands for Federación de Sociedades Cooperativas de Producción Pesquera (Federation of Fishing Production Cooperative Societies).

5.1.3 Local Stakeholders in Laguna de Sontecomapan (Veracruz)

Public Institutions (State)

No.	Institution	Main actions
1	Comisión del Agua del Estado de Veracruz (CAEV)	It is a decentralized public entity in Veracruz responsible for managing, planning, distributing, and conserving water resources. CAEV oversees wastewater treatment, reduces nutrient discharges, controls pollution sources, and ensures compliance with water quality standards.
2	Comité de Origen y Trazabilidad para las Actividades Pecuarias en Veracruz (COT)	It coordinates efforts among various actors, including government agencies and NGOs, to implement actions that help ensure the identification of livestock and beehives in compliance with national regulations.
3	Comité Estatal de Sanidad Vegetal de Veracruz (CESAVE)	It operates phytosanitary campaigns and programs for the prevention, detection, and control of quarantine and economically important pests and diseases, while promoting the implementation of Contamination Risk Reduction Systems in the state of Veracruz.
4	Comité Estatal para el Fomento y Protección Pecuaria de Veracruz (CFPP)	It is an organization that aims to achieve Official Animal Health Campaign Phases to maintain disease-free statuses in the state of Veracruz and is recognized for its work in preventing diseases that affect human health.
5	Instituto Veracruzano de Asuntos Indígenas (IVAI)	It is dedicated to preserving the culture of Indigenous communities in Veracruz.
6	Instituto Veracruzano de las Mujeres (IVERMUJERES)	It is an entity that seeks to promote equity and equal opportunities for men and women, and to establish the necessary conditions to ensure respect for women's human rights through public policies that support their holistic development.

7	Procuraduría Estatal de Protección al Medio Ambiente de Veracruz (PMAVER)	It improves environmental conditions in the state and promotes ecological awareness by developing, regulating, and enforcing actions in compliance with environmental legislation. PMAVER monitors pollution, ensures compliance with nutrient runoff standards, and leads restoration efforts for ecosystems impacted by eutrophication.
8	Secretaría de Cultura (SECVÉR)	This agency promotes inclusive culture and develops projects focused on intangible heritage, biocultural projects, and activities with Indigenous councils.
9	Secretaría de Desarrollo Agropecuario, Rural y Pesca (SEDARPA)	It is the entity responsible for coordinating public policies aimed at the development of agriculture, livestock, and fisheries in the state.
10	Secretaría de Desarrollo Económico y Portuario (SEDECOP)	It fosters businesses and supports their growth by promoting entrepreneurship, investment, quality, competitiveness, technological modernization, and improved marketing channels, aiming to enhance well-being, social development, and gender equity.
11	Secretaría de Desarrollo Social (SEDESOL VER)	Its purpose is to coordinate various social activities to promote comprehensive development that enhances the quality of life for the population.
12	Secretaría de Gobierno (SEGOB VER)	It promotes democratic governance and public peace, with a focus on human rights. This is achieved by strengthening institutions that respond to social needs and manage internal policies to ensure the welfare of Veracruz's inhabitants.
13	Secretaría de Medio Ambiente (SEDEMA)	Its primary role is to draft complaints, charges, and statements addressing environmental crimes under the Federal Penal Code and the Penal Code of Veracruz. SEDEMA leads efforts to combat environmental crimes, especially those causing water pollution, supporting long-term solutions to mitigate marine hypoxia through legal and regulatory frameworks.
14	Secretaría de Protección Civil (PCEstatalVer)	It coordinates initiatives to protect the population from disasters, whether natural or human induced. Its mission is to minimize or eliminate the loss of lives, destruction of property, and environmental damage.
15	Secretaría de Turismo (SECTUR VER)	It is dedicated to fostering sustainable, innovative, and inclusive tourism through public policies, information technology, and training for tourism service providers. Its goal is to make a positive impact on poverty reduction and strengthen the economy of Veracruz's ten regions, promoting their cultural, historical, gastronomic, and natural diversity.

Public Institutions (Municipalities)

No.	Institution	Main actions
1	Catemaco	Municipal authorities play a vital role due to their direct connection with local communities and their ability to address resident-specific issues. They implement policies on public services, resource management, and environmental conservation, while overseeing infrastructure, land use, and utilities like water and sanitation to support sustainable development and public health.
2	Mecayapan	

3	San Andrés Tuxtla	Key municipal institutions, including Municipal Committees, Work Committees, Rural Committees, and the Water Department, are essential partners for the project. These institutions manage wastewater infrastructure, regulate land use to reduce nutrient runoff, and promote community-based solutions to address water pollution.
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NGOs (Civil Society and Academic Institutions)

No.	Institution	Main actions
1	Academia Veracruzana de las Lenguas Indígenas (AVELI)	Its main objective is to promote the development, study, preservation, strengthening, and dissemination of the use of Indigenous languages in the region.
2	Brigadas Comunitarias de Protección Civil de Veracruz (BC VER)	They carry out preventive actions for emergencies and work to reduce disaster risks in their communities, neighborhoods, or areas where they live.
3	Buceo Deportivo Los Tuxtlas (BDLT)	It is an organization dedicated to offering diving courses in Veracruz.
4	Casas y Centros Culturales en Veracruz (CCCV)	They promote and spread traditional Veracruz cultural expressions and serve as liaisons with Indigenous communities.
5	Consejo Empresarial Mexicano de Comercio Exterior, Inversión y Tecnología, A.C. (COMCE)	It is a Mexican private sector organization dedicated to promoting foreign trade, foreign investment, and technological development.
6	DECOTUX A.C.	It is an NGO with over 22 years of experience facilitating co-management processes to support sustainable development and ecological restoration in Indigenous communities of the Sierra de Santa Marta and Los Tuxtlas.
7	Educación y Desarrollo Rural A.C. (EDUDER)	It is an organization dedicated to promoting sustainable development models in rural areas. Its goal is to establish itself as a leader in this field by harnessing the entrepreneurial capacity of rural communities.
8	Espacios Naturales y Desarrollo Sustentable (ENDESU)	It conducts a variety of educational, awareness, and training projects aimed at fostering environmental awareness in the community to contribute to the conservation of its natural surroundings.
9	Fondo Golfo de México (FGM)	It is an organization dedicated to conserving and sustainably using natural resources in the Gulf of Mexico region. FGM focuses on collaborative strategies to reduce nutrient pollution and its impacts on marine ecosystems.
10	Gente Sustentable A.C.	It is a civil society organization involved in water management projects.
11	Instituto de Ecología (INECOL)	It emerged from the interest in conducting research on the use of natural resources, conservation, and biodiversity in Mexico.
12	Instituto Tecnológico Superior de San Andrés Tuxtla (ITSSAT)	Its mission is to be a higher education institute that trains professionals for the economic development of society through a comprehensive learning process.
13	KALPULLI Catemaco A.C	Its purpose is to promote the sustainable use of natural resources, as well as community participation, organization, and self-management.

14	Los Amigos Ecoturismo y Reserva Natural de Sontecomapan (Los Amigos)	It is an organization that provides ecotourism and sustainable lodging services in the Sontecomapan Lagoon.
15	Pronatura Veracruz A.C. (PVER)	It conducts site assessments, designs restoration proposals, implements eco-productive restoration, performs biological monitoring, and provides maintenance. PVER focuses on restoring ecosystems affected by water pollution and nutrient overload.
16	Proyecto Sierra de Santa Marta A.C (PSSM)	It is an organization promoting equitable and sustainable use of natural and human resources in the Sierra de Santa Marta, Veracruz. PSSM focuses on reducing land-based pollution that contributes to hypoxia in the Gulf of Mexico.
17	Red de Mujeres Gestoras de Desarrollo A.C. (RMGD)	It is dedicated to strengthening women's skills and promoting their growth within the group. Topics covered include effective communication, leadership, emotional management, women's empowerment, and time management.
18	Selva del Toztlan A.C. (STAC)	It focuses on strengthening the group of stingless beekeepers in Los Tuxtlas (MARETUX) and raising community awareness about the importance of native bees.
19	Senderos y Encuentros para un Desarrollo Autónomo Sustentable (SENDAS)	It operates in the Citlalapa basin near the city of Huatusco in central Veracruz. Its work is centered on the sustainable management of natural resources and environmental education.
20	Universidad Autónoma Metropolitana (UAM)	It is a public institution providing a flexible educational model, impactful scientific and humanistic research, and cultural dissemination. Its academic units in Azcapotzalco and Xochimilco are actively involved in the Sontecomapan Lagoon.
21	Universidad Veracruzana (UV).	It is an autonomous public university in Veracruz, Mexico, with nationwide campuses and a strong reputation. Its Intercultural division provides higher education in rural and Indigenous contexts. UV conducts research on water quality, eutrophication, and hypoxia while fostering community engagement and education to tackle these issues effectively.
22	Vivero Tebanca, A.C. (VTAC)	It is an initiative dedicated to reforestation and spring restoration in Catemaco, Veracruz, and is part of the Biodiversity Nursery Network.

Producers Organizations (farmers, livestock and fishing)

No.	Institution	Main actions
1	Agroproductores de la Sierra De Santa Martha (ASSM)	A rural production organization dedicated to the protection, conservation, and promotion of the sustainable use of natural resources among producers in the Veracruz region and surrounding areas.
2	Alianza Ganadera del Sur Sureste de la República Mexicana (AGSSRM)	A livestock alliance representing ranchers in southeastern Mexico, focused on sustainable livestock management, resource access, and community welfare in the region.
3	Asociación de Industriales del Estado de Veracruz A.C. (AIEVAC)	An association of industrialists in Veracruz that promotes economic development and collaboration among industries, supporting industrial growth and addressing regional challenges.

4	Asociación Ganadera Local de Catemaco (AGLC)	A local cattle ranchers' association in Catemaco that supports livestock producers with resources, training, and sustainable practices to improve economic resilience.
5	Asociación Ganadera Local de San Andrés Tuxtla (AGLSAT)	A local association for cattle ranchers in San Andrés Tuxtla, providing support and resources to livestock producers to enhance production and promote sustainable practices.
6	Asociación Ganadera Local General de la Victoria (AGLGV)	A cattle ranchers' association in La Victoria dedicated to supporting local livestock producers with training, resources, and advocacy for sustainable livestock practices.
7	Asociación Ganadera Local General Santiago Apóstol (AGLGSA)	An association serving livestock producers in Santiago Apóstol, promoting sustainable cattle ranching practices and providing resources to strengthen local agriculture.
8	Comité de Sanidad Acuicola y Pesquero (CSAP)	An organization focused on aquatic and fishing health, dedicated to monitoring and maintaining the health standards of fisheries and aquaculture operations in the region.
9	Red de Ganadería Sostenible de los Tuxtlas (ReGaS)	Promotes sustainable livestock practices to reduce nutrient runoff from agricultural areas, mitigating its impact on water quality and marine ecosystems.
10	Sociedad Cooperativa Restauradores de Manglar Sontecomapan (SCRMS)	It is a cooperative engaged in mangrove restoration in Tecolutla and the Sontecomapan Lagoon, casuarina control in the Caribbean, and other conservation efforts. SCRMS contributes to reducing nutrient pollution and enhancing coastal ecosystem health.
11	Unión Ganadera Regional de la Zona Central del Estado de Veracruz (UGRZCEV)	A regional livestock union for central Veracruz, supporting cattle ranchers with resources, training, and sustainable practices to strengthen the local livestock industry.
12	Unión Ganadera Regional del Sur de Veracruz (UGRSV)	A regional livestock union for southern Veracruz, focused on supporting livestock producers through training, resources, and promoting sustainable livestock practices across the region.

Private Sector

No.	Institution	Main actions
1	Corporación Integral de Comercio Exterior (Grupo CICE)	A Mexican company that provides cargo management and maritime logistics services from the port of Veracruz, specializing in the transportation and logistics of goods for international trade.
2	Grupo Herdez	One of the largest distributors of processed Mexican foods, Herdez leads several food categories in Mexico, particularly in mole, mayonnaise, and tomato puree. The company currently has production facilities in Veracruz.

5.1.4 Local Stakeholders in Cuenca del Río Hondo (Quintana Roo and Campeche)

Public Institutions (States)

No.	Institution	Main actions
1	Asociación de Municipios del Sur de Quintana Roo (AMUSUR)	A decentralized public organization founded in 2013, aiming to improve environmental conditions and optimize the productivity of natural resources in the southern region of the state.

2	Comisión de Agua Potable y Alcantarillado (COPA)	It is a public utility managing potable water and sewage services in Quintana Roo, ensuring water access and quality. COPA's maintenance of wastewater treatment infrastructure helps reduce nutrient discharges, combating eutrophication and marine hypoxia.
3	Comisión de Cuenca del Río Hondo (CCRH)	Focuses on the sustainable management of the Río Hondo watershed, ensuring reduced nutrient runoff from agricultural and urban areas, which helps mitigate water pollution and marine hypoxia downstream.
4	Comité de la Reserva Estatal Santuario del Manatí de Quintana Roo (Comité RESMBCH)	The committee responsible for overseeing the Manatee Sanctuary Reserve in Quintana Roo, working to protect manatee populations and promote conservation efforts within the reserve.
5	Consejo de Cuenca de la Península de Yucatán (CCPY)	This council coordinates water resource management across the Yucatán Peninsula, promoting policies and actions that reduce nutrient loads into rivers and coastal ecosystems, protecting marine biodiversity.
6	Instituto de Biodiversidad y Áreas Naturales Protegidas de Quintana Roo (IBANQROO)	Its primary goal is to ensure equal rights and opportunities for men and women, promote gender equity, and design, implement, and supervise public policies that benefit women in the state.
7	Instituto de la Mujer del Estado de Campeche (IMEC)	Its mission is to establish a transparent, honest, inclusive, efficient, and results-oriented institution, promoting joint participation between society and various government agencies at municipal, state, and federal levels.
8	Instituto para el Desarrollo del Pueblo Maya y las Comunidades Indígenas de Quintana Roo (IDAIPQROO)	Responsible for implementing public policies related to Indigenous communities. According to the 2015 intercensal survey by INEGI, over 40% of Quintana Roo's population identifies as Indigenous.
9	Instituto Quintanarroense de la Mujer (IQM)	The state agency responsible for addressing and preventing violence against women in Quintana Roo.
10	Procuraduría de Protección al Ambiente de Quintana Roo (PPAQROO)	It monitors and enforces compliance with laws on restoring, conserving, and protecting natural resources through inspections, surveillance, complaint responses, and public involvement. PPAQROO works to prevent nutrient pollution from industrial, municipal, and agricultural sources.
11	Secretaría de Desarrollo Agropecuario Rural y Pesca de Quintana Roo (SEDARPE)	It promotes balanced and sustainable economic development while enhancing population well-being across state regions. Its functions include formulating, implementing, managing, and evaluating policies and programs for agriculture, rural development, fishing, financing, livestock, and rural infrastructure.
12	Secretaría de Ecología y Medio Ambiente de Quintana Roo (SEMA)	It is responsible for establishing and guiding the state's environmental policy as the primary authority in the sector. Its duties include implementing the Sectoral Ecology and Environment Program and developing strategies and action plans. SEMA focuses on reducing nutrient pollution and rehabilitating ecosystems impacted by eutrophication and hypoxia.
13	Secretaría de Gobierno de Campeche (SEGOB CAM)	Has various functions, including coordinating and overseeing parks, zoos, botanical gardens, and natural reserves within the state.

14	Secretaría de Gobierno de Quintana Roo (SEGOB QROO)	It oversees political development in the country, facilitating interaction between the Federal Executive Branch, other branches of government, and various levels of government. Its goal is to promote peaceful coexistence, social harmony, development, and well-being within the framework of the rule of law.
15	Secretaría de Medio Ambiente, Biodiversidad, Cambio Climático y Energía de Campeche (SEMABICCE)	It is a state agency in Campeche focused on environmental protection, biodiversity conservation, climate change mitigation, and sustainable energy development. Its activities include managing water quality, addressing climate change impacts, and reducing nutrient pollution through sustainable development initiatives.
16	Secretaría de Obras Públicas de Quintana Roo (SEOP)	Responsible for planning, executing, and overseeing public works and infrastructure projects in Quintana Roo to support sustainable development and improve regional infrastructure.
17	Secretaría de Turismo de Quintana Roo (SEDETUR QROO)	It promotes sustainable, innovative, and inclusive tourism through public policies, technology, and training for providers. Its goal is to reduce poverty, strengthen the economy across the state's ten regions, and showcase cultural, historical, gastronomic, and natural diversity.

Public Institutions (Municipalities)

No.	Institution	Main actions
1	Bacalar (Quintana Roo)	Municipal authorities are essential due to their close connection to communities and their ability to address resident-specific issues. As the closest level of government, they implement policies on public services, resource management, and environmental conservation. They oversee infrastructure, land use, and utilities like water and sanitation, which are vital for sustainable development and public health. Municipal entities such as Committees, Work Committees, Rural Committees, and the Water Department are key project partners. Municipal authorities execute policies and infrastructure projects for water management, land use, and conservation, reducing nutrient runoff and promoting sustainable development.
2	Calakmul (Campeche)	
3	Othón P. Blanco (Quintana Roo)	

NGOs (Civil Society and Academic Institutions)

No.	Institution	Main actions
1	Agua Clara Ciudadanos por Bacalar A.C. (ACCB)	It is an NGO based in Bacalar, established in 2016. Specializing in monitoring the water quality of the Bacalar Lagoon, ACCB advocates for preventing nutrient pollution and promotes sustainable practices to protect aquatic ecosystems.
2	Alianza Peninsular de Turismo Comunitario (APTC)	An organization composed of social enterprises dedicated to promoting and strengthening community-based tourism in the Yucatán Peninsula. This alliance integrates three community tourism networks across the states of Yucatán, Campeche, and Quintana Roo.
3	Amigos de Sian Ka'an	It aims to preserve the ecosystems of the Yucatán Peninsula while supporting the socioeconomic development of local communities. Using scientific evidence, it influences local culture and environmental policies, promoting practices and policies that reduce water pollution and protect marine and coastal biodiversity.

4	Colegio de la Frontera Sur (ECOSUR)	It is dedicated to promoting sustainable development in Mexico's southern border, Central America, and the Caribbean through knowledge creation, human capital development, and collaboration in the social and natural sciences.
5	Fondo para la Paz A.C.	Since 1994, it has been a development agency focused on sustainably improving living conditions in rural communities, particularly Indigenous ones. It works to strengthen the capacities and opportunities of Mexican communities affected by poverty.
6	Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias (INIFAP)	A prominent scientific and technological institution recognized nationally and internationally for its ability to address knowledge needs and technological innovations in the forestry, agricultural, and livestock sectors.
7	Instituto Tecnológico de la Zona Maya (ITZM)	It is a higher education institution in the Mayan region of Quintana Roo, focused on training professionals to support regional development with an emphasis on cultural and environmental sustainability.
8	La Sociedad de Productores Forestales Ejidales de Quintana Roo (SPFEQR)	An organization focused on promoting the sustainable management of forests and jungles in the region, supporting ejido communities in sustainable forestry practices and resource conservation.
9	Pronatura Península de Yucatán (PPY)	It's a CSO focused on biodiversity protection and ecosystem preservation in the Yucatán Peninsula, including Quintana Roo. PPY undertakes conservation projects to reduce nutrient inflows, protect aquatic ecosystems, and promote community-based solutions to mitigate water pollution.
10	Rainforest Alliance (RA)	An international non-profit organization operating at the intersection of business, agriculture, and forestry sectors, promoting sustainable practices to conserve biodiversity and support sustainable livelihoods.
11	Universidad Autónoma de Quintana Roo (UAEQROO)	It is a public university in Quintana Roo offering higher education and research programs that support the region's sustainable development, particularly in environmental and social sciences. It addresses regional challenges like water pollution and hypoxia.

Producers Organizations (farmers, livestock and fishing)

No.	Institution	Main actions
1	Cooperativa Yaax'Che (C Yaax'Che)	This initiative began in 1994 with a group of residents from communities near the Calakmul reserve. Taking advantage of the tourist flow to the archaeological area, they started offering guided tours to promote local development.
2	Grupo Beta San Miguel (BSM)	The largest sugarcane producer in Mexico, with a production of 782,788 tons during the harvest season, representing 13.08% of Mexico's total sugarcane production.
3	Ingenio Azucarero San Rafael Pucte (IASRP)	A sugar mill focused on the production and processing of sugarcane in Mexico, playing an important role in local employment and the regional economy through the sugar industry.
4	Sociedad de Producción Rural Kabi Habin (SPR KH)	Focused on trade and regional integration, this organization has been recognized as a significant player in its local community, contributing to the area's economic development.

5.2. Gender

Despite systemic barriers, women in rural Mexico show remarkable resilience in conserving water resources and ocean health. Their roles and responsibilities differ from men's, making them crucial as users and managers of natural resources. However, women often face discrimination in accessing and managing these resources or benefiting from their services.

While Mexico ranks 33rd out of 146 countries in the Global Gender Gap 2024 report, significant challenges remain. Rural women work an average of 89 hours a week—31 more than men—much of it unpaid and unrecognized, including subsistence farming and caregiving.

Women in rural Mexico share common conditions that are specific to the Mexican context across all three landscapes where the project will be carried out. However, it's important to note that there are variations in the productive activities they engage in, their level of leadership, and their ethnic affiliation. It's crucial to understand that women are not a homogenous group. Other social factors, such as age and ethnic origin, intersect with gender, leading to varying degrees and forms of marginalization and discrimination. Recognizing and addressing these intersecting inequalities in the governance of natural resources, particularly water resources, is crucial for achieving women's empowerment and promoting inclusive and effective management. This, in turn, will lead to better conservation results and the promotion of sustainable activities that help reduce marine hypoxia.

It is a common thread that women, despite their significant role in managing, conserving, and defending natural resources and territories, often have their critical work overlooked due to cultural issues and patriarchal structures. During the project's visits to the three landscapes, it was evident that women were actively involved in actions to reduce ocean pollution, such as beach cleaning and mangrove restoration. Their roles as producers, ecosystem protectors, and leaders were also identified as crucial.

The Spotlight Initiative, a global partnership led by the United Nations, aims to eliminate all forms of violence against women and girls. In Mexico, this initiative focuses on addressing gender-based violence, including femicide, sexual violence, domestic violence, and human trafficking, while also strengthening institutional and community mechanisms to protect women's rights. The project recognizes that gender-based violence and discrimination significantly impact women's ability to participate in decision-making, access resources, and benefit from sustainable environmental initiatives.

In alignment with the Spotlight Initiative, this project will integrate gender-responsive strategies to ensure that women—especially Indigenous women, female heads of households, and young women—have equitable access to decision-making spaces and project benefits. This includes creating safe environments for women's participation, promoting inclusive governance structures, and strengthening local institutional capacities to prevent and respond to gender-based violence. By aligning with the Spotlight Initiative's goals of empowerment and protection, the project will reinforce women's leadership in sustainable water management, pollution reduction, and conservation efforts, ensuring their voices are central in shaping long-term solutions for marine hypoxia and ecosystem restoration.

In summary, gender equality and rights must be central to the implementation of this project to avoid perpetuating gender inequalities and to encourage women and men to contribute to efforts to reduce pollution and marine hypoxia. Equitable participation in the initiatives promoted within the framework of this project (in terms of decision-making and influence and the distribution of costs and benefits) will generate improved capacities, more effective solutions, improved quality of water resources, and respect for human rights.

5.3. Opportunities and Constraints for Project Participation

Opportunities for Women under GEF-8

Based on the current political, social, and economic context of the assessed municipality, several opportunities have been identified:

- Promote access to participate in projects to reduce pollution and marine hypoxia that promote sustainable, productive activities that generate income for women.
- Generate opportunities for women to access financial resources, technologies, training, information, and support for productive work.
- Raise awareness among women and men to achieve joint responsibility in care work and thus reduce the hours that women spend on these tasks.
- Sharing successful experiences from a gender perspective between the participants of the project's different components, as well as between both regions included.

Constraints for Women's participation under GEF-8

Certain conditions have been recognized as limiting women's participation:

- Women's knowledge in reducing water pollution is often undervalued.
- There are restrictions on female participation in training and decision-making spaces at different levels.
- Women are responsible for care work, so it is not easy for them to have time for activities such as those involved in the project.
- The distance between their isolated communities and more central locations does not make life easier for them, as they generally do not have access to public or private transport. In addition, women may suffer violence and harassment on the way.
- Access to information is limited and is another factor limiting their participation in decision-making and ensuring that their voices are heard.

The project will design activities and spaces that include both men and women, as well as initiatives exclusively for women, depending on the subject matter and addressing the challenges outlined above.

5.4. Summary of Project Stakeholder Needs, Concerns and Expectations

The project is committed to gathering and assessing the needs, concerns, and expectations of stakeholders to ensure responsive and inclusive engagement throughout its duration. During initial consultations conducted in early 2024, the project team identified key interests and concerns across major stakeholder groups. This summary outlines the primary needs and expectations of these groups, establishing a foundation for tailored project activities and strategies that align with stakeholder priorities and foster strong, ongoing support.

Summary of key stakeholders' expectations and concerns

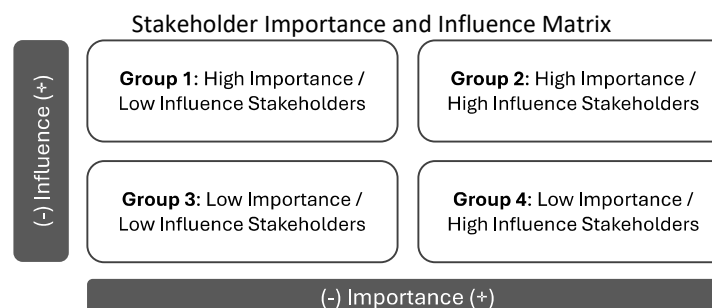
Stakeholder group	Key expectations	Key concerns
Federal Government	Federal agencies expect the project to align with the new national policies of President Sheinbaum (2024-2030) on environmental conservation and sustainable development, ensuring compliance with federal regulations. They anticipate full support in implementing national programs and an opportunity to strengthen federal-level environmental governance.	Concerns include potential overlaps with existing federal initiatives and the need for clear inter-agency coordination. There may also be concerns regarding the effective allocation of resources across diverse implementation areas. These are important matters considering that President Sheinbaum's new administration is restructuring the federal government, where agencies such as CONAGUA, CONABIO, and CONAFOR, among others, are being relocated within the Undersecretariat for Environmental Policy and Natural Resources of SEMARNAT. This could slow down administrative processes while these changes are consolidated.
International Cooperation	International organizations expect the project to align with global conservation standards, provide measurable impacts, and foster sustainable development practices that are	A main concern is ensuring that the project remains sustainable and impactful beyond the 5-year funding period. Another concern is that, during project implementation, the perspectives of

	replicable in other regions. They also look forward to supporting community-driven initiatives that strengthen local capacities.	all involved parties must be considered, and care should be taken to avoid creating false expectations about the project. It should be clear that GEF funds will be used to complement and enhance scheduled activities, as well as to improve technical assistance and develop relevant studies and diagnostics.
Private Sector	Private sector stakeholders anticipate opportunities for sustainable investment, partnerships in ecotourism, agriculture, and conservation, and improved local infrastructure that could support business growth. They are also interested in enhancing their environmental and social responsibility profiles.	Concerns include the potential for regulatory constraints from SEMARNAT that could affect operations, especially in natural areas. The private sector may also be concerned about the balance between conservation efforts and economic activities, particularly in agriculture and tourism.
NGOs (Civil Society and Academia)	NGOs and academic institutions expect active involvement in the project, particularly in data collection, environmental monitoring, in the development of studies and diagnosis, and encouraging community engagement. They look forward to opportunities for collaboration in conservation education and in promoting sustainable practices within communities.	Concerns include ensuring that community voices are genuinely represented, and that engagement is inclusive and culturally sensitive. There is also a need for assurance that data and research efforts will be effectively utilized and acknowledged within the project.
State Governments	State authorities expect the project to contribute to state-level sustainable development objectives and to support local environmental initiatives. They also anticipate collaborative efforts to address regional conservation priorities and improve infrastructure.	State governments are concerned about the coordination between federal institutions and the state and municipal agencies to ensure streamlined efforts. There may also be concerns about the allocation of resources across the regions and ensuring that the project addresses unique state-level environmental challenges related to water pollution and marine hypoxia.
Municipal Governments	Municipal governments expect technical assistance support for water conservation, and sustainable land use activities. They anticipate increased capacity-building opportunities and community involvement.	Concerns include ensuring adequate resources for implementation at the local level and managing community expectations effectively, particularly in addressing water pollution and its contribution to marine hypoxia. Municipalities may also be concerned about implementing wastewater treatment infrastructure, regulating agricultural runoff to reduce nutrient pollution, and maintaining clear communication channels to foster community participation. Additionally, they must address potential conflicts over land use and

		natural resource management, especially in areas where nutrient overload from land-based activities impacts aquatic ecosystems and contributes to oxygen depletion in coastal waters.
Productive Organizations	Productive organizations look forward to increased access to sustainable practices, technical support, and market opportunities for local products. They anticipate training and resources that will help transition to environmentally friendly practices and improve local livelihoods.	Concerns revolve around ensuring that sustainable practices do not limit productivity or income. There may also be concerns about fair access to project resources and support, particularly for smaller or marginalized producers, and the need for practical, culturally appropriate training and tools.

Analyzing beneficiary interests and stakeholder influence is essential for an inclusive and effective planning process. Understanding beneficiaries' motivations and needs helps design interventions that truly address their priorities, while assessing stakeholder influence identifies actors who can support or hinder project implementation. This approach enhances project relevance and impact and promotes equity by giving traditionally marginalized groups a voice in decision-making (UNDP 2009).

5.5. Beneficiaries and Stakeholders interests and their influence



The figure above presents a tool for prioritizing stakeholders based on their influence and impact on the project. Group 1 stakeholders are crucial for the activity's success, despite having limited influence. Group 2 stakeholders are both important and influential, making them key to planning and valuable partners. Group 3 stakeholders have minimal influence and importance. Group 4 stakeholders, though not essential, hold significant influence that could affect or halt the program. While they may not be directly involved in planning, a communication strategy to gain their support is essential to overcome potential obstacles and ensure success (UNDP 2009).

Categorizing stakeholders by engagement level and role is key to the project's success. Priority Level 1 (High) stakeholders have significant influence and interest, requiring active involvement in decision-making and planning. Priority Level 2 (Medium) stakeholders, with moderate influence or interest, are regularly consulted for alignment and feedback. Priority Level 3 (Low) stakeholders, with limited influence or interest, are primarily kept informed about project milestones. This ensures efficient use of resources and targeted engagement.

Stakeholders are also classified by their role as beneficiaries. Direct Beneficiaries receive immediate project benefits, while Indirect Beneficiaries gain secondary advantages. Implementing Parties actively execute project tasks, and Interested Parties have a vested interest but are not directly affected. This categorization tailor's engagement strategies, fostering collaboration and the projects impact. Information is also provided on the interests and contributions of different stakeholders to the project's outcomes and outputs, based on the component to which they are most closely associated.

National Stakeholders interest and influence on the project.

Stakeholder	Component of the project to which it contributes	Interests in relation to the project	Group of importance and influence	Prioritization	Beneficiary
CONAPESCA	Component 3	Focuses on sustainable fisheries, ecosystem protection, and regulating fishing practices to prevent marine hypoxia by reducing nutrient runoff and promoting sustainable aquaculture.	Group 2	1 (High)	Direct
CONANP	Component 2 and 3	Conserving natural protected areas, biodiversity, and habitat restoration, with priority actions to mitigate eutrophication and its effects on marine ecosystems.	Group 2	1 (High)	Direct
CONAGUA	Component 1 y 2	Water resource management, quality control, and allocation for sustainable use, ensuring effective measures to reduce nutrient pollution that contributes to eutrophication and marine hypoxia.	Group 2	1 (High)	Direct
CONAFOR	Component 2 and 3	Sustainable forestry management, conservation, and reforestation to reduce sedimentation and nutrient loading in water bodies, addressing water pollution and hypoxia.	Group 2	1 (High)	Direct
CONABIO	Component 1	Biodiversity monitoring, species protection, and ecosystem preservation, focusing on the impacts of nutrient overload and hypoxia on aquatic and coastal ecosystems.	Group 2	1 (High)	Direct

CONAMER	Component 3	Streamlining regulatory processes to facilitate the implementation of sustainable practices and promote environmental conservation within project sites, including measures to reduce water pollution and hypoxia.	Group 1	3 (Low)	Indirect
CCNSA	Component 2	Environmental sector policy development and stakeholder coordination, with a focus on addressing water pollution and its ecological impacts, including hypoxia.	Group 2	1 (High)	Interested Party
CNPI	Component 3	Indigenous rights, free prior informed consent (FPIC), and cultural protection in project regions, promoting Indigenous-led solutions to reduce nutrient pollution and support healthy aquatic ecosystems.	Group 2	1 (High)	Interested Party
CIIT	Component 1, 2, 3 y 4	Sustainable regional economic development and infrastructure alignment with environmental goals, prioritizing projects that reduce nutrient runoff and combat hypoxia.	Group 2	1 (High)	Implementing Party
IMIPAS	Component 1 y 2	Sustainable aquaculture research and technology advancement for fisheries, focusing on reducing nutrient discharges and supporting practices that prevent hypoxia in marine ecosystems.	Group 2	1 (High)	Interested Party
IMTA	Component 1 and 3	Water technology research, innovation, and sustainable management solutions, emphasizing nutrient reduction technologies and improved wastewater treatment to combat water pollution and hypoxia.	Group 2	1 (High)	Direct
INECC	Component 1	Climate change adaptation and mitigation, environmental research, and ecological monitoring, with specific attention to nutrient pollution impacts and hypoxia.	Group 2	1 (High)	Direct

INEGI	Component 1	Data collection, statistical analysis, and GIS for project planning and monitoring, focusing on identifying water pollution and hypoxia hotspots.	Group 4	2 (Medium)	Interested Party
INMUJERES	Component 2 and 3	Promoting gender equality, including women in environmental decision-making, and implementing gender-responsive policies, especially in efforts to address water pollution and its impact on health and livelihoods.	Group 2	1 (High)	Direct
INPI	Component 2 and 3	Indigenous rights, cultural preservation, and free prior informed consent (FPIC) for Indigenous communities involved in the project areas, supporting sustainable practices that mitigate nutrient pollution and hypoxia.	Group 2	1 (High)	Direct
NAFIN	Component 3	Financing and investment opportunities for sustainable initiatives and economic development in project areas, prioritizing funding for infrastructure that reduces water pollution and marine hypoxia.	Group 4	2 (Medium)	Interested Party
PEMEX	Component 2 and 3	Community relations, and sustainable development impacts related to energy production.	Group 4	2 (Medium)	Interested Party
PA	Component 2	Ensuring land tenure security, supporting rural development, and providing agrarian legal support, focusing on land-use practices that reduce nutrient runoff and protect water bodies from eutrophication.	Group 2	1 (High)	Direct
PROFEPA	Component 2	Environmental law enforcement, pollution control, and conservation of natural resources, with an emphasis on reducing nutrient discharges that lead to water hypoxia.	Group 2	1 (High)	Direct
SADER	Component 1, 2, 3 y 4	Sustainable agricultural practices, food security, and rural development in project sites, focusing on reducing	Group 2	1 (High)	Implementing Party

		agricultural runoff and nutrient pollution to combat eutrophication and hypoxia.			
BIENESTAR	Component 1 and 3	Social development, poverty reduction, and community well-being in project areas, supporting initiatives to improve water quality and reduce the impacts of hypoxia on livelihoods.	Group 4	2 (Medium)	Interested Party
SEDATU	Component 2	Urban and rural development, land management, and housing policies that promote sustainable practices.	Group 2	1 (High)	Interested Party
SE	Component 3	Economic growth, sustainable trade, and support for green industries.	Group 2	1 (High)	Interested Party
SEGOB	Component 2	Political stability, social cohesion, and intergovernmental coordination, especially in Indigenous regions, promoting decision-making solutions for water pollution and hypoxia.	Group 2	1 (High)	Implementing Party
SHCP	Component 1, 2, 3, 4	Budgeting, financial oversight, and funding allocations for sustainable development projects.	Group 2	1 (High)	Direct
SEMAR	Component 1 y 2	Maritime security, protection of coastal resources, and support for environmental conservation along coastlines.	Group 2	1 (High)	Direct
SEMARNAT	Component 2 and 3	Environmental policy, biodiversity conservation, sustainable resource management, and climate change mitigation, emphasizing solutions to reduce eutrophication and marine hypoxia.	Group 2	1 (High)	Implementing Party
SRE	Component 1 y 5	International cooperation, partnerships, and alignment with global environmental and development agendas.	Group 4	2 (Medium)	Interested Party
SECTUR	Component 3	Promotion of sustainable tourism and support for eco-tourism initiatives in project regions.	Group 4	2 (Medium)	Interested Party
SENASICA	Component 1 and 3	Biosecurity, agricultural health, and prevention of diseases affecting	Group 2	1 (High)	Direct

		agriculture, supporting nutrient management practices to reduce agricultural runoff.			
USAID	Component 3	Technical and financial support, capacity building, and sustainability initiatives.	Group 4	2 (Medium)	Interested Party
AFD	Component 3	Financing sustainable development and biodiversity conservation efforts.	Group 4	2 (Medium)	Interested Party
BID	Component 3	Financial support for sustainable development, particularly in economic and social development projects.	Group 4	2 (Medium)	Interested Party
BM	Component 2 and 3	Supporting poverty alleviation, and environmental sustainability in alignment with global development goals.	Group 4	2 (Medium)	Interested Party
CAF	Component 2 and 3	Promotion of sustainable infrastructure and economic growth in Latin America.	Group 4	2 (Medium)	Interested Party
UNDP	Component 1, 2, 3, and 4	Sustainable development, environmental conservation, and poverty reduction, supporting initiatives to mitigate water pollution and hypoxia.	Group 2	1 (High)	Implementing Party
GIZ	Component 1, 2, and 3	Technical cooperation and sustainability, focusing on capacity building and climate resilience.	Group 4	2 (Medium)	Interested Party
Citibanamex	Component 3	Financing and supporting sustainable business practices in Mexico.	Group 4	3 (Low)	Interested Party
Grupo Rotoplas	Component 3	Water management solutions, sanitation, and sustainable water practices to reduce nutrient discharges and improve water quality.	Group 1	3 (Low)	Interested Party
iAlumbra	Component 3	Innovation in sustainable technology, particularly for energy efficiency and environmental conservation.	Group 1	3 (Low)	Interested Party
KfW Bank	Component 1, 2, and 3	Providing financial support for sustainable development, environmental protection, and climate resilience projects.	Group 4	2 (Medium)	Interested Party

SOFAGRO	Component 3	Supporting sustainable agricultural, agroindustrial, and livestock practices by providing financing for initiatives that reduce nutrient runoff, preventing eutrophication and marine hypoxia.	Group 1	3 (Low)	Interested Party
MIDEMI	Component 3	Financing micro-enterprises that promote sustainable practices in agriculture, fishing, and other sectors, with a focus on women-led initiatives to support community development and environmental responsibility.	Group 1	3 (Low)	Interested Party
CAME	Component 3	Providing productive loans, and financial education, while financing sustainable projects in agriculture, fishing, and small enterprises to reduce nutrient pollution and promote environmental stewardship.	Group 1	3 (Low)	Interested Party
CI	Component 3	Biodiversity conservation, sustainable development, and ecosystem management in Mexico.	Group 4	2 (Medium)	Interested Party
FLACSO	Component 1	Research and academic support on social sciences, sustainability, and policy development for Latin America.	Group 1	3 (Low)	Interested Party
FMCN	Component 2 and 3	Financial and technical support for conservation and sustainable use of natural resources in Mexico.	Group 2	1 (High)	Interested Party
WWF	Component 1, 2, and 3	Global environmental conservation, sustainable natural resource management, and biodiversity protection, with specific initiatives to address hypoxia.	Group 2	1 (High)	Interested Party
FCCM	Component 3	Community development, environmental sustainability, and support for water conservation projects.	Group 4	2 (medium)	Interested Party
Fundación FEMSA	Component 3	Environmental conservation, water resources management, and community well-being in Mexico.	Group 4	2 (medium)	Interested Party

FGRA	Component 3	Public health, water resource conservation, and environmental sustainability.	Group 2	1 (High)	Interested Party
WKKF	Component 1 and 3	Community development, food security, and children's welfare in underserved areas.	Group 1	3 (Low)	Interested Party
GGGI	Component 2 and 3	Promoting green growth and sustainable development through policy innovation and investment.	Group 1	3 (Low)	Interested Party
WRI	Component 2 and 3	Research on climate, water, and sustainable agriculture to inform policy and practice in environmental conservation.	Group 4	2 (medium)	Interested Party
IPN	Component 1	Academic research and development of technology for sustainable practices and environmental management, emphasizing water pollution solutions.	Group 2	1 (High)	Direct
TNC	Component 1, 2, and 3	Biodiversity protection, ecosystem management, and sustainable development in Mexico.	Group 2	1 (High)	Direct
UNAM	Component 1	Conducting academic research on sustainability and conservation, focusing on environmental, social, and economic topics, including nutrient pollution and hypoxia impacts.	Group 2	1 (High)	Direct

Sistema Lagunar del Istmo de Tehuantepec (Oaxaca) Stakeholders interest and influence on the project

Stakeholder	Component of the project to which it contributes	Interests in relation to the project	Group of importance and influence	Prioritization	Beneficiary
CtC Los Perros	Component 3	Managing water resources, protecting the environment, and engaging communities in watershed activities to reduce nutrient runoff and prevent eutrophication and marine hypoxia.	Group 1	1 (High)	Direct

CtC Tehuantepec	Component 3	Collaborating on watershed management, sustainable water usage, and ecosystem conservation to address water pollution and its role in downstream hypoxia.	Group 1	1 (High)	Direct
CEPCIFO	Component 2	Prevention and management of forest fires, conservation of forest ecosystems, and coordination with local authorities to minimize soil erosion and sedimentation that can contribute to water pollution.	Group 2	1 (High)	Interested Party
CCCO	Component 1 and 3	Water quality improvement, sustainable management of coastal watersheds, and community involvement in conservation efforts, with a focus on reducing nutrient pollution to combat marine hypoxia.	Group 1	1 (High)	Direct
ODP-RSU	Component 2	Sustainable urban waste management, reduction of environmental impact, and collaboration with municipal waste services.	Group 1	1 (High)	Interested Party
PROPAEO	Component 2	Enforcing environmental laws, protecting biodiversity, and collaborating on ecological restoration to address water pollution and its impacts on marine ecosystems.	Group 2	1 (High)	Interested Party
SEFADER	Component 2 and 3	Promoting rural development, sustainable agriculture, and community capacity building to reduce agricultural runoff and nutrient pollution.	Group 2	1 (High)	Direct
SEGOB Oaxaca	Component 2	Facilitating political stability, coordinating government entities, and supporting inclusive governance to align with efforts to mitigate water pollution and its effects.	Group 2	1 (High)	Interested Party

SEIGEN	Component 2 and 3	Promoting gender equality and women's rights through inclusive participation in initiatives addressing water pollution and hypoxia.	Group 2	1 (High)	Direct
INTERCULTURALIDAD Oaxaca	Component 2 and 3	Promoting the rights of Indigenous and Afro-Mexican communities and ensuring their cultural relevance.	Group 2	1 (High)	Direct
MUJERES Oaxaca	Component 2 and 3	Advocacy for women's rights and gender equality, ensuring inclusive participation of women.	Group 2	1 (High)	Direct
SEMAEDES	Component 1, 2, and 3	Overseeing environmental policies, conserving natural resources, and supporting sustainable development initiatives on water pollution and its impacts.	Group 2	1 (High)	Direct
SOAPA	Component 2 and 3	Managing water supply and sanitation services to improve water quality and reduce wastewater discharge and nutrient pollution.	Group 2	1 (High)	Direct
Asunción Ixaltepec Municipality	Component 3	Community welfare, support for sustainable local development, oversight of local public services, and promotion of environmental protection to reduce runoff and nutrient loading in water bodies.	Group 2	1 (High)	Direct
Ciudad Ixtepec Municipality	Component 3		Group 2	1 (High)	Direct
El Espinal Municipality	Component 3		Group 2	1 (High)	Direct
Guevea de Humboldt Municipality	Component 3		Group 2	1 (High)	Direct
Juchitán de Zaragoza Municipality	Component 3		Group 2	1 (High)	Direct
Magdalena Tlacotepec Municipality	Component 3		Group 2	1 (High)	Direct
Reforma de Pineda Municipality	Component 3		Group 2	1 (High)	Direct

Salina Cruz Municipality	Component 3		Group 2	1 (High)	Direct
San Blas Atempa Municipality	Component 3		Group 2	1 (High)	Direct
San Dionisio del Mar Municipality	Component 3		Group 2	1 (High)	Direct
San Francisco del Mar Municipality	Component 3		Group 2	1 (High)	Direct
San Francisco Ixhuatán Municipality	Component 3		Group 2	1 (High)	Direct
San Mateo del Mar Municipality	Component 3		Group 2	1 (High)	Direct
San Miguel Chimalapa Municipality	Component 3		Group 2	1 (High)	Direct
San Pedro Comitancillo Municipality	Component 3		Group 2	1 (High)	Direct
San Pedro Huilotepec Municipality	Component 3		Group 2	1 (High)	Direct
Santa María Chimalapa Municipality	Component 3		Group 2	1 (High)	Direct
Santa María Guienagati Municipality	Component 3		Group 2	1 (High)	Direct
Santa María Jalapa del Marqués Municipality	Component 3		Group 2	1 (High)	Direct
Santa María Mixtequilla Municipality	Component 3		Group 2	1 (High)	Direct
Santa María Xadani Municipality	Component 3		Group 2	1 (High)	Direct
Santiago Lachiguiri Municipality	Component 3		Group 2	1 (High)	Direct
Santiago Laollaga Municipality	Component 3		Group 2	1 (High)	Direct

Santiago Niltepec Municipality	Component 3		Group 2	1 (High)	Direct
Santo Domingo Chihuitán Municipality	Component 3		Group 2	1 (High)	Direct
Santo Domingo Ingenio Municipality	Component 3		Group 2	1 (High)	Direct
Santo Domingo Tehuantepec Municipality	Component 3		Group 2	1 (High)	Direct
Santo Domingo Zanatepec Municipality	Component 3		Group 2	1 (High)	Direct
Unión Hidalgo Municipality	Component 3		Group 2	1 (High)	Direct
CIDIR	Component 1	Conducting research and education in environmental conservation, sustainable resource management, and community education initiatives.	Group 2	1 (High)	Direct
CETMAR	Component 1	Marine and coastal ecosystem education, sustainable fishing practices, and promotion of technical skills in local communities.	Group 1	2 (Medium)	Interested Party
COBAO	Component 1	Fostering local education, youth skills training in sustainable practices, and community involvement.	Group 1	3 (Low)	Interested Party
CECyTEO	Component 1	Support for technical education, particularly in agricultural and environmental sciences, and fostering youth involvement in local sustainable initiatives.	Group 1	3 (Low)	Interested Party
Comité Melendre	Component 1	Promotion of cultural heritage, sustainable development, and advocacy for Indigenous rights within the local communities.	Group 1	2 (Medium)	Interested Party
CtC Los Perros	Component 1	Water resource management, conservation, and coordination of	Group 2	1 (High)	Direct

		stakeholders in river basin planning.			
F Ecológico	Component 3	Conserving the environment, raising community awareness, and educating on ecological practices to reduce water pollution in Juchitán de Zaragoza.	Group 1	2 (Medium)	Interested Party
IEBO	Component 3	Providing education to rural communities, supporting sustainable development, and integrating environmental studies.	Group 1	3 (Low)	Interested Party
TECNM	Component 1	Technical education in natural resource management, environmental sciences, and sustainable technologies.	Group 2	1 (High)	Direct
UCIRI	Component 2 and 3	Promoting fair trade, sustainable agriculture, and economic development for Indigenous coffee producers in Oaxaca.	Group 2	1 (High)	Direct
UNISTMO	Component 1	Higher education, community engagement, and research in sustainable development, including initiatives to address water pollution and hypoxia.	Group 1	2 (Medium)	Interested Party
UMAR	Component 1	Marine research, sustainable management of marine resources, and conservation initiatives addressing the impacts of eutrophication and hypoxia.	Group 2	1 (High)	Direct
UNPA	Component 1	Conducting environmental studies, ecological research, and engaging communities in natural resource management.	Group 1	2 (Medium)	Interested Party
UV	Component 1	Education and research in environmental conservation, fostering sustainable practices to prevent water pollution and address hypoxia.	Group 2	1 (High)	Direct
AGSS	Component 3	Livestock management and promoting sustainable agricultural	Group 2	1 (High)	Direct

		practices within the Southern-Southeast livestock sector.			
CFP	Component 3	Sustainable rural development, community agriculture, and livelihood improvement for cooperative members.	Group 2	1 (High)	Direct
CFMI	Component 3	Mangrove conservation, sustainable fishing practices, and strengthening local livelihood opportunities through cooperative efforts.	Group 1	2 (Medium)	Direct
Ecotierra	Component 3	Promotion of sustainable agricultural practices, environmental conservation, and support for rural communities in adapting to climate change and addressing nutrient runoff.	Group 2	1 (High)	Direct
F.S.C.P.P. Bahía de Paredón	Component 3	Fishing resource management, sustainable practices, and promoting economic growth within the fishing community.	Group 2	1 (High)	Direct
F.S.C.P.P. Cuenca del Río Ostuta	Component 3		Group 2	1 (High)	Direct
F.S.C.P.P. del Pacífico	Component 3		Group 2	1 (High)	Direct
F.S.C.P.P. Fuerza Ikoots	Component 3		Group 2	1 (High)	Direct
F.S.C.P.P. Mar Muerto	Component 3		Group 2	1 (High)	Direct
S.C.P.P. Huazantlan del Río	Component 3		Group 2	1 (High)	Direct
S.C.P.P. Ribereña Alianza Integral	Component 3		Group 2	1 (High)	Direct
S.C.P.P. Ribereña Barra de Santa Teresa	Component 3		Group 2	1 (High)	Direct
S.C.P.P. Ribereña Cerro Chico	Component 3		Group 2	1 (High)	Direct
S.C.P.P. Ribereña Ixhuatán	Component 3		Group 2	1 (High)	Direct

S.C.P.P. Ribereña Pescadores e Río Viejo	Component 3		Group 2	1 (High)	Direct
UAC TT	Component 1	Sustainable agriculture, artisanal crafts promotion, and local economic development for rural communities.	Group 1	3 (Low)	Interested Party
UCIRI	Component 1	Advocating Indigenous rights, promoting sustainable agriculture, and boosting local economies through fair trade and cooperative models.	Group 2	1 (High)	Direct
UCPIT	Component 1 and 3	Sustainable fishing practices, economic resilience, and environmental conservation within the Istmo region.	Group 2	1 (High)	Direct
UECIT	Component 2	Sustainable land use, agricultural development, and communal rights in resource management to reduce runoff and nutrient pollution.	Group 2	1 (High)	Direct
UGRCO	Component 2	Promoting sustainable livestock practices, regional agricultural development, and economic opportunities for cattle ranchers while reducing environmental impacts on water bodies.	Group 2	1 (High)	Direct
UGR	Component 3	Livestock management, sustainable grazing practices, and economic growth for ranchers, with a focus on reducing runoff and water pollution.	Group 2	1 (High)	Direct

Laguna de Sontecomapan (Veracruz) Stakeholders interest and influence on the project

Stakeholder	Component of the project to which it contributes	Interests in relation to the project	Group of importance and influence	Prioritization	Beneficiary
CAEV	Component 3	Managing water resources, distribution, and sustainable usage	Group 2	1 (High)	Interested Party

		to support community access and ecosystem preservation, focusing on reducing nutrient pollution to prevent eutrophication.			
COT	Component 3	Ensuring livestock traceability, sustainable farming practices, and health standards while minimizing nutrient runoff into water bodies.	Group 1	2 (Medium)	Interested Party
CESAVE	Component 3	Focusing on plant health, biosecurity, disease prevention, and sustainable crop management to reduce agricultural runoff and prevent eutrophication and marine hypoxia.	Group 1	2 (Medium)	Interested Party
CFPP	Component 1 and 2	Focusing on disease prevention, biosecurity, and sustainable livestock practices to reduce environmental impacts on water quality.	Group 1	2 (Medium)	Interested Party
IVAI	Component 1, 2, and 3	Indigenous rights, preservation of Indigenous cultures, and participation in sustainable land management practices.	Group 2	1 (High)	Direct
IVERMUJERES	Component 1, 2, and 3	Gender equality, women's rights, and promotion of female participation in sustainable development initiatives.	Group 2	1 (High)	Direct
PMAVER	Component 1 and 2	Protecting the environment, ensuring regulatory compliance, and conserving natural resources in Veracruz, with a focus on preventing water pollution and addressing aquatic hypoxia.	Group 2	1 (High)	Direct
SECVAR	Component 1 and 2	Cultural preservation, promotion of local heritage, and community engagement in sustainable practices.	Group 1	2 (Medium)	Interested Party
SEDARPA	Component 2 and 3	Rural development, sustainable agricultural and fishing practices, and enhancing food security by reducing nutrient runoff and protecting water quality.	Group 2	1 (High)	Direct

SEDECOP	Component 1, 2, and 3	Economic development, promotion of sustainable industries, and expansion of port activities.	Group 2	1 (High)	Interested Party
SEDESOL VER	Component 3	Social welfare, poverty reduction, and community empowerment through sustainable initiatives.	Group 1	2 (Medium)	Direct
SEGOB VER	Component 1 and 2	Political stability, public safety, and facilitating community participation in sustainable development projects that include water pollution mitigation.	Group 2	1 (High)	Direct
SEDEMA	Component 1, 2, and 3	Protecting the environment, conserving ecosystems, and managing resources sustainably by reducing nutrient pollution and combating marine hypoxia.	Group 2	1 (High)	Direct
PCEstatalVer	Component 1 and 2	Disaster risk management, community resilience, and climate adaptation strategies.	Group 1	2 (Medium)	Interested Party
SECTUR VER	Component 3	Sustainable tourism, economic development through ecotourism, and preservation of natural resources.	Group 1	2 (Medium)	Interested Party
Catemaco Municipality	Component 3	Community development, local environmental protection, and access to public utilities, including improved wastewater management to reduce nutrient pollution.	Group 2	1 (High)	Direct
Mecayapan Municipality	Component 3		Group 2	1 (High)	Direct
San Andrés Tuxtla Municipality	Component 3		Group 2	1 (High)	Direct
AVELI	Component 1, 2, and 3	Indigenous language preservation, cultural heritage promotion, and community engagement.	Group 1	2 (Medium)	Interested Party
BC VER	Component 3	Community resilience, disaster preparedness, and emergency response readiness.	Group 1	2 (Medium)	Interested Party
BDLT	Component 3	Promoting marine conservation, environmental awareness, and ecotourism to protect marine ecosystems from hypoxia.	Group 1	2 (Medium)	Interested Party

CCCV	Component 3	Cultural preservation, education, and community development.	Group 1	2 (Medium)	Interested Party
COMCE	Component 3	Promotion of foreign trade, investment, and economic development in Veracruz.	Group 1	2 (Medium)	Interested Party
DECOTUX A.C.	Component 3	Environmental conservation, community development, and local biodiversity protection.	Group 1	2 (Medium)	Direct
EDUDER	Component 3	Rural education, capacity-building in sustainable agricultural practices, and community empowerment.	Group 1	2 (Medium)	Direct
ENDESU	Component 3	Conserving natural spaces, providing education, and promoting sustainable development practices.	Group 1	2 (Medium)	Direct
FGM	Component 1, 2, and 3	Preservation of marine ecosystems, biodiversity conservation, and sustainable use of Gulf resources.	Group 2	1 (High)	Interested Party
Gente Sustentable A.C.	Component 3	Promoting sustainable community practices, resource management, and social empowerment in conservation.	Group 1	2 (Medium)	Direct
INECOL	Component 1 and 3	Ecological research, biodiversity studies, and sustainable development practices, focusing on the effects of water pollution and eutrophication.	Group 2	1 (High)	Interested Party
ITSSAT	Component 1	Conducting research and education on sustainable practices while building capacity for students in environmental sciences.	Group 1	2 (Medium)	Interested Party
KALPULLI Catemaco A.C.	Component 1	Fostering community development, preserving cultural heritage, and managing resources sustainably by focusing on protecting water bodies from pollution.	Group 1	2 (Medium)	Interested Party
Los Amigos	Component 3	Ecotourism, environmental education, and conservation efforts around Sontecomapan lagoon.	Group 1	2 (Medium)	Direct
PVER	Component 2 and 3	Biodiversity conservation, sustainable development, and	Group 2	1 (High)	Direct

		community engagement in conservation, including efforts to mitigate water pollution.			
PSSM	Component 2	Sustainable development in indigenous communities, environmental conservation, and education on ecological practices.	Group 2	1 (High)	Direct
RMGD	Component 1, 2, and 3	Women's empowerment, sustainable community development, and economic participation of women.	Group 2	1 (High)	Direct
STAC	Component 3	Forest conservation, sustainable resource management, and biodiversity preservation.	Group 1	2 (Medium)	Direct
SENDAS	Component 1, 2, and 3	Promoting sustainable community practices, providing environmental education, and supporting autonomous development.	Group 2	1 (High)	Direct
UAM	Component 1	Academic research, sustainable practices, and education in environmental science, focusing on the impacts of eutrophication.	Group 2	1 (High)	Direct
UV	Component 1	Academic research, environmental studies, and sustainable practices to reduce nutrient pollution.	Group 2	1 (High)	Direct
VTAC	Component 3	Reforestation, environmental conservation, and community engagement in green initiatives.	Group 1	2 (Medium)	Direct
ASSM	Component 3	Promoting sustainable agriculture, economic growth for farmers, and natural resource conservation to reduce nutrient pollution.	Group 2	1 (High)	Direct
AGSSRM	Component 3	Livestock sustainability, economic growth for livestock farmers, and environmental conservation, including measures to reduce runoff.	Group 2	1 (High)	Direct
AIEVAC	Component 3	Promotion of industrial growth, environmental responsibility in manufacturing, and regional economic development.	Group 2	1 (High)	Interested Party

AGLC	Component 3	Sustainable livestock practices, economic stability for local livestock farmers, and environmental protection.	Group 2	1 (High)	Direct
AGLSAT	Component 3	Sustainable farming, protection of resources for livestock farming, and economic support for local livestock farmers, minimizing runoff impacts.	Group 2	1 (High)	Direct
AGLGV	Component 3	Enhancing livestock practices, promoting sustainability, and supporting local economic development while addressing water quality.	Group 2	1 (High)	Direct
AGLGSA	Component 3	Economic empowerment for livestock farmers, sustainable resource management, and community development, supporting clean water initiatives.	Group 2	1 (High)	Direct
CSAP	Component 3	Aquatic resource health, sustainable fishing practices, and biosecurity.	Group 2	1 (High)	Direct
ReGaS	Component 3	Promoting sustainable livestock practices, improving biodiversity, and protecting natural habitats in Los Tuxtlas, reducing runoff.	Group 2	1 (High)	Direct
SCRMS	Component 3	Mangrove restoration, ecosystem protection, and sustainable environmental practices.	Group 2	1 (High)	Direct
UGRZCEV	Component 3	Regional livestock support, economic sustainability, and responsible resource use in central Veracruz, addressing water pollution.	Group 2	1 (High)	Direct
UGRSV	Component 3	Livestock sector improvement, sustainable development, and environmental stewardship in southern Veracruz, reducing nutrient pollution.	Group 2	1 (High)	Direct
Grupo CICE	Component 3	Facilitating logistics and transport that align with sustainable development, economic growth	Group 1	2 (Medium)	Interested Party

		through trade, and efficient use of resources.			
Grupo Herdez	Component 3	Promoting sustainable ingredient sourcing, reducing environmental impacts of food production, and addressing water resource management.	Group 2	1 (High)	Interested Party

Cuenca del Río Hondo (Quintana Roo and Campeche) Stakeholders interest and influence on the project

Stakeholder	Component of the project to which it contributes	Interests in relation to the project	Group of importance and influence	Prioritization	Beneficiary
AMUSUR	Component 2 and 3	Promoting sustainable land use and reducing nutrient runoff that contributes to water pollution and hypoxia.	Group 1	2 (Medium)	Interested Party
COPA	Component 3	Managing potable water and sanitation services with a focus on water conservation, sustainable usage, and improving wastewater treatment systems to reduce nutrient discharge into water bodies.	Group 2	1 (High)	Interested Party
CCRH	Component 3	Integrated watershed management and conservation of the Río Hondo basin by implementing practices to reduce agricultural runoff, addressing eutrophication, and protecting downstream aquatic ecosystems.	Group 2	1 (High)	Direct
Comité RESMBCH	Component 3	Conserving the Manatee Sanctuary through ecosystem preservation and sustainable practices to reduce nutrient runoff that threatens critical habitats.	Group 2	1 (High)	Direct
CCPY	Component 1 and 3	Protection of water resources in the Yucatán Peninsula through sustainable management practices, targeting reductions in agricultural	Group 2	1 (High)	Direct

		and urban nutrient loads that lead to eutrophication and hypoxia.			
IBANQROO	Component 2	Biodiversity conservation, ecosystem management, and sustainable resource use in protected areas.	Group 2	1 (High)	Direct
IMEC	Component 1, 2 and 3	Gender equality, women's empowerment, and inclusion in project activities.	Group 2	1 (High)	Direct
IDAIPQROO	Component 1, 2 and 3	Development of indigenous communities, cultural preservation, and inclusive participation.	Group 2	1 (High)	Direct
IQM	Component 1, 2 and 3	Women's rights, gender equity, and involvement of women in sustainable practices.	Group 2	1 (High)	Direct
PPAQROO	Component 3	Protecting the environment by monitoring and enforcing laws to reduce marine hypoxia and water contamination.	Group 2	1 (High)	Direct
SEDARPE	Component 3	Promoting rural and agricultural development with sustainable practices that reduce nutrient runoff from agriculture and aquaculture, mitigating water pollution and supporting marine ecosystem health.	Group 2	1 (High)	Direct
SEMA	Component 2 and 3	Policymaking and implementation of environmental conservation strategies, including measures to mitigate nutrient pollution and its impacts on water quality and marine oxygen levels.	Group 2	1 (High)	Direct
SEGOB CAM	Component 1 and 2	Governance and inter-institutional coordination to align regional development efforts with water pollution control and hypoxia mitigation objectives.	Group 2	1 (High)	Direct
SEGOB QROO	Component 1 and 2	Coordinating stakeholders to ensure governance structures support projects that reduce water pollution and prevent eutrophication.	Group 2	1 (High)	Direct

SEMABICCE	Component 2 and 3	Conserving biodiversity and adapting to climate change, with actions focused on improving water quality and reducing nutrient loads.	Group 2	1 (High)	Direct
SEOP	Component 3	Infrastructure development, sustainable land use, and public works that align with environmental standards.	Group 1	2 (Medium)	Interested Party
SEDETUR QROO	Component 3	Promotion of sustainable tourism, protection of natural attractions, and regional economic growth.	Group 1	2 (Medium)	Interested Party
Bacalar Municipality	Component 3	Protecting the environment, promoting sustainable community practices, and creating economic opportunities for residents by implementing policies to reduce nutrient runoff from agriculture and urban wastewater, safeguarding the lagoon from eutrophication and hypoxia.	Group 2	1 (High)	Direct
Calakmul Municipality	Component 3		Group 2	1 (High)	Direct
Othón P. Blanco Municipality	Component 3		Group 2	1 (High)	Direct
ACCB	Component 2 and 3	Actively monitoring water quality, raising community awareness, and promoting best practices to reduce eutrophication in the Bacalar Lagoon.	Group 1	2 (Medium)	Direct
APTC	Component 3	Promoting community-based and sustainable tourism practices throughout the Yucatán Peninsula.	Group 1	2 (Medium)	Direct
Amigos de Sian Ka'an	Component 1, 2, and 3	Conservation of the Sian Ka'an Biosphere, with initiatives targeting reductions in nutrient pollution to protect marine biodiversity and prevent hypoxia.	Group 2	1 (High)	Direct
ECOSUR	Component 1 and 3	Conducting academic research on sustainable development and water pollution mitigation, providing data and strategies to address eutrophication and its ecological impacts.	Group 2	1 (High)	Direct

Fondo para la Paz A.C.	Component 3	Improving rural community living conditions by promoting sustainable land management and agricultural practices to prevent nutrient runoff into aquatic ecosystems.	Group 1	2 (Medium)	Direct
INIFAP	Component 3	Researching and developing sustainable agricultural and livestock practices that reduce runoff, protect water quality, and addressing eutrophication.	Group 2	1 (High)	Direct
ITZM	Component 1	Providing education and conducting research on sustainable development, ecological conservation, and community empowerment in the Maya Zone.	Group 1	2 (Medium)	Interested Party
SPFEQR	Component 1 and 3	Promotion of sustainable forest management to reduce deforestation and soil erosion, preventing sedimentation and nutrient runoff into water bodies.	Group 2	1 (High)	Direct
PPY	Component 3	Conserving biodiversity through ecosystem management that reduces nutrient inputs into water systems, preventing eutrophication and marine hypoxia downstream.	Group 2	1 (High)	Interested Party
RA	Component 3	Promotion of sustainable practices in agriculture, forestry, and tourism to protect biodiversity.	Group 2	1 (High)	Direct
UAEQROO	Component 1	Academic research and education supporting sustainable practices to address eutrophication and protect aquatic biodiversity in the region.	Group 2	1 (High)	Interested Party
C Yaax'Che	Component 3	Promoting local tourism, environmental conservation, and sustainable economic development in Calakmul.	Group 2	1 (High)	Direct
BSM	Component 3	Implementing sustainable sugar production practices, focusing on efficient water usage and reducing	Group 2	1 (High)	Interested Party

		nutrient runoff to improve nearby aquatic systems.			
IASRP	Component 3	Sustainable production processes and wastewater management to minimize the environmental footprint of sugar production and protect water quality.	Group 2	1 (High)	Interested Party
SPR KH	Component 3	Development of sustainable agricultural practices that prevent nutrient runoff, protect water resources, and support ecological balance in rural areas.	Group 2	1 (High)	Direct

Sub-Annex 8.1: List of Project Beneficiaries

Stakeholder	Description		
Federal level institutions	- Secretaría de Agricultura y Desarrollo Rural (SADER) - Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT) - Corredor Interoceánico Istmo de Tehuantepec (CIIT) - Comisión Nacional del Agua (CONAGUA) - Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO) - Comisión Nacional de Acuacultura y Pesca (CONAPESCA) - Instituto Nacional de los Pueblos Indígenas (INPI) - Instituto Nacional de las Mujeres (INMUJERES) - Instituto Mexicano de Investigación en Pesca y Acuacultura Sustentables (IMIPAS)		
State level institutions	- State Government of Oaxaca - State Government of Veracruz - State Government of Quintana Roo - State Government of Campeche		
Municipal level institutions	- Asunción Ixtaltepec - Bacalar - Calakmul - Catemaco - Ciudad Ixtepec - El Espinal - Guevea de Humboldt - Heroica Ciudad de Juchitán de Zaragoza - Magdalena Tlacotepec - Mecayapan - Othón P. Blanco - Reforma de Pineda	- Salina Cruz - San Andrés Tuxtla - San Blas Atempa - San Dionisio del Mar - San Francisco del Mar - San Francisco Ixhuatán - San Mateo del Mar - San Miguel Chimalapa - San Pedro Comitancillo - San Pedro Huilotepec - Santa María Chimalapa - Santa María Guienagati - Santa María Jalapa del Marqués	- Santa María Mixtequilla - Santa María Xadani - Santiago Lachiguiri - Santiago Laollaga - Santiago Niltepec - Santo Domingo Chihuitán - Santo Domingo Ingenio - Santo Domingo Tehuantepec - Santo Domingo Zanatepec - Unión Hidalgo
Private Companies	- Citibanamex - Innovaciones Alumbra - KFW Bank - Rotoplas		
Civil Society Organizations (CSOs) and Academic Institutions	- Fondo Mexicano para la Conservación de la Naturaleza (FMCN) - Fondo Mundial para la Naturaleza (WWF) - Global Green Growth Institute (GGGI) - Universidad Nacional Autónoma de México (UNAM) - Universidad del Mar (UMAR)		

Stakeholder	Description
	• The Nature Conservancy (TNC) • Senderos y Encuentros para un Desarrollo Autónomo Sustentable (SENDAS)

Sub-Annex 8.2: Description of each regulation related to NGOs, productive sectors, interested parts, and citizen participation

Law	Description
Political Constitution of the United Mexican States	Articles 1, 2, 4, 5, 6, 7, 8, 9, 17, 25, 26, 27, 103, 107, 130, and 133 establish the fundamental rights of citizens, recognizing equality and non-discrimination, as well as rights to education, health, and a healthy environment. Additionally, the Constitution emphasizes the protection of Indigenous peoples and their right to self-determination, promoting their inclusion in decision-making processes. It also mandates that the State should promote sustainable development and equitable access to natural resources.
General Law of Ecological Balance and Environmental Protection	Articles 1, 3, 15, 20 Bis 8, 39, 40, 41, 111, 159 Bis, and 159 Bis 1 establish the framework for the conservation, restoration, and sustainable use of natural resources and the environment in Mexico. This law regulates integrated ecosystem management, promotes public participation in environmental decision-making, and supports the development of public policies to ensure ecological balance. It also focuses on pollution prevention and control, as well as the protection of biodiversity and ecosystem services.
General Law on Climate Change	Articles 1, 29, 34, and 71 set the legal framework for addressing the challenges of climate change in Mexico, promoting actions aimed at mitigation and adaptation. The law acknowledges the State's responsibility to reduce greenhouse gas emissions and the importance of fostering sustainable development. It also establishes mechanisms for public participation, evaluation, and monitoring of progress in implementing policies and actions that contribute to climate resilience and environmental protection.
General Law for Equality between Women and Men	Articles 1, 16, 17, 33, 34, 37, and 38 outline the basis for promoting gender equality across all areas of social, economic, political, and cultural life in Mexico. This law recognizes gender equality as a fundamental human right and aims to eliminate discrimination and inequalities affecting women. It calls for the implementation of policies and actions that promote equitable access to resources, opportunities, and decision-making, fostering active participation of women in all sectors.
Federal Law for the Promotion of Activities Carried Out by CSOs	Article 13 promotes the participation of CSOs in social and community development in Mexico. This article emphasizes the State's commitment to support the activities of these organizations by facilitating their access to resources and support, ensuring an enabling environment for their operations. It also aims to strengthen collaboration between the Government and CSOs to address social issues and improve the quality of life in communities.
General Law on Sustainable Fisheries and Aquaculture	Articles 1, 17, and 20 establish the principles of cooperation and the involvement of fishing producers, as well as the guiding principles for the creation and direction of the National Policy on Sustainable Fisheries and Aquaculture. The Mexican State recognizes both fishing and aquaculture as activities that strengthen the country's food and territorial sovereignty, considering them matters of national security. These activities are prioritized in national development planning and in the comprehensive management of fishing and aquaculture resources. This law indirectly addresses marine hypoxia by regulating activities that impact marine ecosystems, including measures to protect fishery resources from the adverse effects of hypoxia caused by nutrient overloading.
General Wildlife Law	Articles 1 to 8 regulate the conservation and sustainable use of wildlife in Mexico, establishing measures to protect species and their habitats. The law encourages community participation in the conservation and management of natural resources, promoting practices that ensure biodiversity. Through this law, the State seeks to guarantee that economic activities do not compromise the integrity of ecosystems and the country's biological diversity.
General Law on Sustainable Forest Development	Articles 2, 3, 5, 8, 10, 24, and 153 regulate the management and conservation of forest resources in Mexico. It promotes responsible participation by landowners and rightful forest landholders, encouraging sustainable use and the protection of forest ecosystems. The law establishes principles for integrated forest management, fostering local community involvement in conservation and resource utilization. It also aims to

Law	Description
	protect biodiversity while promoting economic and social development in forest regions, contributing to climate change mitigation and environmental conservation.
General Law on Women's Access to a Life Free of Violence	Articles 8, 17, and 41 set forth the goal of preventing, punishing, and eradicating violence against women in all its forms. This law recognizes women's right to live without violence and establishes a legal framework for protecting and assisting victims. It promotes coordinated actions among different institutions and government levels, including the public, to ensure a safe, violence-free environment for all women.
Federal Environmental Responsibility Law	Articles 3, 7, 10, and 45 establish the foundations for environmental responsibility in Mexico, defining obligations and penalties for causing environmental harm. Article 3 recognizes the right of every individual to a healthy and balanced environment, while Article 7 establishes accountability for environmental damage, including harm caused by water pollution. It enforces remediation of affected aquatic ecosystems, contributing to the recovery of areas of eutrophication and hypoxia. Article 10 outlines the responsibilities of obligated parties for the prevention, control, and remediation of environmental damage. This law promotes sustainable development and environmental protection, establishing mechanisms for responsible parties to assume the consequences of their actions and commit to repairing any damage caused. Additionally, Article 45 assigns SEMARNAT the responsibility to set up operational guidelines for the fund, with participation from the Attorney General's Office, academic institutions, and social organizations.
Sustainable Rural Development Law	Articles 3, 5, 6, 15, 144, 154, and 162 state that the Federal Government will promote policies, actions, and programs in rural areas, considering them priorities for national development. These efforts aim to reduce regional development inequalities, focusing on the most disadvantaged areas through an integrated approach to encourage productive and economic transformation. The law promotes a sustainable rural development approach that also contributes to national food sovereignty and security, built through the involvement of organizations and associations representing rural society stakeholders.
National Water Law	Articles 3, 7, 7 bis, 9, 86 Bis, and 88 Bis classify the integrated management of water resources as a matter of public utility and national security priority. The law designates the National Water Commission as the entity responsible for coordinating, implementing, and overseeing the National Water Program, ensuring it is updated and enforced. The Commission is tasked with developing interregional and inter-basin programs, proposing guidelines to unify federal government actions regarding national waters, ensuring coherence between programs and resource allocation, and defining national priorities in the administration of national waters and associated public assets. This is achieved through the participation of water users, CSOs, and private individuals. This law regulates wastewater discharges into national water bodies, setting quality standards for effluents to minimize nutrient loading, which directly addresses eutrophication and reducing marine hypoxia.
Regulation of the National Water Law	This regulation complements the National Water Law by establishing detailed provisions for the prevention, control, and reduction of water pollution in Mexico. It outlines the operational framework for managing water resources, particularly addressing the discharge of pollutants into national water bodies, including rivers, lakes, and coastal areas.
Law of the National Institute of Indigenous Peoples	Article 4 establishes the creation and operation of the National Institute of Indigenous Peoples, whose primary goal is to promote and protect the rights of Indigenous peoples in Mexico. This law seeks to ensure the recognition of their identity, culture, and territorial rights, as well as to encourage their participation in decision-making processes that impact their communities. It also supports the development of public policies that address their needs and demands. Additionally, the law outlines actions for designing and implementing policies, plans, programs, and projects related to Indigenous and Afro-Mexican peoples through dialogue, coordination, and participation with Indigenous and Afro-Mexican communities.
Agrarian Law	Articles 4, 8, 37, 71, and 108 regulate land ownership and use in Mexico, establishing the framework for the organization and operation of agrarian and ejido communities. This law recognizes the legal status of agrarian entities and sets provisions for land distribution, ensuring that property rights are respected. With the participation of rural producers and inhabitants through their representative organizations, the law promotes the development of annual and medium-term programs, as well as access to resources and support to encourage agricultural production and modernization in rural areas. This contributes to sustainable rural development and the well-being of these communities.

Law	Description
Planning Law	Articles 1, 2, 9, and 19 establish the framework for national development planning in Mexico, guiding the formulation of public policies and programs aimed at improving the quality of life for the population. The law also regulates the bases for societal participation and consultation, including that of Indigenous peoples and communities through their representatives and authorities, in the creation of the Plan and programs referenced in this Law. It defines planning principles to be followed at all levels of government, emphasizing citizen participation and intergovernmental coordination. Additionally, the law underscores the importance of aligning plans and programs with sustainable development goals, ensuring that government actions address the needs and priorities of society.
Guidelines for Promoting, Forming, Organizing, and Operating Mechanisms for Citizen Participation in Federal Public Administration Agencies and Entities	These guidelines aim to establish the minimum conditions and requirements for federal public administration agencies and entities to foster, form, organize, and operate mechanisms for citizen participation. They apply to all mechanisms implemented by these agencies and entities, without prejudice to obligations set forth by other legal provisions. Additionally, it is essential that these mechanisms incorporate a human right and gender perspective and promote participatory processes that impact public policies and strengthen democratic governance.
Official Mexican Norm NOM-001-SEMARNAT-2021	Sets maximum permissible limits for pollutants in wastewater discharges into national waters and properties. This norm plays a critical role in managing nutrient discharges (such as nitrogen and phosphorus), which are primary contributors to eutrophication. Compliance with this NOM is essential for industries and municipalities to reduce nutrient pollution.
Official Mexican Norm NOM-003-SEMARNAT-1997	Establishes permissible limits for pollutants in treated wastewater for reuse in public services. By promoting the reuse of treated water, this norm reduces the discharge of untreated effluents into natural water bodies, mitigating the risks of nutrient overloading and subsequent marine hypoxia.
Official Mexican Norm NOM-127-SSA1-2021	Establishes permissible levels for pollutants in water for human consumption. By ensuring water quality, this norm indirectly supports efforts to manage nutrient concentrations in water systems.

Sub-Annex 8.3: Description of each regulation related to indigenous peoples' rights and participation

Political Constitution of the United Mexican States	Article 2 recognizes the multicultural composition of the Mexican nation, originally rooted in its Indigenous peoples. These are defined as those descending from populations that inhabited the country's current territory at the beginning of colonization and who preserve their own social, economic, cultural, and political institutions, or parts of them. The awareness of their Indigenous identity is the fundamental criterion for determining who is subject to the provisions concerning Indigenous peoples. Federal, state, and municipal governments are obligated to promote, respect, protect, and guarantee the human rights of members of these communities and Afro-Mexican individuals, ensure equal opportunities, and consider their input in the creation and implementation of public policies. Article 27, Section VII, establishes constitutional protection for the integrity of Indigenous groups' lands.
Law of the National Institute of Indigenous Peoples	It establishes the creation of the National Institute of Indigenous Peoples, a decentralized body responsible for matters related to Indigenous and Afro-Mexican peoples, with the purpose of defining, regulating, designing, establishing, executing, guiding, coordinating, promoting, monitoring, and evaluating policies, programs, projects, strategies, and public actions to guarantee the exercise and implementation of the rights of Indigenous and Afro-Mexican peoples, as well as their integral and sustainable development and the strengthening of their cultures and identities, in accordance with the provisions of the Political Constitution and the international legal instruments to which the country is a party.
General Law on the Linguistic Rights of Indigenous Peoples	It regulates the recognition and protection of the linguistic rights, both individual and collective, of Indigenous peoples and communities, as well as to promote the daily use and development of Indigenous languages, within a framework of respect for their rights.

Sub-Annex 8.4: Description of each regulation related to gender equality and women participation

Law	Description
General Law of Ecological Balance and Environmental Protection	Article 15, Section XV indicates that women play an essential role in the protection, preservation, and sustainable use of natural resources and development. Their full participation is critical to achieving sustainable development.
General Law for Equality between Women and Men	Articles 16, 17, 33, 34, and 38 establish measures to promote equality between women and men in Mexico. This law encourages social, political, and civic engagement to achieve gender equality in urban and rural areas. It mandates the integration of gender perspectives in budget planning and program implementation, equal access to property rights and land use, and the inclusion of rural women in agricultural programs. Additionally, it promotes actions ensuring equal access to food, education, and health for both genders.
General Law on Sustainable Forest Development	Articles 2, 3, 8, 24, and 153 outline provisions to advance gender equity in forestry. The law promotes affirmative actions for women, Indigenous populations, youth, and people with disabilities within forestry policies. It fosters participation of women in sustainable forest management projects and includes gender, cultural, and social equity in territorial development. The law also ensures the ongoing participation of community representatives, Indigenous peoples, academics, and women in forestry decision-making.
Agrarian Law	Articles 4, 37, 71, and 108 set the framework for gender equality in rural land governance. The law promotes equitable rural development through activities with a gender perspective. It establishes gender parity in candidacy for ejido governance roles, designates areas for women's agricultural units, and allows ejidos and communities to create companies for resource use, with women, youth, and community members participating.
Sustainable Rural Development Law	Articles 6, 15, 144, 154, and 162 promote gender equity in rural areas. This law prioritizes actions that enhance social and gender equity, including support for programs focused on women's and youth's productive roles. It promotes comprehensive rural welfare through health, education, housing, and indigenous rights, while also addressing the needs of vulnerable groups such as women, children, and the elderly, through targeted support programs.
General Law on Sustainable Fisheries and Aquaculture	Articles 1 to 8 regulate the conservation and sustainable use of wildlife in Mexico, establishing measures to protect species and their habitats. The law encourages community participation in the conservation and management of natural resources, promoting practices that ensure biodiversity. Through this law, the State seeks to guarantee that economic activities do not compromise the integrity of ecosystems and the country's biological diversity.
National Water Law	The law establishes parity as a guiding principle for appointments and designations related to water resources management, promoting gender equity in water governance.
General Law on Climate Change	Article 71 mandates that state climate change programs include strategies, policies, and goals aligned with the National Strategy and prioritize gender equity and the representation of vulnerable populations, including Indigenous communities, people with disabilities, and those most affected by climate change.
Planning Law	Articles 2 and 9 emphasize the inclusion of intercultural and gender perspectives in national planning. The law ensures that development goals are equitable, inclusive, comprehensive, and sustainable, aligning public administration activities with gender and intercultural objectives in national development.

Sub-Annex 8.5: List of representatives of the institutions that participated in the consultations during the Inception Phase

Date	Participants
July 2, 2024	• Fernando Camacho - UNDP National Officer for Environment, Energy, and Resilience. • Martha Rosas - National Coordinator for the PPG.

Date	Participants
	• Nadia Jiménez - National Consultant on FPIC. • Alejandra Cerna - Program Manager for Sustainable Development at UNDP. • Jesús Alarcón - National Consultant for Stakeholder Engagement.
July 24, 2024	• Nadia Jiménez - National Consultant on FPIC. • Jesús Alarcón - National Consultant for Stakeholder Engagement. • Leonel Zabaleta - Director of Fondo Golfo de México A.C.
July 25, 2024	• Luis Rojas - SEGOB • Luis Felipe Rodríguez - SEGOB • Eva García - SEGOB • Ana Lilia Cruz - General Coordinator for the Development of the Agro-Food and Agro-Industrial Sector • Fernando Camacho - National Officer for Environment, Energy, and Resilience at UNDP • Jesús Alarcón - National Consultant for Stakeholder Engagement
July 25, 2024	• Inti Escalona Lüttig - Director of Social Capacity Building for Participatory Democracy, SEGOB • Fernando Camacho - National Officer for Environment, Energy, and Resilience at UNDP • Martha Rosas - National Coordinator for the PPG • Nadia Jiménez - National Consultant on Free, Prior, and Informed Consent (FPIC)
July 29, 2024	• Fernando Camacho - National Officer for Environment, Energy, and Resilience at UNDP • Martha Rosas - National Coordinator for the PPG • Nadia Jiménez - National Consultant on Free, Prior, and Informed Consent (FPIC) • Ana Lilia Cruz - General Coordinator for the Development of the Agri-Food and Agro-Industrial Sector
August 14, 2024	• Sebastien Proust - National Coordinator of the Small Grants Programme at UNDP • Nadia Jiménez - National Consultant on Free, Prior, and Informed Consent (FPIC) • Diana Lahoz - National Consultant on Gender • Jesús Alarcón - National Consultant for Stakeholder Engagement
August 27, 2024	• Ana Lilia Cruz - General Coordinator for the Development of the Agri-food and Agroindustrial Sector • Martha Rosas - National Coordinator of the PPG • Jesús Alarcón - National Consultant for Stakeholder Engagement
September 26, 2024	• Sildia Mecott - Technical Secretary of the • Intersecretarial Commission of the State of Oaxaca for the Isthmus of Tehuantepec Interoceanic Corridor Project • Karyba García - Mangroves Oaxaca • Gerardo García - SEFADER
October 2, 2024	• Fernando Camacho - National Officer for Environment, Energy, and Resilience, UNDP • Martha Rosas - National Coordinator for the PPG • Nadia Jiménez - National Consultant on FPIC Matters • Inti Escalona Lüttig - Director of Social Capacity Building for Participatory Democracy, SEGOB • Ana Lilia Cruz - General Coordinator for the Development of the Agri-Food and Agroindustrial Sector • Diana Lahoz - National Consultant on Gender Matters
October 3, 2024	• Nadia Jiménez - National Consultant on Free, Prior, and Informed Consent (FPIC) • Diana Lahoz - National Consultant on Gender

Date	Participants
	• Jesús Alarcón - National Consultant for Stakeholder Engagement
October 3, 2024	• Nadia Jiménez - National Consultant on Free, Prior, and Informed Consent (FPIC) • Tajín Fuentes - Director of Sendas, A.C. • Jesús Alarcón - National Consultant for Stakeholder Engagement
October 3, 2024	• Fernando Camacho - National Officer for Environment, Energy, and Resilience at UNDP • Mauricio Escalante - Strategic Partnerships Associate at UNDP • Jesús Alarcón - National Consultant for Stakeholder Engagement
October 11, 2024	• Fernando Camacho - National Officer for Environment, Energy, and Resilience at UNDP • Ana Lilia Cruz - General Coordinator for the Development of the Agri-Food and Agroindustrial Sector • Nadia Jiménez - National Consultant on Free, Prior, and Informed Consent (FPIC)
October 14, 2024	• Fernando Camacho - National Officer for Environment, Energy, and Resilience at UNDP • Martha Rosas - National Coordinator of the PPG • Nadia Jiménez - National Consultant on Free, Prior, and Informed Consent (FPIC) • Inti Escalona Lüttig - Director of Social Capacity Building for Participatory Democracy, SEGOB • Ana Lilia Cruz - General Coordinator for the Development of the Agri-Food and Agroindustrial Sector • Iván Ramos - Director of Indigenous Participation and Consultation, INPI
October 16, 2024	• Fernando Camacho - National Officer for Environment, Energy, and Resilience at UNDP • Martha Rosas - National Coordinator of the PPG • Mauricio Escalante - Strategic Partnerships Associate at UNDP • Jesús Alarcón - National Consultant for Stakeholder Engagement • Nadia Jiménez - National Consultant on Free, Prior, and Informed Consent (FPIC) • Ana Lilia Cruz - General Coordinator for the Development of the Agri-Food and Agroindustrial Sector • Inti Escalona Lüttig - Director of Social Capacity Building for Participatory Democracy, SEGOB • Victor Romero - Strategic Projects Coordinator for the Isthmus of Tehuantepec, SEDECOP
October 18, 2024	• Fernando Camacho - National Officer for Environment, Energy, and Resilience at UNDP • Martha Rosas - National Coordinator of the PPG • Nadia Jiménez - National Consultant on Free, Prior, and Informed Consent (FPIC) • Ana Lilia Cruz - General Coordinator for the Development of the Agri-Food and Agroindustrial Sector • Sildia Mecott - Technical Secretary of the Intersecretarial Commission of the State of Oaxaca for the Isthmus of Tehuantepec Interoceanic Corridor Project
October 22, 2024	• Ana Lilia Cruz - General Coordinator for the Development of the Agri-Food and Agroindustrial Sector • Nadia Jiménez - National Consultant on Free, Prior, and Informed Consent (FPIC) • Magdalena Hernández - Representative Office of INPI in the State of Veracruz
October 29, 2024	• Inti Escalona Lüttig - Director for Social Capacity Building for Participatory Democracy, SEGOB • Nadia Jiménez - National Consultant on Free, Prior, and Informed Consent (FPIC) • Carlos Tamayo - Indigenous Consultation Officer at the INPI Representation Office in Campeche • Venancia Coh Chuc - Head of the INPI Representation Office in Quintana Roo

Sub-Annex 8.6: List of representatives of the institutions that participated in the consultation process during PPG phase

Date and place	Representatives (institutions)
August 21, 2024 Mexico City	Some of the high-level officials were: • Víctor Villalobos, Secretary of SADER • Iris Mariana Rodríguez Bello, Undersecretary of SEGOB • Rear Admiral Efrén Gómez, Head of the Regional Development and Social Welfare Unit, CIIT • Gabriela Niño, Director of Sustainable Financing and GEF Operational Focal Point in Mexico, SHCP • Santiago Argüello, General Coordinator of SADER • Sol Ortiz, General Director of Policies, Prospecting and Climate Change, SADER • Fernando Camacho, National Officer for Environment, Energy, and Resilience at UNDP in Mexico The participating institutions include: SADER, SEGOB, CIIT, SHCP, UNDP, SEMARNAT, SER, CONAGUA, INECC, CONABIO, FOCIR, INEGI, Idea Sostenible, WWF, and TNC.
October 22, 2024 Mexico City	UNDP
October 23 and 24, 2024 Mexico City	Some of the high-level officials were: • Marina Robles García, Undersecretary of SEMARNAT • Verónica Bunge Vivier, Director of Climate Change Management in SADER • Ana Lilia Cruz Salinas, General Coordinator of CIIT • Daniel Vargas, Deputy Resident Representative of UNDP The participating institutions include: SADER, CIIT, CONABIO, CONAGUA, CONANP, CONAPESCA, CONANP, FIRA, IMIPAS, INPI, SEGOB, SEMAR, SEMARNAT, and UNDP.
October 25, 2024 Xalapa, Veracruz	CAEV, CONAFOR, CONAGUA, CONAP, SEGOBVER, OFIGOB-IUAIS, SECTUR, SECVER, SEDARPA, SEDECOP, SEDEMA, SEV, and SPC
October 26, 2024 Catemaco, Veracruz	Municipal agents and representatives from the municipalities of Catemaco, Mecayapan, along with INPI, CONANP, Restauradores de Manglares Sontecomapan, DECOTUX and SENDAS AC.
October 28, 2024 Juchitán, Oaxaca	Representatives from the ejidos: Luis Rincón, Ejido Sordon, Buenos Aires, and San Dionisio del Mar. Municipal presidents and/or representatives from the municipalities of: Ciudad Ixtepec, San Francisco Ixhuatán, Salina Cruz, Unión Hidalgo, Santo Domingo Tehuantepec, El Espinal, Asunción Ixtaltepec, Santo Domingo Zanatepec, and Juchitán de Zaragoza.
October 29, 2024 Juchitán, Oaxaca	Federación de pesqueros de Salina Cruz, Playa Roble, San Dionisio del Mar, Cienega del Rio los Perros Comitee, Santo Domingo Tehuantepec Comitee, Guze Bemda Cooperative, Mareños Cooperative, Fuerza Manglar Cooperative, and the agricultural organization NUUP. A total of 22 IP communities * were consulted: Buenos Aires, Ciudad Ixtepec, Ejido El Jordán, El Espinal, Huamuchil, Ixtaltepec, Juchitán de Zaragoza, Morro de Mazatlán, Playa Roble, Playa San Vicente, Rincón Juárez, Salina Cruz, San Dionisio del Mar, San Dionisio Pueblo Viejo, San Francisco del Mar, San Francisco Ixhuatán, San

Date and place	Representatives (institutions)
	Mateo del Mar, Santa Cruz, Santa María Xadani, Santo Domingo Tehuantepec, Santo Domingo Zanatepec, and Unión Hidalgo. * Note. The IPPF includes a methodology that will enable the project team to conduct the consultations following the FPIC requirements during the implementation of the project.
October 30, 2024 Oaxaca City, Oaxaca	CEABIEN, CECYTEO, CHDER, COBAO, COCITEI, COESFO, CSEIIO, DCUT, DECIIT, DG CECGTE, Escuela Judicial PJEO, ICAPET, IERO, INPLAN, ITSTE, MMSF, Multidiversidad, SEECO, Sefader, SEP Oaxaca, SIC, SIPCIA, SOAPA, UMAR, and UTVCO.
November 4, 2024 Chetumal, Quintana Roo	Amigos de Sian Kaan, CONANP QROO, Delegación de Othón P. Blanco (IP representatives), ECOSUR, Fondo para la Paz, IBAN QROO, IMEI, INPI, ITTES, Municipality of Othon P. Blanco, Rainforest Alliance, SEDARPE QROO, SEGOB QROO, SEMA QROO, and SPDE QROO
November 5, 2024 Chetumal, Quintana Roo	INPI, and the social representatives, ejido authorities, and municipal agents from Othón P. Blanco and Calakmul.
December 12, 2024 Mexico City	SADER, SEGOB, CIIT, SHCP, UNDP, SEMARNAT, SRE, BIENESTAR, IMIPAS, NAFIN, CONAGUA, INECC, CONABIO, CONAFOR, CONANP, SEGOB QROO, SEDECOP, SEFADER, AMUSUR, INTERCULTURALIDAD OAX, IBANQROO, SEDARPA, PRONATURA, GIZ.

Sub-Annex 8.7: Details and relevant aspects of the Informative Sessions and Results Framework Review Workshops

Activity detail	Relevant aspects
Day 1	
Welcome and introduction of participants	The workshop began with a warm welcome to create an inclusive and collaborative atmosphere. Participants introduced themselves, fostering connections and mutual respect. This activity established camaraderie and set a positive tone for open dialogue.
Presentation of Workshop Objectives	The workshop objectives were outlined, emphasizing expected outcomes and the importance of participants' contributions. A trusting environment encouraged participants to share insights, aligning everyone on the purpose and fostering active engagement toward advancing project outcomes.
Project Overview and its Components	A detailed presentation of the project's core components provided participants with a clear understanding of its goals, structure, and scope. This shared vision highlighted the interconnectedness of components, ensuring participants understood how their work aligns with the project and setting the stage for focused discussions.
Three Group Work by Component: Results, Outputs, and Indicators	Participants were divided into three groups, each focusing on a project component. Discussions addressed expected results, outputs, and indicators, enabling detailed analysis and collaboration. The session concluded with a plenary, where groups presented their refined results frameworks, ensuring a holistic and consistent project view.

Activity detail	Relevant aspects
Day 2	
Recap and Explanation of Working Methodology	After the group discussions, a brief recap reinforced key insights and clarified the methodology, ensuring all participants were aligned for the next stages. It maintained momentum, allowed questions, and enabled adjustments based on feedback.
Three Group Work by Component: Activity Definition per Output	Participants reconvened in their groups to define activities needed to achieve each output, aligning objectives with actionable steps. Groups then presented their refined frameworks in a plenary session, fostering accountability, coherence, and shared ownership of the project's results framework.
Explanation of Next Steps and Closure	The workshop concluded with a discussion of next steps, outlining a clear roadmap and addressing any remaining questions. Participants were informed of their roles, thanked for their contributions, and motivated to advance the project, reinforcing the workshop's collaborative spirit.

Sub-Annex 8.8: Details and relevant aspects of the Informative Sessions and Results Framework Review Workshops

Activity detail	Relevant aspects
Welcome and introduction of participants	The workshop opened with a warm welcome and participant introduction, fostering a collaborative atmosphere and rapport. Attendees shared their roles and experiences, promoting inclusion, mutual respect, and open communication for the workshop.
Presentation of Workshop Objectives	The workshop objectives were outlined, clarifying the intended outcomes and guiding principles. This established a shared purpose, emphasized active participation, and fostered trust. A supportive environment motivated participants to engage meaningfully and align their expectations.
Project Overview and its Components	A detailed overview of the project, including its core components and results framework, was presented. This clarified the project's goals, structure, and scope, ensuring participants understood how their contributions aligned with overall objectives and providing a strong foundation for subsequent discussions.
Presentation and Validation of Preliminary Stakeholder Analysis	A preliminary analysis of stakeholder participation was presented, including a Key Stakeholders Map, state environmental programs, budgetary programs, and community vulnerabilities related to the project's impacts. Participants provided feedback on past projects and engagement strategies, enriching the analysis with their insights. This dialogue identified risks, validated strategies, and suggested improvements, enhancing the stakeholder engagement plan.
Division into Working Groups: Project Components and Women's Group	Participants were divided into four groups—three on specific project components and one on women's perspectives. Each group analyzed their focus area in detail, then shared summaries to enable cross-group learning and a comprehensive understanding of challenges and contributions. This activity deepened insights and enhanced the project framework.

Annex 9: Environmental Social Management Framework (ESMF) and other SES frameworks/plans, if required

Included as a separate file.

Annex 10: Gender Analysis and Gender Action Plan

INTRODUCTION

The “Forging Partnerships for the Ocean” project aim to mitigate coastal marine pollution in hypoxic zones caused by agricultural, industrial, and urban activities. This initiative emphasizes improving governance, adopting nature-based solutions, and implementing innovative financing for integrated river basin management. It also incorporates gender perspectives to ensure inclusive development, recognizing the importance of equitable benefits for all stakeholders involved.

The gender perspective is applied in this project not only to improve its results and to develop more effective and inclusive strategies but also to provide a platform for recognizing the problems of women involved in the rural sector and the productive sectors related to the project “Forging alliances for the ocean.” By mainstreaming the gender perspective in the project, the interventions' possible adverse effects on women's living conditions that are directly or indirectly related to the activities planned to be carried out are identified and avoided. It incorporates actions to strengthen gender equality, ensure the non-discrimination of women, and their empowerment following the national and international standards. The first step to mainstreaming the gender perspective is to carry out a Gender Analysis (GA). This systematic analytical tool aims to identify, understand, and explain the different roles, needs, and opportunities for men and women and the relationships between them. GA also identifies inequalities; by conducting a GA in projects, it makes an essential contribution to enhancing the relevance, effectiveness, and sustainability of interventions.

In the GEF's Progress Report on Advancing Gender Equality, published in early 2024, it is emphasized that most of the mid-term evaluation reports of the different supported projects reaffirm the importance of carrying out in-depth gender analysis to inform project development and implementation⁴⁰. Conducting a gender analysis is essential for securing that any project promotes gender equality and sustainable development. This analysis identifies the root causes and locations of gender inequalities, which is crucial in formulating an effective gender action plan.

METHODOLOGY

Gender assessment is a vital analytical tool for understanding different genders' roles, needs, and opportunities, particularly in the context of development interventions. It highlights power, resources, opportunities, and inequalities and examines the underlying reasons for these disparities. This analysis is crucial for improving the relevance and effectiveness of development strategies.

To carry out the gender analysis of this project, the following steps were followed:

- Compilation of gender statistics at the country level to identify gender gaps
- Analysis of the legal gender framework applicable to the project
- Gender gaps for the three landscapes of the project
- Meetings with women who live in the three landscapes to collect their proposals and needs
- Systematization of information
- Identification of crucial findings that serve as input for the development of the gender action plan

⁴⁰GEF. 2024. Progress report on advancing gender equality. https://www.thegef.org/sites/default/files/documents/2024-01/EN_GEF.C.66.Inf_07_Progress%20Report%20On%20Advancing%20Gender%20Equality_.pdf

I. Gender policies and strategies for funding and implementing entities

A. GEF Gender Policy and progress in its implementation.

This report accounts for the actions carried out in 2023 and 2024. This project is aligned with the GEF Gender Equality Policy (2017) and its Gender Implementation Strategy (2018). Recently, during the 66th meeting of the GEF Council, the “Progress Report on Advancing Gender Equality” was presented⁴¹. The findings of this report support those of previous reports. All projects reviewed complied with the policy and substantially incorporated gender equality and women’s empowerment into project and program design. This was partly achieved through a rigorous review by the GEF Secretariat to ensure compliance. In the coming year, consideration of gender equality in project design will continue to be promoted and efforts will focus on five specific actions: 1) Strengthen and develop the capacity of GEF technical staff and agencies; 2) Raise awareness and broaden understanding and appreciation of gender equality through the organization of dedicated meetings and webinars; 3) Promote the GEF’s gender equality ambition and inclusiveness through partnerships; 4) Connect with women participants/beneficiaries and implementing entities; and 5) Continue commitments to the Conventions and their gender focal points. Therefore, the “Forging Partnerships for the Ocean” project must adhere to the GEF Gender Policy and ensure gender mainstreaming in all actions and efforts arising from the project. This ensures that everyone is considered and that the project represents opportunities and benefits for women and men equally.

B. UNDP Gender Equality Strategy 2022-2025

UNDP Gender Equality Strategy 2022-2025⁴² recognizes the need for systemic change to address gender equality in development. UNDP is committed to supporting countries in pursuing systemic changes that prioritize gender equality in their policies and programs. These change directions align with national development needs and seek lasting impact. The strategy outlines six priority areas for action, which are as follows:

- A. Contribute to the development of sustainable and gender-equal economies
- B. Helping to revitalize inclusive governance, women's participation and leadership
- C. Helping equal societies increase resilience
- D. Making gender equality a central element of caring for people and the planet
- E. Bridging gender gaps in access to modern and sustainable energy
- F. Accelerating the achievement of gender equality

All elements of this strategy are based on the lessons learned by UNDP throughout its commitment to advancing gender equality worldwide. The approach emphasizes that UNDP's work will be successful if it creates and maintains a culture in which all people are respected, valued, and empowered and where everyone feels safe and included. In line with this approach, in July 2024, the UNDP regional office carried out a three-session training on Social and Environmental Standards (SES) aimed at project staff to ensure that these issues were the focus, and their correct implementation was ensured. This project is generally aligned with the [Gender Equality Strategy 2022-2025](#).

In addition to this, it is important to mention that a Gender [Equality Strategy 2023-2025 has been drawn up for the Mexico country office](#). The strategy describes how UNDP in Mexico, together with its development partners, will seek to achieve gender equality. To achieve this, it will base its actions on the six UNDP flagship solutions and the three ‘axes of change’: innovation, digital transformation, and financing to achieve the Sustainable Development Goals; all with a gender perspective. This includes ending gender violence, addressing the gender dimension of poverty, expanding access to clean and affordable energy, reforming public institutions, and seeking more public and private investments that promote gender equality.

⁴¹ GEF. 2024. Progress report on advancing gender equality https://www.thegef.org/sites/default/files/documents/2024-01/EN_GEF.C.66.Inf_07_Progress%20Report%20On%20Advancing%20Gender%20Equality_.pdf

⁴² UNDP. 2022. UNDP Gender Equality Strategy 2022-2025. <https://www.undp.org/es/publicaciones/estrategia-de-igualdad-de-genero-del-pnud-2022-2025>

II. Legal and regulatory framework in Mexico on gender perspective

The current presidency of Mexico began on October 1, 2024. According to the Mexican Planning Law ([Ley de Planeación](#)), the National Development Plan must be sent to the Congress of the Union for its approval before finalizing February 2025. The Congress will have two months to approve it (Article 21). Therefore, the new National Development Plan will be ready approximately in May 2025. Consequently, the sectoral programs (for example, the environment and agriculture, the plan of equality between men and women, among others) will be ready approximately six months later, in December 2025 (Article 30).

This section only describes the legal framework; It does not describe the regulatory framework because the plan and the sectoral programs are under construction.

A. Legal framework

Table 1 shows the main legal findings on gender equality in natural resources, agriculture, and fisheries, all of which are relevant to the project.

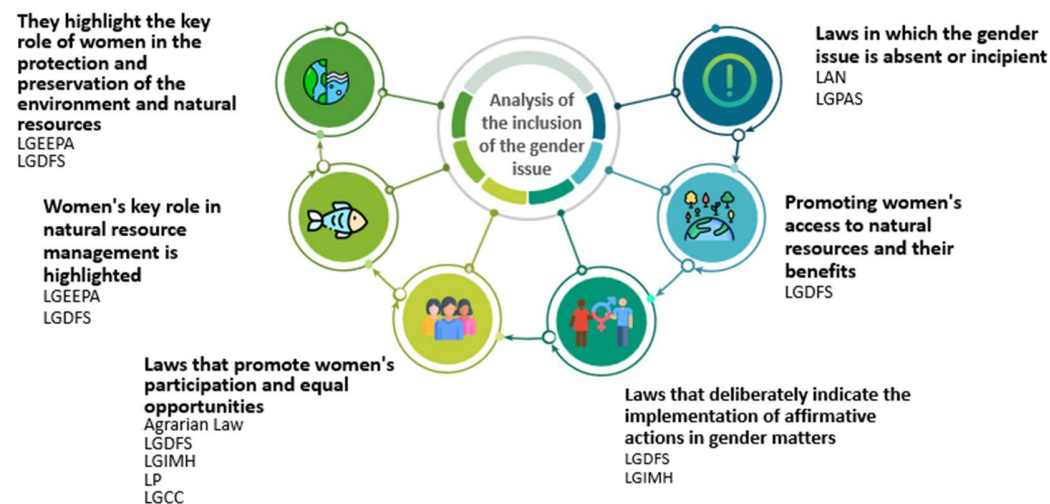
Table 5. Gender aspects identified in legislation relevant to the project

Instrument	Relevant aspects of the gender perspective
Constitución Política de los Estados Unidos Mexicanos	- Article 4 establishes substantive equality among women and men. It also establishes that all people have the right to a healthy environment for their development. - Gender equality parity in all decision-making levels is granted in several articles of the Constitution
Ley General del Equilibrio Ecológico y la Protección al Ambiente (LGEEPA)	Article 15, Section XV indicates that women play an essential role in the protection, preservation, and sustainable use of natural resources and development. Their full participation is critical to achieving sustainable development.
Ley General para la Igualdad entre Mujeres y Hombres (LGIMH)	Articles 16, 17, 33, 34, and 38 emphasize promoting gender equality through various mechanisms, including political participation, budget planning, and resource access. They advocate for integrating a gender perspective in public policies to ensure equal opportunities for women and men, particularly in rural and urban settings. The following sections describe critical aspects of these initiatives.
Secretaría de las Mujeres	New secretariat in charge of establishing and conduct the instrumentation, coordination, supervision, monitoring, implementation, and evaluation within its area of competence of the National Policy on women, adolescents and girls, substantive equality, gender mainstreaming; prevention, addressing and eradication of gender- based violence; and systems of care.
Ley de Desarrollo Forestal Sustentable (LDFS)	Articles 2, 3, 8, 24, and 153 indicate the importance of affirmative actions in forest policy to ensure equitable opportunities for marginalized groups, including women, indigenous peoples, youth, and people with disabilities. These measures foster inclusive participation in sustainable forest management and development, promoting social equality and environmental sustainability.

Ley Agraria (LA)	Articles 4, 37, 71, and 108 highlight the importance of gender equality in rural development and political participation, emphasizing the need for comprehensive policies that promote women's rights and participation. These initiatives aim to improve the well-being of rural populations while ensuring equal opportunities for women in various sectors.
Ley de Desarrollo Rural Sustentable (LDRS)	Articles 6, 15, 144, 154, and 162 highlight the importance of prioritizing actions in rural areas that promote social and gender equality, mainly through government initiatives. They also highlight the need for comprehensive programs that address the unique challenges faced by vulnerable groups, including women, youth, and the elderly, in rural communities.
Ley General de Pesca y Acuacultura Sustentables (LGPAS)	It does not include provisions on gender equality.
Ley de Aguas Nacionales (LAN)	Indicates that one of its objectives is progressively observing the principle of parity based on the new designations and appointments that correspond under the law.
Ley General de Cambio Climático (LGCC)	The provisions outlined in Article 71 emphasize the importance of state-level climate change programs that align with national strategies while ensuring gender inclusion and equality. These programs are designed to establish comprehensive frameworks that include strategies, policies, and measurable objectives to address climate change effectively.
Ley de Planeación (LP)	The planning process in Mexico is essential to ensure the State's responsibility towards equitable and sustainable development, as highlighted in Articles 2 and 9. These articles emphasize the need for an intercultural and gender perspective in planning, aligning with national development objectives. This approach is crucial to fostering inclusive policies that address social, economic, and environmental objectives.

The level of inclusion of gender equality in the legislation relevant to the project and the programmatic instruments is not homogeneous. In some laws, it is still incipient or non-existent (LAN, LGPAS), while in some other laws, the priority of promoting gender affirmative actions is even mentioned, as is the case of the LGDFS. Some of these instruments highlight the valuable participation of women in environmental management; see Figure 1:

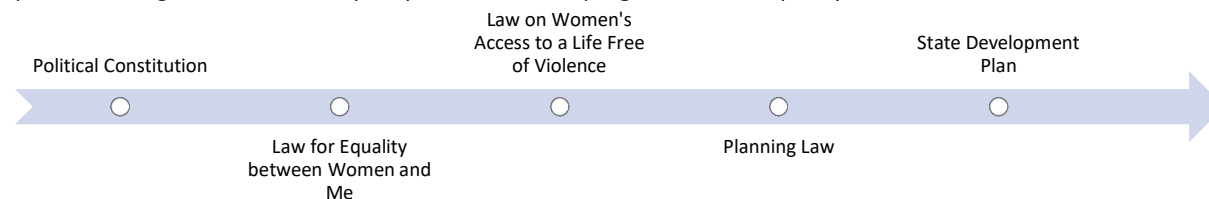
Figure 1. Analysis of the legal framework on the inclusion of gender aspects



Source: own elaboration

B. Legal framework regarding gender in the states where the project landscapes are located

The former National Institute of Women (INMUJERES) developed a methodology that allows us to determine whether the country's states have laws and planning instruments that provide their governments with policy tools to enable progress toward equality between women and men. To carry out these evaluations, the following instruments are reviewed:



In this regard, the following information is reported for the five states of relevance to the project:

Table 6. The gender regulatory framework in the project states

State	Regulatory framework on gender
Campeche	▪ In the Public Account, it is possible to locate the reference to gender equality in its narrative. ▪ While the National Institute for Women (INMUJERES) recognizes that Campeche complies with national and international standards in its gender regulatory framework, it urges the state to implement new strategies to guarantee substantive equality

	between women and men. One example of this is the need to advance legislation on the legal interruption of pregnancy, a crucial issue to guarantee women's reproductive rights and in which Campeche has ample room for improvement.
Oaxaca 	▪ Has a regulatory framework that complies with national and international standards regarding equality between women and men. ▪ The Political Constitution of the state recognizes the exercise of human rights and constitutional guarantees recognized in the Political Constitution of the United Mexican States and the international treaties of which the Mexican State is a party. ▪ The Planning Law incorporates the gender perspective as a principle to promote development, provide strategic guidance on public spending and the actions of the State Executive Branch, and guarantee equal opportunities for women and men. ▪ The State Development Plan incorporates gender equality as a priority cross-cutting policy in each guiding axis. ▪ The Public Account presents information that allows us to understand the use of public resources.
Quintana Roo 	▪ The gender perspective is a cross-cutting guiding principle in state regulatory instruments. ▪ The Budget Decree has an article and chapter on budgetary obligations concerning gender equality. ▪ The Public Account presents a specific narrative on how equality between men and women was advanced during the fiscal year.
Veracruz 	▪ Has a regulatory framework aligned with national and international frameworks. ▪ The Budget Decree has different classifications that allow us to know in general terms what is spent. ▪ The Law on Women's Access to a Life Free of Violence establishes the coordination mechanisms between the different levels of government.

Source: INMUJERES⁴³

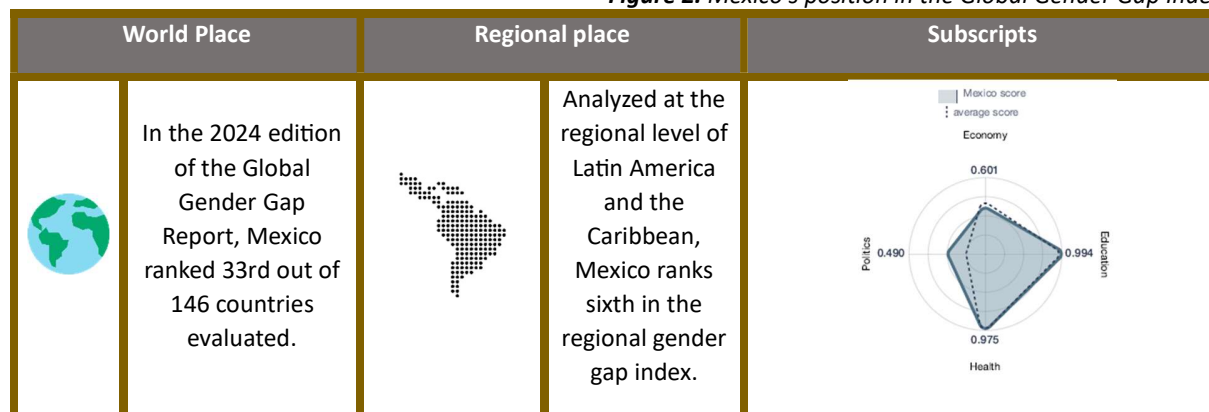
III. Gender gaps in Mexico

⁴³ INMUJERES. 2024. Mexico on the road to equality <http://rumboalaigualdad.inmujeres.gob.mx/temas/marco-normativo>

According to the “Global Gender Gap Index 2024” report published annually by the World Economic Forum, no country has achieved gender equality, not even the countries that report smaller gender gaps, such as Iceland, Norway, and Finland.⁴⁴ The report estimates that at the current rate of progress, it will take 134 years to achieve gender parity globally. The report evaluates four sub-indexes: 1) Economic participation and opportunities, 2) Political empowerment, 3) Health and survival, and 4) Educational achievements. Mexico ranked 33rd globally. Regarding its performance in the sub-indexes, it is observed that the most significant achievement is in education and the lowest in political empowerment (See Figure 2).

⁴⁴ WEF. 2024. Global Gender Gap 2024 https://www3.weforum.org/docs/WEF_GGGR_2024.pdf

Figure 2. Mexico's position in the Global Gender Gap Index 2024



Source: World Economic Forum, 2024

Below in Table 3 are national statistics that provide an overview of the situation of women in Mexico:

Table 7. Sociodemographic statistics disaggregated by sex

Issue	Women	Men
Population (126,014,024 inhabitants in Mexico)	64,540,634 inhabitants are women (51.2%)	61,473,390 inhabitants are men (48.8%)
Education (Average years of education completed aged 15 and over)	8.48 (Year 2010) 9.60 (Year 2020)	8.79 (Year 2010) 9.80 (Year 2020)
Economic participation rate (Economically active population aged 15 years and over; rate per 100 women and men)	42.24 (Year 2010) 45.94 (Year 2020)	78.39 (Year 2010) 75.93 (Year 2020)
Unemployment rate (Rate per 100 economically active men and women aged 15 and over)	5.20 (Year 2010) 2.70 (Year 2020)	5.36 (Year 2010) 2.43 (Year 2020)
Unpaid work in homes (TNRH)⁴⁵ (number of hours of TNRH performed by men and women - per 100 hours)	73.4 hours	26.6 hours
Wage gap⁴⁶	• For every peso that men earn, women receive only 56 cents.	

⁴⁵INEGI. 2023. Satellite account of unpaid household work in Mexico 2022 <https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2023/CSTNRHM/CSTNRHM2022.pdf>

⁴⁶SHCP. 2023. Towards Gender Equality in the Financial Sector https://www.gob.mx/cms/uploads/attachment/file/862411/Hacia_la_Igualdad_de_Ge_nero_en_el_Sector_Financiero.pdf

(Data 2023)	• In operational positions, women receive 80 cents for one peso men receive. • At management levels, women only receive 40 cents for every peso that men receive.
Gender violence ⁴⁷	• In 2021, at the national level, 70.1% of women aged 15 and over reported experiencing at least one form of violence—whether psychological, economic, property-related, physical, sexual, or discriminatory—at some point in their lives, perpetrated by any aggressor in various contexts. • Psychological violence is the most prevalent (51.6%), followed by sexual violence (49.7%), physical violence (34.7%), and economic, property, and discrimination violence (27.4%). • Compared to 2016, the 2021 results show a 4% increase in total lifetime violence against women. • Also, evidence reveals direct links between environmental pressures and gender-based violence, where nature degradation, competition for scarce resources, and ecological crimes intensify violence.

A. Condition of rural women in Mexico

In the case of rural women, the achievement of equality and their empowerment has been hindered by various factors. While all women have the same human rights, those who live in rural areas face unique needs and priorities, with poverty being a significant impediment to gender equality⁴⁸. For example, recent analyses in the Latin American and the Caribbean region indicate that women are overrepresented in households living in poverty and experience specific deprivations that are rarely reflected in measurements of this phenomenon. This is related to limitations in their economic, physical, and decision-making autonomy, which have been disproportionately aggravated because of the COVID-19 pandemic^{49,50}. In Mexico, there are 64.5 million women, of whom 21.1% live in rural areas. In addition, of the 11.4 million households headed by women in the country, 16.2% are in rural areas. Living in a rural or urban area has differences that can impact people's living conditions and well-being. Table 4 below shows some sociodemographic indicators that compare the situation of women in rural areas (population less than 2,500 inhabitants) versus those living in urban areas (population greater than 2,500 inhabitants).

Table 8. Sociodemographic characteristics of women according to type of locality

Indicator	Rural	Urban
Average education level	7.3 years	10.2 years
Percentage of population with access to health services	76.7%	75%
Average number of daughters and sons	2.7	1.9
Labor force participation	31.6%	45.2%

⁴⁷INEGI. Violence against women in Mexico <https://www.inegi.org.mx/tablerosestadisticos/vcmm/>

⁴⁸UN Women. 2018. Challenges and opportunities in achieving gender equality and empowering rural women and girls <https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/CSW/62/CSW-Conclusions-62-SP.PDF>

⁴⁹ECLAC. 2021. Women's economic autonomy in sustainable and equal recovery <https://www.cepal.org/es/publicaciones/46633-la-autonomia-economica-mujeres-la-recuperacion-sostenible-igualdad>

⁵⁰ <https://www.undp.org/es/latin-america/publicaciones/indice-de-pobreza-multidimensional-con-foco-en-mujeres-para-america-latina-y-el-caribe>

Source: INMUJERES, 2021⁵¹

Land tenure

Another critical aspect of rural women's situation in Mexico is land ownership, which is interrelated with their capacity to produce food and acquire capital. In Mexico, 50.8% of the national territory is social property (ejidal and communal). This percentage is distributed among 29,709 ejidos and 2,393 communities that occupy approximately 100 million hectares, of which 5.5 million people have rights⁵². In recent years, the National Agrarian Registry has made efforts to generate statistics with gender perspective, which helps to determine the degree of representation women have as landowners and as part of the bodies that govern these ejidos and communities. Some of these data are mentioned below:

Women are systematically less likely to own or manage land; and, when they can access to it, it is often of poor quality and small ⁵³ .	Only 27.7% of Mexicans with an ejidatarias or comuneras (community members) land certificate are women ⁵⁴ .	Only 7.2% of ejidos and communities with representative bodies in Mexico were chaired by a woman in 2023 ⁵⁵ .	Women's presidency in ejidos and communities has an uneven pattern among the country's states, with presidencies held by women ranging from 3% to a maximum of 35%.
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Agricultural production

In Mexico, 951 thousand women work in the primary sector, of which 84.9% are employed in agriculture, 12.5% in animal husbandry, 0.9% in fishing and aquaculture, and 1.7% in hunting and forestry services. Of the rural women engaged in agricultural and fishing activities, it is considered that 96.7%, in addition to their work activity, carry out a whole series of extra unpaid activities, including housework, caring for another person in the home, carrying firewood and water for the household, community work, attending school and home maintenance tasks⁵⁶. Below are data from the 2022 Agricultural Census:

19 out of 100 people responsible for agricultural production units are women. One-fifth of them have no education. ⁵⁷	Of the women producers, 49.6% considered themselves indigenous, and 61.9% spoke an indigenous language. In addition, one in 100 considered themselves Afro-Mexican.	Of the total number of jobs as day laborers in the agricultural sector, women represented 10.7%	The average daily wage for female agricultural workers was 201 pesos; for males, it was 228. This gap exists in 26 states.
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B. Condition of Afro-Mexican women in Mexico

⁵¹INMUJERES. 2021. Bulletin 11. http://cedoc.inmujeres.gob.mx/documentos_download/BA7N11.pdf

¹⁵ National Agrarian Registry (RAN). Technical note on corporate ownership. http://www.ran.gob.mx/ran/indic_bps/NOTA_TECNICA_SOBRE_LA_PROPIEDAD_SOCIAL_v26102017#:~:text=De%20trabajo%20a%20los%20datos,y%202%2C393%20comunidades%20que%20en

⁵³FAO. 2017. Gender-sensitive value chain development: Framework. <https://openknowledge.fao.org/server/api/core/bitstreams/2af9588c-1543-4904-9daa-064e826c4466/content>

⁵⁴RAN. 2023. National Agrarian Registry, 2023, Statistics with a gender perspective, Tabulations. <http://www.ran.gob.mx/ran/index.php/sistemas-de-consulta/estadistica-agraria/estadistica-con-perspectiva-de-genero>

⁵⁵RAN. 2023. Members of representative bodies of agrarian nuclei registered in SIMCR, current as of the cut-off date http://www.ran.gob.mx/ran/indic_gen/orgrep-resultados-2023.pdf

⁵⁶Chamber of Legislative Journalism. Gender parity in ejido representation bodies https://comunicacionsocial.diputados.gob.mx/revista/index.php/nuestros-centros/paridad-de-genero-en-organos-de-representation-ejidal_20230907_142706#:~:text=The%20RAN%20a%202022%20has,%20women%20represent%20the%208.0%25.

⁵⁷INEGI. 2023. Final results of the 2022 Agricultural Census https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2023/CA_Def/CA_Def2022.pdf

In 2020, Mexico was home to 2,576,213 people who identify as Afro-Mexican, making up 2% of the country's total population. Of this number, 50% are women and 50% are men. The States of Veracruz and Oaxaca are among those with the highest concentrations of Afro-Mexican population, mainly in the municipalities where this project will be implemented. Afro-Mexican communities, and particularly Afro-Mexican women, have been without public policies based on human rights, interculturalism, and gender for over 500 years. An important milestone in their struggle was the inclusion of the Afro-Mexican people in the 2020 Population and Housing Census. It is necessary to address the structural problems faced by Afro-Mexican women, issues that range from the lack of access to services in their communities, such as the absence of piped potable water inside homes, to the fact that 40% of their households do not have a dedicated room for cooking.⁵⁸ All of this results in an increased caregiving workload for women.

Afro-Mexican women face unique challenges related to gender inequality. These challenges include limited access to education, health services, and economic opportunities, due to race discrimination. In rural areas where many Afro-Mexican communities are located, women often have fewer resources and opportunities for advancement. Afro-Mexican women are often concentrated in lower-income sectors and face greater economic hardship due to historical marginalization and the compounded effects of gender and racial discrimination. Their work, particularly in rural communities, is often undervalued and underpaid.

Below are the data on Afro-descendants and Afro-descendant women in the project states:

State	Afro-Mexican Population
Campeche	According to the 2020 Population and Housing Census conducted by INEGI, 19,183 people in Campeche identify as Afro-Mexican, representing 2.1% of the state's total population. The Afro-Mexican population in Campeche is almost evenly distributed between genders: 9,564 women (49.9%) and 9,619 men (50.1%). It is important to note that this information is based on self-identification, meaning how individuals identify themselves.
Oaxaca	194,474 people in Oaxaca identify as Afro-Mexican, representing 4.7% of the state's total population. The Afro-Mexican population in Oaxaca is almost evenly distributed between genders: 96,968 women (49.9%) and 97,506 men (50.1%).
Quintana Roo	55,773 people in Quintana Roo identify as Afro-Mexican, representing 3.3% of the state's total population. The Afro-Mexican population in Quintana Roo is almost evenly distributed between genders: 27,591 women (49.5%) and 28,182 men (50.5%).
Veracruz	215,435 people in Veracruz identify as Afro-Mexican, representing 2.1% of the state's total population. The Afro-Mexican population in Veracruz is almost evenly distributed between genders: 107,717 women (50%) and 107,718 men (50%). It is important to note that this information is based on self-identification, meaning how individuals identify themselves.

IV. Women and Natural Resource Management

⁵⁸ Afro-Mexican women: stories of fight and resistance <https://www.gob.mx/inmujeres/articulos/mujeres-afromexicanas-historias-de-lucha-y-resistencia?idiom=es>

The way nature is managed differs according to gender. Women and men who depend on and use natural resources have different roles and purposes. Women's knowledge, needs, priorities, experiences, and capacities (particularly as primary users and managers of natural resources) remain ignored or undervalued. In many countries, women are systematically discriminated against concerning access to natural resources, let alone equal participation in their management or benefit from their services; without the collection of appropriate sex-disaggregated data, such inequalities go unreported and possibly overlooked⁵⁹. Furthermore, gender relations play a fundamental role in shaping restoration and mediating how restoration processes are experienced by those who inhabit and manage restored landscapes.⁶⁰ Gender equality can lead to better environmental outcomes, as attention to gender relations can improve equality and the efficiency and effectiveness of restoration initiatives. It is worth highlighting that the international community acknowledged the period 2021-2030 as the United Nations Decade on Ecosystem Restoration; in this sense, it is essential to learn from the existing knowledge and experiences of both men and women to restore in ways that enhance restoration equity and ensure that restoration initiatives and programs are inclusive, leaving no one behind. Below are some available examples and data on women in the Mexican context regarding natural resource management.

Women and coastal marine ecosystems

- In various parts of Mexico, women's organizations such as collectives and cooperatives carry out multiple activities to protect mangroves. An example is the group "*Las Chelemeras*," located in Yucatan⁶¹, or the *Cooperativa Pescadoras del Manglar*, situated on the coast of Oaxaca⁶².
- Coral reefs are priority ecosystems for conservation due to the invaluable environmental and socioeconomic benefits they provide. Despite their importance, they are profoundly impacted daily, so their preservation becomes urgent. In Quintana Roo, the Guardians of the Reef brigades preserve and protect coral reefs. The brigades' activities would not have been possible without the participation of valuable women who contributed knowledge, passion, and leadership, making this initiative a national and international good practice⁶³.
- Women play a crucial role in marine environments and fishing economies. They represent half of the active population in the industry related to seafood products. Even so, coastal areas, fishing activities, and research on marine ecosystems continue to be a male monopoly in the social imaginary⁶⁴.
- In Mexico, there are 1,574 registered fishing and aquaculture cooperatives, of which 14.2% belong to women, 60% are dedicated to production, 30% to marketing, and 10% to services⁶⁵.
- According to data from INEGI, 8% of Mexican women are employed in fishing and aquaculture⁶⁶. In Mexico, CONAPESCA estimates that at least 22,000 women are directly employed in fishing, while INEGI estimates 14,000⁶⁷.

Forest management

- In the forestry sector, women are essential users of forest resources, but their participation in forest governance is limited⁶⁸.
- When women participate more in decision-making committees and community forest management activities, forest governance and resource sustainability improve. However, a considerable gender gap restricts women's greater participation in these areas⁶⁹.

⁵⁹IUCN. 2020. Gender & Ecosystem Restoration: unlocking resilience for a post-2020 world <https://www.cbd.int/gender/doc/cbd-gender-ecosystem-restoration-en.pdf>

⁶⁰ Dick Frederiksen, S., Elias, M., Zaremba, H., Aynekulu, E. (2021). Developing gender-equitable ecological restoration initiatives: A synthesis of guidance to improve restoration practice. <https://cgispace.cgiar.org/server/api/core/bitstreams/f4c45274-6b75-486d-8fea-7af1d7dc7e0b/content>

⁶¹ <https://www.un-ilibrary.org/content/journals/22202315/2023/3/12>

⁶² <https://www.mujeresdelmanglar.com/>

⁶³ <https://www.tncmx.org/que-hacemos/recursos/historias-destacadas/historias-que-inspiran/guardianas-del-arrecife/>

⁶⁴ Nuria Jiménez. Sentipensar el género en los estudios marítimos y pesqueros

⁶⁵ <https://www.gob.mx/agricultura/prensa/reconocen-contribucion-de-las-mujeres-a-la-soberania-alimentaria#:~:text=En%20nuestro%20pa%C3%ADs%20se%20tienen,por%20ciento%20a%20los%20servicios.>

⁶⁶ <https://www.gob.mx/agricultura/prensa/fortalecen-mujeres-la-actividad-pesquera-y-acuicola-de-mexico-agricultura>

⁶⁷López-Ercilla, I.; N. Solano; S. Marcos y D. Valdez. 2019. Participación de las mujeres en la cadena de valor de tres pesquerías ribereñas en México. DatosMares. Recurso interactivo. <https://doi.org/10.13022/M33357>

⁶⁸ Mai, Yen Hoang; Mwangi, Esther, and Wan, Melinda. 2011. Gender analysis in forestry research. Looking back and thinking ahead. International Forestry Review, 13(2). https://americalatinagenera.org/wp-content/uploads/2020/02/AMai1101_1.pdf

⁶⁹ CCMSS. 2018. Forest women, an unfinished agenda. https://www.ccmss.org.mx/wp-content/uploads/2018/03/Las-mujeres-del-bosque_agendapendiente_marzo2018.pdf

- In many parts of Mexico, men are often more involved in large-scale forestry enterprises, such as logging. At the same time, non-timber forest products used in the home or for small income-generating activities fall into the hands of women.
- The lack of data on women's participation in large-scale forestry activities makes obtaining an accurate picture of their involvement difficult. This could suggest that women's roles in the sector are invisible and informal, leading to poor working conditions and lower pay⁷⁰.

Water resources management

- The relationship between women and water is crucial to improve their quality of life and empowerment. Globally, 1.8 billion people lack access to water, and women and girls are primarily responsible for collecting water in 70% of households. In most cases, women and girls make longer trips to collect it, losing time on education, work, and leisure and exposing themselves to risks of physical injury and danger along the way⁷¹.
- In general, women and girls are disproportionately affected by the lack of access to essential water, sanitation, and hygiene services due to their needs during periods and to infections related to menstruation and reproduction⁷².
- In Mexico, data from 2020 indicate that 3.7% of the population obtains the water they consume by carrying it. Carrying water could imply contamination of the liquid during transport and storage, in addition to the time that must be invested and the problems for its storage. These activities often fall on women⁷³.
- In Mexico, 16.4% of the population lives in homes that do not have drainage in rural areas. Also, 38.4% of households in rural areas access water only through facilities outside the property but within the land. In addition, 12.4% of people drink water from wells, lakes, rivers, or streams⁷⁴. Knowing the number of people in private households in rural areas that do not have drainage, for every hundred people in private homes in rural areas, allows us to know the proportion of women and men whose homes lack some installation for the removal of wastewater, and identifies needs for essential services for environmental sustainability. It also shows unfavorable conditions that imply more work for domestic chores and personal and family hygiene, which falls to women⁷⁵.
- In Mexico, INEGI reports through the Household and Environment Module (MOHOMA) statistics that People who carry water spend an average of 5.1 hours a week on this activity. On this same topic, CONAGUA indicates that in Veracruz and Oaxaca, it is estimated that people spend 1.1 hours/day collecting water (7.7 hours/week)⁷⁶.
- Women also have extensive knowledge about water quality, reliability, restrictions, and storage methods. They are the primary water managers in their homes and in agriculture.

Gender and climate change

- Women are the most affected by climate change, given that the discrimination they still suffer at the socioeconomic level intensifies the consequences that global warming is having on their food, home, and livelihoods.⁷⁷
- The Intergovernmental Panel on Climate Change (2022), in the Study "Poverty, livelihoods and Sustainable Development," highlights that, in the most vulnerable regions and countries, there are minimal structures and resources to support women when droughts, floods, or storms occur and place an additional burden on them.

⁷⁰Manfre, C. and Rubin, D. 2013. Integrating gender in forestry research: A guide for CIFOR researchers and programme managers. https://www.cifor-icraf.org/publications/pdf_files/Books/BCIFOR1301.pdf

⁷¹WHO. 2023. Women and girls bear the brunt of the water and sanitation crisis – new report from UNICEF and WHO <https://www.who.int/es/news/item/06-07-2023-women-and-girls-bear-brunt-of-water-and-sanitation-crisis---new-unicef-who-report>

⁷²IDB. 2017. Lack of access to a toilet and handwashing supplies affects women and girls the most, especially during their menstrual period. <https://blogs.worldbank.org/es/voices/la-falta-de-acceso-un-retrete-y-articulos-para-el-lavado-de-manos-afecta-mas-las-mujeres-y-the-girls>

⁷³INMUJERES. SISPROIGUALDAD. <https://sisproigualdad.inmujeres.gob.mx/public/index.html>

⁷⁴ <https://www.economista.com.mx/econohabitat/La-brecha-del-acceso-al-agua-en-Mexico-8-millones-de-viviendas-no-cuentan-con-suministro-en-su-interior-20230306-0101.html#:~:text=En%20estas%20zonas%20rurales%2C%2038.4,%25%22%2C%20coment%C3%B3%20el%20experto.>

⁷⁵Idem.

⁷⁶CONAGUA. Data from the PROCAPTAR program.

⁷⁷UN. Gender inequality gives climate change an advantage. <https://news.un.org/es/story/2020/06/1475742>

- Climate change will worsen the living conditions of farmers, fishermen, and forest dwellers, already vulnerable and food-insecure populations. In Mexico, 3 out of 10 people suffer from some degree of food insecurity⁷⁸.
- Women and girls are disproportionately affected by climate change, primarily because they constitute most of the world's poor population. Their livelihoods are often closely tied to the natural resources in their local environment, making them more vulnerable to environmental disruptions. This is particularly relevant, as later analysis will show that in most municipalities across the three project regions, the number of poor women exceeds that of poor men. (see Tables 7, 13, and 19). This was confirmed in the field phase of this project, where women reported suffering from the impacts of drought during the current year and the previous one.

Gender and Nature-based Solutions (NbS)

Likewise, the document “Draft Outline of a Post-2020 Gender Action Plan” published by the Convention on Biological Diversity indicates that it is vital to:

- Increase women's access to and control over resources by identifying and eliminating gender-related barriers.
- Ensure equal access for women to financial services, credit, training, relevant information, and education, among others).
- Ensure that all individuals, regardless of gender, have equitable access to and can benefit from the conservation and sustainable use of biological diversity. This commitment to fairness and justice is a cornerstone of the Convention's efforts to integrate gender perspective in NbS.
- Promote women's economic empowerment through access to secure, quality, and paid employment and entrepreneurial opportunities for women and girls in supply chains and biodiversity-friendly sectors.

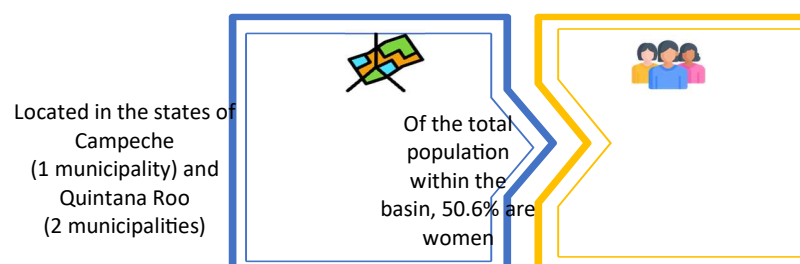
In this way, ambitious strategies will be created that, in addition to promoting ecosystem care and sustainable use, will strengthen women's autonomy as nature managers.

V. Gender analysis in the project landscape areas

A. Caribbean Landscape

This landscape includes an exoreic basin (an open system in which surface waters eventually drain into the ocean), and the principal tributary is the Hondo River (Río Hondo). General details can be seen in Figure 3:

Figure 3. General information on the “Caribbean” landscape



⁷⁸ FAO, IFAD, UNICEF, WFP and WHO. 2023. The State of Food Security and Nutrition in the World 2022. Repurposing food and agricultural policies to make healthy diets more affordable. Rome, FAO. <https://doi.org/10.4060/cc0639en>

Below are some aspects that help to provide a perspective on the main gender gaps in the region:

Land tenure. Table 5 shows two essential data in this landscape. First, women's ownership of land is low (less than 25%), which limits their productive capacity, access to credit, and in general, their possibilities of achieving economic well-being. The second aspect presented is women's participation in spaces of ejidal representation (a type of communal land ownership in Mexico). This is relevant since women have been historically marginalized in these decision-making spaces.

Table 9. Land ownership in the hands of women in the "Caribbean" landscape

State	% Land ownership (RAN) People from agricultural centers who have a land certificate	Ejidos and communities have representative bodies that a woman chairs.
Campeche	20.9% of people with a land ownership certificate are women	A woman chairs 8% of the Ejidos in the current representative bodies.
Quintana Roo	23% of people with a land ownership certificate are women	A woman chairs 7% of the Ejidos in the current representative bodies.

Source: National Agrarian Registry⁷⁹

Gender Inequality Index (GII) measures inequality between women and men in a specific territory, such as municipalities. The municipal GII is calculated using three components that characterize the differences in opportunities: empowerment, participation in the labor market, and reproductive health. In the municipal GII, when there is a value close to zero the development outlook tends to be egalitarian, while when it approaches one, the disadvantages of women compared to men are greater, widening the gender inequality gap. In this sense, the more equal the situation within the municipality, Bacalar and Calakmul present better equality conditions for women than Othón P. Blanco. Below are the GII values of the municipalities that are part of this landscape:

Table 10. GII in the municipalities of the "Caribbean" landscape

Area	State	Municipalities	Gender Inequality Index (GII) 2020	Gender Inequality Index (GII) 2020
Caribbean	Campeche	Calakmul	0.28	0.309 country-wide average
Caribbean	Quintana Roo	Othón P. Blanco	0.34	
Caribbean	Quintana Roo	Bacalar	0.27	

Source: UNDP, 2022⁸⁰

Poverty. Data on poverty in Mexico is disaggregated by sex at the municipal level. Calakmul is a municipality with a high percentage of the population living in poverty and a high degree of marginalization, this is closely tied to the precarious situation women face, as they tend to experience its impacts more intensely. Two out of the three municipalities

⁷⁹RAN. 2023. Members of representative bodies of agrarian nuclei registered in SIMCR, current as of the cut-off date http://www.ran.gob.mx/ran/indic_gen/orgrep-resultados-2023.pdf

⁸⁰UNDP, 2022. Municipal Human Development Report 2010-2020: A decade of local transformations for the development of Mexico https://www.undp.org/sites/g/files/zskgke326/files/2023-02/INFORME_PNUD_2022_electronico-Portadas.pdf

that make up this area have an overrepresentation of women among the population living in poverty. Regarding female-headed households, women are the primary economic support of the family and often face barriers that make them more vulnerable. In this sense, in the three municipalities analyzed, the average percentage of these households grew by 7.4%, from 19.1% in 2010 to 26.5% in 2020. Table 7 shows this data for the municipalities in the Caribbean landscape.

Table 11. Poverty in the municipalities of the “Caribbean” landscape

State	Municipalities	% Population in Poverty 2020 (Women)	% Population in Poverty 2020 (Men)	Degree of Marginalization 2020
Campeche	Calakmul	82.7	83.2	High
Quintana Roo	Othon P. Blanco	44.6	43.0	Very Low
	Bacalar	75.1	71.8	Medium

Source: CONEVAL⁸¹And CONAPO⁸²

Education. In the three municipalities of this area, the average number of years of schooling for women is 8.44 and for men 8.55. Educational lag (the population aged 15 years and older who have not completed secondary school) is reported at 34.7% for women and 35.6% for men.

Economic aspects. Regarding economic aspects, the municipalities report an Economically Active Population of 50.8% for women and 85.1% for men. Comparing the economically active population of women and men is crucial to identify gender inequalities in the labor market, such as participation gaps, occupational segregation, and wage gaps. This information allows for the design of effective public policies that promote equal opportunities, drive economic development by fully incorporating women into the workforce, and contribute to social justice and women's economic empowerment. Likewise, the following wage gaps are noted in the states of Campeche and Quintana Roo.

Table 12. Wage gap in the states of the “Caribbean” landscape

State	On average, for every \$100 MX that a man earns, a woman earns:	Place at country level (where 32nd place is the state where women earn less compared to their male peers)
Campeche	\$86.5	7th place
Quintana Roo	\$82.5	21st place

Source: IMCO/ENOE 3Q 2023-INEGI

Economic activities. In the Caribbean region, women carry out various agricultural production activities for self-consumption and sale. In addition, most of them are related to tourism and ecotourism since these activities predominate in this region. Below are the species they produce and the entrepreneurial activities of these women:

Table 9. Economic activities of the women

	Agriculture	Corn, chihua (a type of pumpkin), chili, beans, pineapple, pitaya, lemon, orange, avocado, chaya, yuca, macal (tuber), banana, sugar cane, among others.
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⁸¹CONEVAL, 2020. Poverty by population groups at the municipal level 2010, 2015 and 2020. https://www.coneval.org.mx/Medicion/Paginas/Pobreza_grupos_poblacionales_municipal_2010_2020.aspx

⁸² <https://www.gob.mx/conapo/documentos/indices-de-marginalizacion-2020-284372>

	Livestock	Backyard poultry farming. Pig farming for personal consumption and sales.
	Entrepreneurship	Ecotourism, food sales, chicken slaughter, and sales, participation in farmers' markets of the "Sembrando Vida" program ⁸³ , and Sale of double-breasted and egg-laying hens.

Source: Workshop with women

Care and Unpaid Household Work (TNRH). Within households, essential activities such as cooking, washing clothes, cleaning, grocery shopping, paying for services, and providing care to those in need are critical to ensuring the well-being and development of each family member. However, these tasks have historically fallen disproportionately on women, young people, and girls. Despite their importance, these activities are unpaid, yet they play a significant role in determining whether women can access and sustain paid employment, secure their own income and social protection, and participate in the social, cultural, and political life of their societies. Below is the contribution of men and women to this type of work in the states that comprise this landscape.

Table 10. TNRH in the states of the "Caribbean" landscape

State	% of TNRH performed by women	% of TNRH performed by men
Campeche	69.31	30.69
Quintana Roo	71.06	28.94

Source: INEGI, 2022⁸⁴

Violence. In Mexico, there is the National Survey of Victimization and Perception of Public Safety 2023 (ENVIPE). Women and men aged 18+ from each of the country's states were asked about their perception of security in their neighborhood or town. For the states where this landscape is located, the following results are obtained:

Table 11. Perception of insecurity in the states of the "Caribbean" landscape

State	% of women who feel unsafe in their neighborhood or town	% of men who feel unsafe in their neighborhood or town
Campeche	45.9	32.7
Quintana Roo	44.2	32.5

Source: INEGI-ENVIPE, 2023⁸⁵

As can be seen in both states, women experience more perceived insecurity than men, with percentage differences more significant than 11% between both genders.

⁸³. The government program "Sembrando vida" encourages farmers who benefit from it to offer a wide variety of products directly from the field at affordable prices.

⁸⁴ <https://www.inegi.org.mx/temas/tnrh/#tabulados>

⁸⁵ https://www.inegi.org.mx/app/tabulados/interactivos/?px=ENVIPE_SEGURIDAD_COLONIA&bd=ENVIPE

Gender Violence. Gender violence in Mexico is a serious and widespread problem that affects women of all ages and social strata. Various forms of violence, such as domestic violence, sexual violence, femicide, and economic violence, are perpetrated against women in the family, work, and social spheres. Alarming statistics reveal the magnitude of the problem: more than 60% of Mexican women have experienced some type of violence in their lifetime, and thousands of women are killed each year for gender-related reasons. Gender violence in Mexico is the product of a complex interaction of factors, including gender inequality, deep-rooted machismo in the culture, impunity, and lack of access to justice for victims. Despite the efforts of the government and civil society to address this problem, gender violence remains a daily reality for many women in Mexico. Below are the data on gender violence in the project states:

State	Gender Violence, according to the 2021 National Survey on the Dynamics of Household Relationships (ENDIREH):
Campeche	67% of women aged 15 or older in Campeche have experienced some type of violence in their lifetime. This includes psychological, physical, sexual, economic, or property violence. Furthermore, 39.7% of women in Campeche suffered violence in the last 12 months.
Oaxaca	67.1% of women aged 15 or older in Oaxaca have experienced some type of violence in their lifetime. This includes psychological, physical, sexual, economic, or property violence. Furthermore, 39.1% of women in Oaxaca suffered violence in the last 12 months.
Quintana Roo	70.4% of women aged 15 or older in Quintana Roo have experienced some type of violence in their lifetime. This includes psychological, physical, sexual, economic, or property violence. Furthermore, 44.2% of women in Quintana Roo suffered violence in the last 12 months.
Veracruz	72.2% of women aged 15 or older in Veracruz have experienced some type of violence in their lifetime. This includes psychological, physical, sexual, economic, or property violence. Furthermore, 45.4% of women in Veracruz suffered violence in the last 12 months.

Gender-Based Violence in Environmental Projects

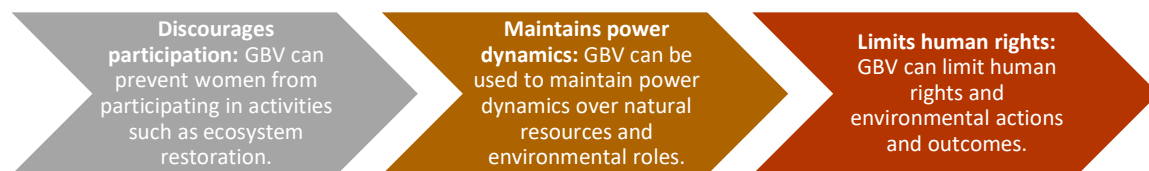
Evidence reveals direct links between environmental pressures and gender-based violence, where nature degradation, competition for scarce resources, and ecological crimes intensify violence.

Present in all societies, gender-based violence perpetuates inequalities, negatively impacting livelihoods, human rights, conservation, and sustainable development. It is estimated that one in three women and girls experience gender-based violence, although people of all sexual and gender identities also suffer from it. This violence encompasses sexual assault, domestic violence, verbal abuse, harassment, stalking, child marriage, economic deprivation, survival sex, and forced prostitution⁸⁶.

In the realm of environmental projects, gender-based violence can deter female participation, negatively impacting the environment and perpetuating power dynamics over natural resources.

Ways in which gender-based violence affects environmental projects:

⁸⁶ <https://iucn.org/resources/issues-brief/gender-based-violence-and-environment#3548>



Gender-differentiated roles and responsibilities in water collection and fuel harvesting put women in highly dangerous situations when performing these daily tasks, especially in resource-scarce situations when they must spend more time and walk longer distances to access resources.

Gender-based violence is used by various actors, including men and women, to control land and natural resources, including as a tool to influence and manage socio-cultural conditions, as well as in negotiations, such as in sexual exploitation in exchange for land rights.

The limited access of women to information and decision-making spheres regarding natural resources, at all levels, is a form of exclusion, and women may face violent reprisals if they attempt to access these spaces. This leads to a vicious cycle that limits opportunities to act in a gender-responsive way, as well as to inform about conservation and act to combat gender-based violence.

The correlation between gender-based violence and women's property and land rights is highly variable and depends on context and culture, but evidence shows that guaranteeing equitable rights to land and resources is an important lever for reducing various forms of gender-based violence.

One important point is that gender-based violence is used to assert control over natural resources. Furthermore, gender-based violence is a violation of human rights. Finally, addressing gender-based violence is a fundamental part of achieving a healthy and sustainable future for all.

Activities that they consider polluting their communities. The women of this region know that eradicating pollution, especially water pollution, is essential for the environment and the productive activities they carry out, since their primary income comes from tourism. If the water quality is not good, there are certain activities that they cannot continue. From their perspective, the activities that pollute water the most are waste from businesses located on the banks of rivers, sugar cane crops, and irregular discharges from houses that do not have drainage.

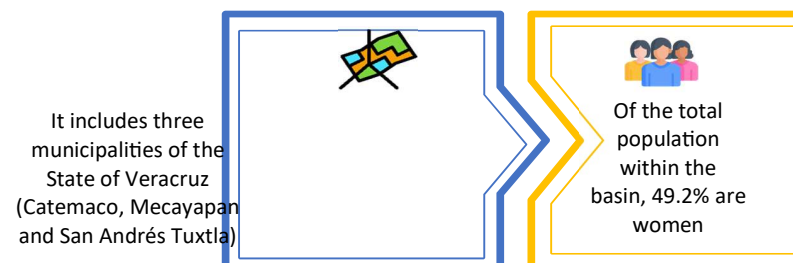
Sustainable activities that women carry out. In this landscape, previous work experiences with environmental projects were found to have encouraged the realization of sustainable activities. Likewise, the “Sembrando vida” program promotes agroforestry and the production of biofertilizers. In this sense, the women informants mentioned that they carry out the following activities:

- Reforestation, firebreaks, and carbon capture projects with forests.
- Recovery of jaguar and deer, prohibition of poaching.
- Production of bioles (organic fertilizer) through the field schools of the “Sembrando Vida” program.
- Infrastructure for water collection.
- Cleaning of parks, streets, and rivers (cleaning days).

B. Northern Isthmus (Gulf of Mexico)

This landscape includes six exoreic basins. The main tributaries are the La Palma River, the Yohualtapan River, the Coxcoapan River, and the El Carrizal River, which belong to the Papaloapan hydrological region. Some general details can be seen in the figure 4:

Figure 4. General information on the “Northern Isthmus” landscape



Land tenure. As explained in the previous landscape, land ownership is one of the main gender gaps in the Mexican context. Below are the percentages of land ownership in the hands of women in the state where this landscape is located:

Table 12. Land ownership in the hands of women in the “Northern Isthmus” landscape

State	% Land ownership (RAN) People from agricultural centers who have a land certificate	Ejidos and communities have representative bodies that a woman chairs.
Veracruz	25.9% of people with a land certificate are women.	A woman chairs 9.1% of the Ejidos and Communities with current representative bodies.

Source: National Agrarian Registry⁸⁷

Gender Inequality Index (GII). Below are the GII values of the municipalities that form part of this landscape. In this sense, considering that the values are closer to zero, the panorama within the municipality tends to be more egalitarian. However, it's important to analyze the situation carefully. While the gender gap seems to narrow in municipalities with high poverty rates, this doesn't necessarily indicate an improvement in women's living conditions. Rather, it may reflect that both men and women face similar situations of vulnerability and deprivation. In other words, the apparent equality is due to a generalized picture of poverty, not real progress in gender equity.

Table 13. GII in the municipalities of the “Northern Isthmus” landscape

Area	State	Municipalities	Gender Inequality Index (GII) 2020	Gender Inequality Index (GII) 2020
Northern Isthmus	Veracruz	Catemaco	0.37	0.309 country-wide average
		Mecayapan	0.30	

⁸⁷RAN. 2023. Members of representative bodies of agrarian nuclei registered in SIMCR, current as of the cut-off date http://www.ran.gob.mx/ran/indic_gen/orgrep-resultados-2023.pdf

		San Andres Tuxtla	0.38	
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Source: UNDP, 2022⁸⁸

Poverty. Data on poverty and marginalization are counted at the municipal level (see Table 14).

Table 14. Poverty in the municipalities of the “Northern Isthmus” landscape

State	Municipalities	% Population in Poverty 2020 (Women)	% Population in Poverty 2020 (Men)	Degree of Marginalization 2020
Veracruz	Catemaco	81.9	81.1	Medium
	Mecayapan	83.5	82.6	High
	San Andres Tuxtla	79.4	79.3	Medium

Source: CONEVAL⁸⁹ and CONAPO⁹⁰

As seen in this area, the three municipalities comprising it have percentages of the population in poverty close to or greater than 80%. In addition, the municipality of Mecayapan has a high degree of marginalization. In the three municipalities, there are more poor women than men. Another important aspect when analyzing the issue of poverty is the percentage of households with female heads of household; where women are the primary economic support of the family, they often face barriers that make them more vulnerable. In this sense, in the three municipalities under analysis, the average percentage of these households grew 9.7 percentage points, going from 19.9% in 2010 to 29.6% in 2020.

Education. In the municipalities of the Northern Isthmus area, the average number of years of schooling for women is 6.75 and for men, 7.33. Regarding educational lag (the Population aged 15 years and older who have not completed secondary school), 55.5% is reported for women and 50.7% for men.

Economic aspects. Regarding economic aspects, the municipalities report an Economically Active Population of 40.2% for women and 81.5% for men. In the state of Veracruz, the following wage gaps are noted.

Table 15. The wage gap in the “Northern Isthmus” landscape

State	On average, for every \$100 MX that a man earns, a woman earns:	Place at country level (where 32nd place is the state where women earn less compared to their male peers)
Veracruz	\$90.3	4th place

Source: IMCO/ENOE 3Q 2023-INEGI

Economic activities. Most women in this region engage in agricultural activities, produce for self-consumption and retail sales, and alternate this with entrepreneurial activities. They grow in backyard gardens and on family plots. Although they work on various plot activities, they conceptualize them as supporting or complementary work. Some of the ventures they carry out, such as producing fruit wine, have been promoted by the “Sembrando Vida” program, which is a government program. However, not all women are beneficiaries of this program. Below are the species they produce and the entrepreneurial activities of women in this region:

⁸⁸UNDP, 2022. Municipal Human Development Report 2010-2020: A decade of local transformations for the development of Mexico https://www.undp.org/sites/g/files/zskgke326/files/2023-02/INFORME_PNUD_2022_electronico-Portadas.pdf

⁸⁹CONEVAL, 2020. Poverty by population groups at the municipal level 2010, 2015 and 2020. https://www.coneval.org.mx/Medicion/Paginas/Pobreza_grupos_poblacionales_municipal_2010_2020.aspx

⁹⁰<https://www.gob.mx/conapo/documentos/indices-de-marginacion-2020-284372>

Table 16. Economic activities of the women of the “Northern Isthmus” landscape

	Agriculture	Coffee, pepper, corn, beans, cilantro, chili, lemons, banana, orange cane, cornfield, pumpkin, epazote, radish, chagalapoli (a berry).
	Livestock	Chickens, pigs, fighting cocks, among others.
	Entrepreneurship	Ornamental plant nurseries, sale of food and desserts, fruit wines (natural fermentation), stone crafts, and grocery stores, among others.

Source: Workshop with women

Unpaid Household Work (TNRH). Below is a list of the contributions of men and women to this type of work in the states that make up this landscape.

Table 17. TNRH in the states of the “Northern Isthmus” landscape

State	% of TNRH performed by women	% of TNRH performed by men
Veracruz	76.56	23.44

Source: INEGI, 2022⁹¹

Violence. Mexico has the National Survey of Victimization and Perception of Public Safety 2023. Women and men aged 18 from each country's state were asked about their perception of security in their neighborhood or town. For the state of Veracruz, where this landscape is located, the following is reported:

Table 18. Perception of insecurity in the states of the “Northern Isthmus” landscape

State	% of women who feel unsafe in their neighborhood or town	% of men who feel unsafe in their neighborhood or town
Veracruz	35.6	27.4

Source: INEGI-ENVIPE, 2023⁹²

As can be seen, the level of perceived insecurity is higher in women than in men, with a percentage difference of more than 8% between both genders.

Activities that women consider polluting in their communities. They consider that pig producers pollute too much because they do not adequately manage their waste. When there is drought, the smells are very strong, and feces are dispersed throughout the community during floods. Another source of pollution is those who burn garbage on the shores of the lagoon, and in addition to this, there is the problem of lack of drainage in specific communities, especially those located on slopes or steep landscapes, in such a way that all domestic waste is dumped in streams and lagoons.

⁹¹ <https://www.inegi.org.mx/temas/tnrh/#tabulados>

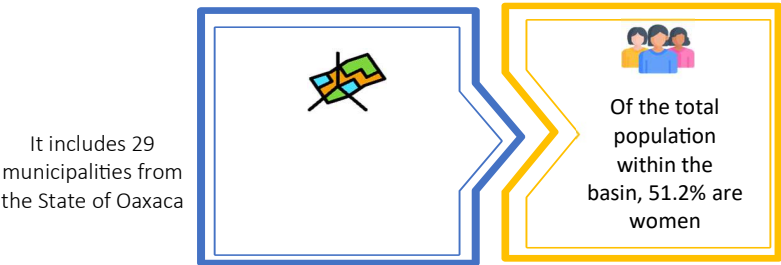
⁹² https://www.inegi.org.mx/app/tabulados/interactivos/?px=ENVIPE_SEGURIDAD_COLONIA&bd=ENVIPE

Sustainable activities that are carried out by women in their communities. In this landscape, mangrove conservation projects are carried out, where men and women participate in planting mangroves, cleaning activities, making canals, and removing weeds, among other activities. They also carry out community cleaning days and clean the shores of the lagoon. Some of these cleanings are promoted by municipal authorities and others by the government program "Sembrando Vida."

C. Southern Isthmus (Pacific Central American PACA)

This landscape includes various exoreic basins in the State of Oaxaca: some of the main tributaries are the Tamarindo River, Los Perros River, and Chicapa River, which belong to the hydrological region of Tehuantepec. Some general details of the area can be seen in the figure 5:

Figure 5 General information on the “Southern Isthmus” landscape



Land possession. As explained in the previous intervention area, land ownership is one of the leading gender gaps in the landscape:

Table 19. Land ownership in the hands of women in the “Southern Isthmus” landscape

State	% Land ownership (RAN)	Ejidos and communities have representative bodies that a woman chair
Oaxaca	28.5% of people with a land certificate are women	A woman chairs 5.4% of the Ejidos and Communities with current representative bodies.

Source: National Agrarian Registry⁹³

Gender Inequality Index (GII). Below are the GII values of the municipalities that form part of this landscape. Table 20 shows the GII ranges in the municipalities of Oaxaca from 0.25 in Santiago Niltepec to 0.44 in El Espinal. It is important to remember that there will be less inequality if the value is closer to zero and the **GII** country-wide average in 2020 was 0.309.

Table 20. GII in the municipalities of the “Southern Isthmus” landscape

⁹³RAN. 2023. Members of representative bodies of agrarian nuclei registered in SIMCR, current as of the cut-off date http://www.ran.gob.mx/ran/indic_gen/orgrep-resultados-2023.pdf

	Municipalities	Gender Inequality Index (GII) 2020		Municipalities	Gender Inequality Index (GII) 2020
1	Asunción Ixtaltepec	0.38	16	San Miguel Chimalapa	0.29
2	Ciudad Ixtepec	0.36	17	San Pedro Comitancillo	0.32
3	El Espinal	0.44	18	San Pedro Huilotepec	0.37
4	Guevea de Humboldt	0.27	19	Santa María Jalapa del Marqués	0.37
5	Juchitán de Zaragoza	0.36	20	Santa María Mixtequilla	0.39
6	Magdalena Tlacotepec	0.00	21	Santa María Chimalapa	0.35
7	Santo Domingo Chihuitán	0.41	22	Santa María Guienagati	0.35
8	Santiago Niltepec	0.25	23	Santa María Xadani	0.41
9	Reforma de Pineda	0.32	24	Santiago Lachiguiri	0.30
10	Salina Cruz	0.39	25	Santiago Laollaga	0.35
11	San Blas Atempa	0.33	26	Santo Domingo Tehuantepec	0.35
12	San Dionisio del Mar	0.34	27	Santo Domingo Ingenio	0.42
13	San Francisco Ixhuatán	0.39	28	Santo Domingo Zanatepec	0.33
14	San Francisco del Mar	0.32	29	Unión Hidalgo	0.41
15	San Mateo del Mar	0.30			

Source: UNDP, 2022⁹⁴

Poverty. Data on poverty and marginalization are counted at the municipal level. See Table 21.

Table 21. Poverty in the municipalities of the “Southern Isthmus” landscape

Municipalities	% Population in Poverty 2020 (Women)	% Population in Poverty 2020 (Men)	Degree of Marginalization 2020
Asunción Ixtaltepec	30.8	30.8	Low
Ciudad Ixtepec	30.5	29.5	Very Low
El Espinal	25.8	22.8	Very Low
Guevea de Humboldt	81.1	80.1	High
Juchitán de Zaragoza	51.5	50.2	Low
Salina Cruz	27.2	26.7	Very Low
Magdalena Tlacotepec	35.6	32.2	Low

⁹⁴UNDP, 2022. Municipal Human Development Report 2010-2020: A decade of local transformations for the development of Mexico https://www.undp.org/sites/g/files/zskgke326/files/2023-02/INFORME_PNUD_2022_electronico-Portadas.pdf

Reforma de Pineda	70.4	69.3	Low
San Blas Atempa	68.2	65.5	Very High
San Dionisio del Mar	83.2	83.1	Very High
San Francisco del Mar	71.2	70.5	High
San Francisco Ixhuatán	66.5	65.0	Low
San Mateo del Mar	90.3	90.3	Very High
San Miguel Chimalapa	76.5	77.1	High
San Pedro Comitancillo	34.2	31.2	Low
San Pedro Huilotepec	69.2	67.3	High
Santa María Chimalapa	85.0	83.9	High
Santa María Guienagati	81.8	81.7	High
Santa María Jalapa del Marqués	45.5	46.6	Low
Santa María Mixtequilla	51.6	49.0	Low
Santa María Xadani	84.1	83.1	High
Santiago Lachiguiri	84.1	83.1	High
Santiago Laollaga	51.6	49.8	Low
Santiago Niltepec	66.9	64.0	Medium
Santo Domingo Chihuitán	66.9	64.0	Low
Santo Domingo Ingenio	57.2	57.2	Low
Santo Domingo Tehuantepec	48.8	49.0	Low
Santo Domingo Zanatepec	59.8	57.8	Medium
Unión Hidalgo	45.0	45.3	Very Low

Source: CONEVAL⁹⁵ and CONAPO⁹⁶

Many of the municipalities in this area report higher percentages of poor women than men. Another important aspect when analyzing the issue of poverty is the percentage of households with female heads of household. In this type of household, where they are the family's primary economic support, they often face barriers that make them more vulnerable. In this sense, in the municipalities under analysis, the average percentage of these households grew 8.2 percentage points, going from 17.5% in 2010 to 25.7% in 2020.

Education. In the municipalities of the Isthmus South area, the average years of schooling for women is 7.6 years and for men 8.2 years. Regarding educational lag (Population aged 15 years and older who have not completed secondary school), a percentage of 48.8% is reported for women and 43.8% for men.

⁹⁵CONEVAL, 2020. Poverty by population groups at the municipal level 2010, 2015 and 2020. https://www.coneval.org.mx/Medicion/Paginas/Pobreza_grupos_poblacionales_municipal_2010_2020.aspx

⁹⁶ <https://www.gob.mx/conapo/documentos/indices-de-marginacion-2020-284372>

Economic aspects. Regarding economic aspects, the Economically Active Population in the municipalities is reported to be 43.8% women and 76.9% men. Table 20 shows the wage gaps noted in Oaxaca.

Table 22. gap in the state that forms the “Southern Isthmus” landscape

State	On average, for every \$100 MX that a man earns, a woman earns:	Place at country level (where 32nd place is the state where women earn less compared to their male peers)
Oaxaca	\$ 79.4	26th place

Source: IMCO/ENOE 3Q 2023-INEGI

Economic activities. Women in this region carry out agricultural and fishing-related activities. They are mainly dedicated to the marketing of fishing products. They do not fish; they only sell the products since, culturally, there is a belief that if a woman goes into the sea to fish, there is little production. However, this has been changing in recent years. Some young women have developed this activity, especially single mothers, as a way of earning a living, and women are sex-dissidents. Below are the species they produce and the entrepreneurial activities of women in this region:

Table 23. Economic activities of the women of the “Northern Isthmus” landscape

	Agriculture	Lemon, milpa, zapalote corn (endemic), and ornamental flowers.
	Livestock	Sheep, chickens, pigs.
	Entrepreneurship	Production and sale of tortilla chips, marketing of seafood, palm basket crafts, and sale of food, among others.

Source: Workshop with women

Unpaid Household Work (TNRH). Below is a list of the contributions of men and women to this type of work in the states that make up this landscape.

Table 24. TNRH in the states of the “Southern Isthmus” landscape

State	% of TNRH performed by women	% of TNRH performed by men
Oaxaca	74.58	25.42

Source: INEGI, 2022⁹⁷

Violence. Mexico has the National Survey of Victimization and Perception of Public Safety 2023. Women and men aged 18 from each country's state were asked about their perception of security in their neighborhood or town. For the states where this landscape is located, the following results are obtained:

⁹⁷ <https://www.inegi.org.mx/temas/tnrh/#tabulados>

Table 25. Perception of insecurity in the states of the “Southern Isthmus” landscape

State	% of women who feel unsafe in their neighborhood or town	% of men who feel unsafe in their neighborhood or town
Oaxaca	32.0	26.3

Source: INEGI-ENVIPE, 2023⁹⁸

As can be seen in this landscape, women experience more perceived insecurity than men, with percentage differences more significant than 5% between the two.

Activities that women consider polluting in their communities. The women said they are concerned about water pollution. One current problem they have is the poor disposal of waste. For example, the batteries that fishermen use with their lamps are thrown directly into the sea. Another critical problem is that informal garbage collectors throw garbage into the Río Los Perros; the public does not have a culture of cleanliness. In addition, they mentioned that there are many towns without drainage and that garbage is thrown directly into the rivers. There is also the perception that Petróleos Mexicanos (PEMEX) contaminates the water to the point that shrimp and other products taste like petroleum. Likewise, the excessive use of fertilizers and the intense felling of mangroves alter the coastal marine ecosystems.

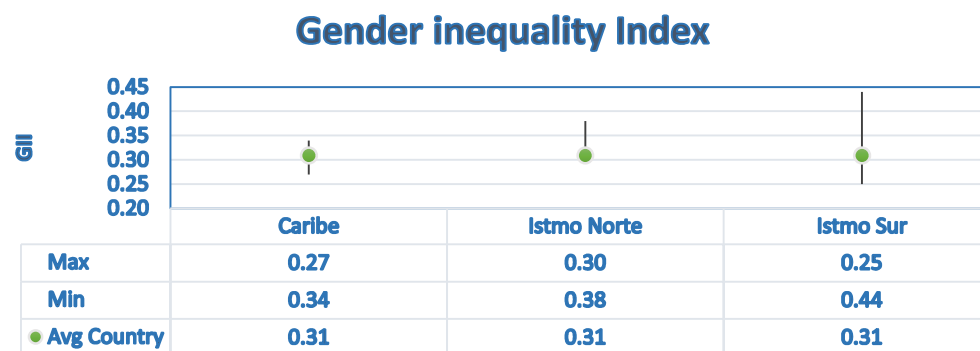
Sustainable activities that women carry out. In some communities, there is a call to make “tequio⁹⁹” to collect garbage. The Institute of Indigenous Peoples has also promoted the reforestation of mangroves.

VI. Main findings of the Gender Assessment

Below are the main findings of the GA of the “Forging Alliances for the Ocean (CHO-MEX)” project. These findings serve as an essential input in the construction of the Gender Action Plan:

- In the three landscapes that make up the project, there are different levels of **gender inequality**. The Southern Isthmus zone presents the least favorable scenarios in terms of GDI (see Figure 6):

Figure 6. Comparison of the GII in the three landscapes



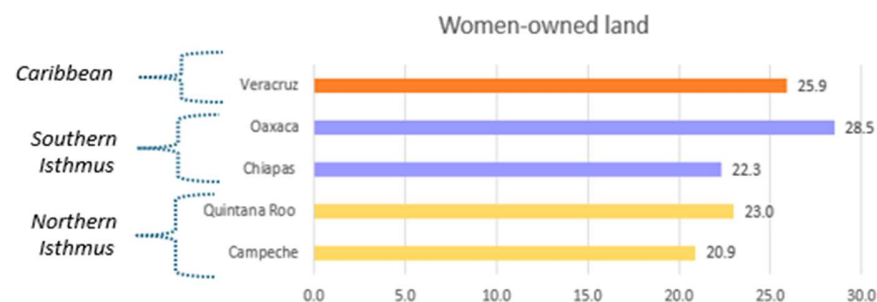
⁹⁸ https://www.inegi.org.mx/app/tabulados/interactivos/?px=ENVIPE_SEGURIDAD_COLONIA&bd=ENVIPE

⁹⁹ Pre-Hispanic custom consists of community collaboration to work for the common good without expecting anything in return.

Source: PNUD, 2022¹⁰⁰

Regarding land ownership, in all three landscapes, women report low ownership levels, with Campeche reporting the lowest percentage of land in the hands of women and, in contrast, Oaxaca, where ownership is higher (see Figure 7). As can be seen, women continue to be at a clear disadvantage, as in all three landscapes, the percentage of land they own is less than 30%.

Figure 7. Comparison of percentages of land ownership by women in the landscapes

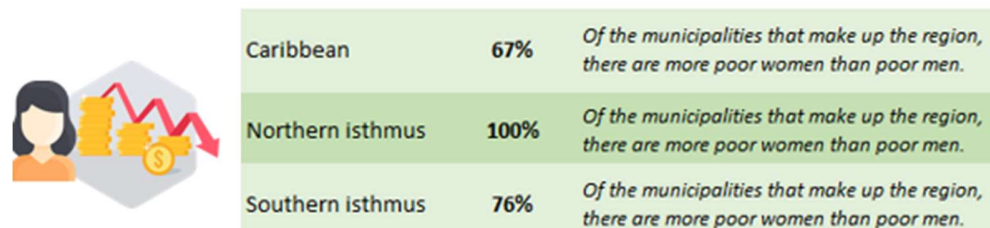


Source: Source: National Agrarian Registry¹⁰¹

Lack of secure land rights directly impacts women's livelihoods, as they are less likely to invest in land improvements or sustainable practices without secure ownership. Lack of ownership also contributes to the invisibility of women's contributions to rural economies, further entrenching gender inequalities.

- ➔ **Poverty** is an essential issue in the three landscapes; furthermore, it is striking that most of the municipalities report having more poor women compared to the number of poor men (Figure 8):

Figure 8. Municipalities where there are more poor women than men.



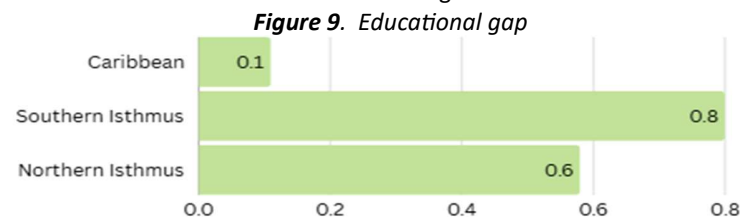
Source, CONEVAL, 2020¹⁰²

¹⁰⁰ UNDP, 2022. Municipal Human Development Report 2010-2020: A decade of local transformations for the development of Mexico https://www.undp.org/sites/g/files/zskgke326/files/2023-02/INFORME_PNUD_2022_electronico-Portadas.pdf

¹⁰¹ RAN. 2023. Members of representative bodies of agrarian nuclei registered in SIMCR, current as of the cut-off date http://www.ran.gob.mx/ran/indic_gen/orgrep-resultados-2023.pdf

¹⁰² CONEVAL, 2020. Poverty by population groups at the municipal level 2010, 2015 and 2020. https://www.coneval.org.mx/Medicion/Paginas/Pobreza_grupos_poblacionales_municipal_2010_2020.aspx

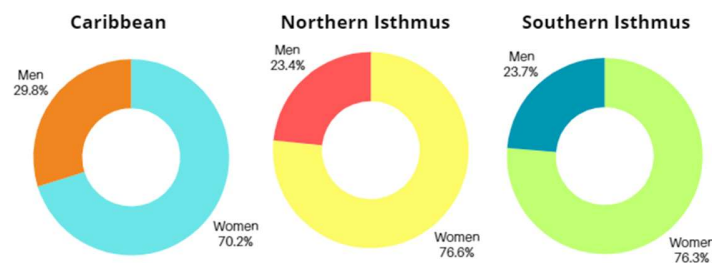
- ➔ In terms of **education**, men reported more years of education in the three landscapes than women, with the Caribbean region having the smallest educational gap, with a percentage difference of 0.11 points (figure 9). This is important because women completed fewer years of education in all three cases. As is known, education is one of the factors that most influence the advancement and progress of people and societies. This means that they choose to leave school earlier than their male peers for various reasons. As can be seen, this situation is exacerbated in the Isthmus South region:



Source: INEGI, Census 2020

- ➔ Women perform nearly three-quarters of unpaid domestic work in all three landscapes. This is important because, in addition to being invisible and undervalued work, it deprives women of the opportunity to engage in other income-generating activities or to provide rest and recreation. Lack of time often prevents them from engaging in sustainable productive activities (see Figure 10).

Figure 10. Unpaid domestic work in the landscapes



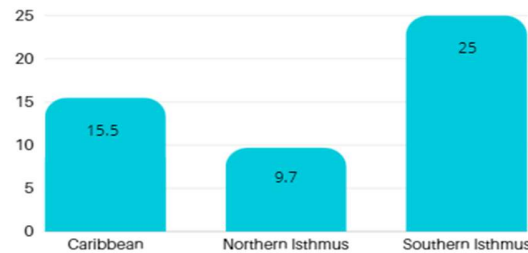
Source: INEGI, 2022¹⁰³

This feminization of domestic work often forces women to prioritize unpaid responsibilities over paid employment, leading to economic dependency and less financial autonomy.

- ➔ Regarding **economic aspects**, the gender pay gap is most acute in the Southern Isthmus landscape (state of Oaxaca). However, in all regions, women are paid less for the same work and with the same education than men (figure 11):

Figure 11. Pay gap in the landscapes

¹⁰³ <https://www.inegi.org.mx/temas/tnrh/#tabulados>



Source: IMCO/ENOE 3Q 2023-INEGI

- ➔ Leadership. After working directly with women's groups in the three project regions, it was observed that there is more female leadership in the Caribbean region. This is evidenced by the fact that, although the exact convening mechanism was used, women presidents of the "comisariados ejidales"¹⁰⁴ participated in the Caribbean region meeting. This did not occur in the other two regions; it was even mentioned that not many women occupied that position.
- ➔ Regarding the actions to reduce water pollution and marine hypoxia, women indicated that they actively participate in the river and coastal clean-up actions promoted by the "Sembrando Vida" program, which was carried out in the three landscapes of the project; however, it has the limitation that only the beneficiaries of "Sembrando Vida" participate. Also, as part of this program, biofertilizers are produced. Likewise, these women report that in past years, they carried out beach and river clean-up actions supported by the Temporary Employment Program supported by the Ministry of Environment and Natural Resources (SEMARNAT), but that program disappeared.
- ➔ Regarding the restoration of marine-coastal ecosystems, it was identified that in the Northern Isthmus region, there is a cooperative called "Mangrove Restorers," in which women participate as cooperative members and clean channels and weeds, among other things. Similar associations were not identified in the Caribbean and Southern Isthmus areas.
- ➔ Regarding awareness of the importance of marine pollution, the main concerns of women regarding water pollution are listed below.
 - Northern Isthmus: houses without drainage (especially in steep areas) pour water into the river or lagoon; pollution from pig farms that, with rain and flooding, goes into rivers and lagoons.
 - Southern Isthmus: water pollution from used batteries thrown into the sea by fishermen, garbage dumped on the banks of rivers, homes without sanitary infrastructure.
 - Caribbean: Agrochemicals used in sugar cane cultivation, garbage dumped on the banks of the lagoon, the population that burns garbage.
- ➔ Project proposals
 - Hold meetings at times that are appropriate for them and give them the option of bringing their children when they do not have anyone to care for them.
 - They prefer specific meetings for women so that they feel more involved.
 - For dissemination, they recommend doing it in places women usually visit, such as dairies, schools, stores and health centers.
 - Only for the Caribbean landscape was the possibility of disseminating information in indigenous language indicated.
 - They need support for their businesses since they develop them without financial knowledge.
 - Follow up on the projects and comply with the agreements.
 - Incentives for cleaning days of streams, lagoons and seas.
 - Promote sustainable projects such as apiaries, production of organic fertilizers, wetlands, among others.

¹⁰⁴ Los comisariados ejidales son órganos que se encargan de representar y gestionar el ejido, así como de ejecutar los acuerdos de la asamblea.

- For this project, they recommend involving the water and health committees that exist in the communities, as well as the parents' committees.
- They recommend raising awareness about the impact of water pollution on people's health.

VII. Main conclusions

- Interventions that are considered gender neutral are never really gender neutral, as they do not consider pre-existing inequalities and, therefore, do not include actions to reduce them. This is especially important in projects related to ecosystem health, as it has been documented that men and women manage natural resources differently.
- This gender analysis clearly shows that women in all three landscapes face disadvantages in the personal sphere and in those related to their productive activities. Land tenure is relevant as the interrelationship between the reproduction of life and land cultivation is crucial in rural areas. However, women face significant challenges due to insecurity in land tenure, which makes access to public resources and decision-making difficult. Broader socio-economic inequalities exacerbate this situation. They also face disadvantages due to cultural beliefs; for example, in the South Isthmus landscape, it is considered that if a woman fishes, it is bad luck, and there will be little production.
- Although the three landscapes are in different parts of the country, the women living in these spaces have in common the fact that they face poverty. There are more poor women than men in all three landscapes. In addition, female-headed households have increased in all areas, which is essential since traditional customs and socio-cultural norms often further limit women's economic opportunities, increasing their vulnerability to poverty. In addition, these households often include children, which increases the financial burden and limits employment opportunities, increasing their vulnerability. Despite these challenges, female-headed households can demonstrate resilience through community support and coping strategies.
- Specifically, field visits for this project found that women play an essential role in protecting mangroves and marine ecosystems through various initiatives that promote sustainable practices and community empowerment. Their participation not only improves ecological conservation but also supports local economies. However, despite their unique knowledge and roles in resource use, women are often excluded from decision-making processes in natural resource management. This assessment shows that in the project landscapes, less than 10% of ejidos are managed by women¹⁰⁵.
- This project can play a crucial role in favor of women, contributing to a more equitable expansion of opportunities for women and men, leading to more sustainable societies. The information found in this Gender Analysis has served as a starting point for designing a **Gender Action Plan** that promotes the achievement of its objectives by integrating men and women in such a way that they can participate and benefit from it.

¹⁰⁵ Ejidos are a form of social agrarian property in Mexico

GENDER ACTION PLAN

The Gender Action Plan seeks to incorporate a gender perspective into the project, not only to improve its results and outline more effective and inclusive strategies but also to provide a platform to recognize the needs and interests of women who participate in the rural sector, particularly in the productive sectors related to the project "Forging Alliances for the Ocean," such as ecological conservation, agriculture, livestock, fishing, and aquaculture.

It is important to mention that women and men are affected by the impacts of water pollution and marine hypoxia; however, these impacts are different depending on the roles and responsibilities of each. In this sense, it is important to mention that women, compared to men, often find themselves at certain disadvantages that reduce their access to natural and financial resources, due to cultural, socioeconomic, and institutional reasons¹⁰⁶. Therefore, projects favoring proper management of ecosystems and biodiversity should not be gender-neutral. On the contrary, it is necessary to analyze the different circumstances experienced by men and women; since they both have valuable proposals to address this problem, all voices must be heard.

This Gender Action Plan includes a series of actions that ensure the gender approach is included in a transversal manner; recognizing that this action allows for the design of more specific interventions with greater chances of success. This is particularly important in initiatives impacting the rural sector since, in the specific case of rural women, the achievement of equality and their empowerment has been hampered by various factors. Although all women have the same human rights, those living in rural areas have specific needs and priorities, with poverty and barriers to access being a major impediment to gender equality¹⁰⁷.

METHODOLOGY

For the elaboration of this Action Plan, the following steps were taken:

1. Analysis of the Mexican national context in terms of gender equality

- Compilation of information on main indicators and gender gaps in Mexico.
- Identification of the legal framework that regulates aspects of gender equality in Mexico.
- Reflection on gender equality in strategies for the reduction of pollution and conservation of biodiversity.
- Analysis of how the project's intervention could modify the development and empowerment conditions of the beneficiary women and men.

2. Analysis of existing gender gaps in the three project landscapes

- Identification of the main gender inequalities in the three landscapes and how they can be addressed with the project intervention.
- Analysis of gender inequalities associated with access to resources.
- Dialogues with women from the three landscapes to learn about their perspectives and problems.
- Identification of the main limitations faced by women in the three landscapes to access resources and benefits.

3. Intervention strategy design. In the design phase of the action plan and definition of actions in favor of the participation of women in the project, the following was identified:

- What are the measures that can increase the equitable participation of men and women in the project?
- How to promote and reinforce the possible contributions of men and women to the project based on their different capacities?
- What specific measures will be taken within the framework of the project so that women and men have the same opportunities to participate and benefit from the intervention?

¹⁰⁶ CONABIO. 2016. Estrategia Nacional sobre la Biodiversidad de México.

¹⁰⁷ ONU-Mujeres. 2018. Desafíos y oportunidades en el logro de la igualdad entre los géneros y el empoderamiento de las mujeres y niñas rurales

With this, it is proposed to develop a series of solutions for social inclusion and gender mainstreaming. The proposal is to trigger the process of women's empowerment, enabling the necessary conditions to ensure their participation in the labor market and decision-making in their communities, and positioning the value of their skills and knowledge for the conservation of biodiversity.

Regarding participatory processes, the following figure highlights the main key points of this process:



GENDER ACTION PLAN

COMPONENT 1

EXPECTED GENDER RESULTS	ACTIONS	INDICATORS	BASELINE	GOAL	MEANS OF VERIFICATION	\$	RISKS
1.1.1. Technical and participatory assessments of the status and generation of water quality data from the basin to the sea [water pollution and marine hypoxia] in three prioritized landscapes that include the monitoring of water pollution and marine hypoxia from four sources (municipal, agricultural, aquaculture and industrial), based on historical information.							
Active participation of both genders in the inventory validation process	Design and implement actions that guarantee the equal inclusion of women and men in participatory inventory validation activities	% of validation actions that include actions to ensure the participation of women	This type of action has not been carried out in any landscape	At least 75% of inventory validation actions are gender sensitive	Reports of inventory validation actions that have been implemented	100,000 USD (Included in the TBWP)	- Women do not have information to validate the information contained in the inventory of pollution sources. - Women do not participate in inventory validation actions.
1.1.2. Information and analysis system to collect, systematize, and exchange knowledge and know-how on integrated watershed management, ocean health, and water quality at the subnational level in operation, managed inter-institutionally, with assured interoperability, and accessible to different audiences.							
Citizen science actions ensure women's participation	Implement actions to ensure the inclusion of women in citizen science activities (community-based participatory water quality monitoring program) ¹⁰⁸	% of women participating in citizen science actions (community monitoring)	There is no gender-disaggregated information on citizen science actions related to water quality	At least 35% of people involved in community monitoring are women	Reports of citizen science actions implemented	No additional budget is needed	- Women are not provided with the necessary capacities to carry out citizen science actions. - Local authorities may resist involving women in citizen science. - Women lack opportunities to participate in citizen science actions.
Improved knowledge of gender-differentiated impacts of water pollution	Integrate sex-disaggregated data on pollutant impacts into the information system.	Number of gender-differentiated information inputs included in the system	Information on gender-differentiated impacts is scarce and	At least one section of the system contains information on gender-	List of information topics included in the system	No additional budget is needed	- Men and women are unaware of the impacts of water pollution and do not take adequate measures to manage them. - The system contains information without a gender perspective.

¹⁰⁸Examples: Organize workshops specifically designed to encourage women's participation in community monitoring.

			difficult to obtain	differentiated impacts			
Training women in the use of the information system	Implement actions for the training of women that facilitate the use and consultation of the information system	% of women trained in the use of the system	This type of action has not been carried out before.	50% of people trained in the use of the system are women	Reports of socialization and training activities with a gender focus to use the system	No additional budget is needed	• Project implementing staff do not conduct training sessions at times and places suitable for women to attend. • Women are not trained in the use and operation of the system. • Women have limitations in benefiting from the system because they do not know how it works.
1.1.3. A broad and sustained inclusive campaign for dissemination, communication, awareness-raising, and education is implemented to promote links and commitments related to integrated watershed management and the reduction of pollution and hypoxia in key areas of three major marine ecosystems - LMEs (Gulf of Mexico, Caribbean, and Central American Pacific).							
Inclusive awareness campaigns on Integrated watershed management and the reduction of pollution and hypoxia	Design and implementation of gender-sensitive actions specific to dissemination campaigns to ensure that women and men are effectively reached	% of gender-sensitive dissemination actions	This type of action has not been carried out before.	At least 75% of campaign actions are gender sensitive	• Terms of Reference for hiring campaign implementers • Contents of the diffusion products	100,000 USD (Included in the TBWP)	• The companies hired for dissemination do not include gender aspects in their proposals. • No appropriate dissemination materials are produced for women. • Dissemination campaigns fail to consider the communication channels that effectively reach and engage women. • Awareness campaigns do not highlight the role of women in water management and the reduction of water pollution.
Women trained as local promoters	Train women as local promoters (community, teachers, etc.) to ensure the sustainability of the awareness campaign.	% of local promoters who are women	This type of action has not been carried out before.	At least 50% of local promoters are women	Reports on training sessions to train local promoters	No additional budget is needed	• There is a lack of female local promoters. • Training is not offered at times or inaccessible locations to women.

							Women miss the opportunity to receive this training because they lack time due to their workloads.
COMPONENT 2							
EXPECTED GENDER RESULTS	ACTIONS	INDICATORS	BASELINE	GOAL	MEANS OF VERIFICATION	\$	RISKS
2.1.1. Existing multi-stakeholder structures and mechanisms for inclusive governance, and others deemed necessary, strengthened, and operational to improve the integrated management of watersheds and marine-coastal zones and to define goals and strategies for the reduction of water pollution and hypoxia.							
The level of participation of women in the governance bodies relevant to the project is known and evaluated	Conducting diagnoses of the existing gender gap in the governance bodies related to the project (one for each project landscape)	Number of gender gap diagnoses in governance that are carried out / Number of planned diagnoses	Participation of women in governance bodies has not been documented	Three gender diagnoses in governance structures	Reports of the diagnoses carried out	10,000 (Included in the TBWP)	- The gender gap in governance bodies is unknown. - There is no appropriate information to determine where actions must be implemented in favor of women. - The issue of women's inclusion is not a priority for local authorities.
Promoting inclusive and gender-sensitive environmental governance	Implementing practices in favor of inclusive governance so that governance schemes and mechanisms ensure that women are represented and have the possibility of occupying decision-making positions ¹⁰⁹ preventing situations of gender-based violence that may arise.	Increase in the number of women in decision-making positions within the governance structures analyzed	No actions like this have been carried out in the project landscapes.	In the three project landscapes, there is gender parity in the governance bodies	Report on actions to strengthen water governance in the three landscapes	30,000 (Included in the TBWP)	- Actions are promoted in favor of governance but do not include the active participation of women. - The governing bodies are still predominantly male. - Women's perspectives and proposals are not considered in governance structures - There are no women assuming positions in governing bodies that serve as examples for others.

¹⁰⁹Examples: 1) Training of women in topics that promote their leadership, 2) raising awareness on aspects to make visible the different uses of natural resources, their distribution and differentiated access to financing for their management, 3) Strengthening the skills and resources of women, both individually and in groups, among others.

2.1.2. Planning, regulatory, land and/or marine zoning, and integrated watershed management instruments developed and/or updated with public participation and an inclusive approach, including targets for the reduction of water pollution through NbS and a gender perspective.							
Create the appropriate public policy framework for equitable access to resources and opportunities	Integrate concrete actions for gender equality and the reduction of water pollution into territorial, marine and basin management planning instruments.	Number of planning or regulatory instruments generated or updated that include gender aspects	The gender issue is scarce in water policy documents aimed at reducing water pollution	The three landscapes incorporate actions in favor of gender equality in all instruments generated or updated by the project	Verification of the content of gender aspects in the instruments updated within the framework of the project	100,000 (Included in the TBWP)	- The link between gender issues and water pollution is not visible. - Public policy instruments are reviewed and improved, but gender issues are not included. - The opportunity to include concrete actions in favor of gender equality is lost and therefore these lack normative support
2.2.1. Guidelines for sustainable and inclusive financing and the reduction of water pollution in the development poles of the CIIT, the lagoon system of the Isthmus of Tehuantepec, and the basins of the Sontecomapan Lagoon and the Hondo River, formulated participatively and disseminated, that include guidelines to guide financing opportunities.							
Establishing the basis for inclusive financing for water pollution reduction measures	Developing enabling activities for sustainable financing with a gender perspective, focused on reducing water pollution. These activities include diagnoses of women's financial needs and opportunities, feasibility analysis of women's businesses, and structuring a portfolio of inclusive projects.	Number of enabling actions for financing that include a gender perspective	It was documented that women face specific barriers to accessing financing schemes	In the three landscapes, documents are developed that describe the bases for inclusive financing	Reports on the actions implemented for financing	100,000 (Included in the TBWP)	- Actions that are not related to the real financial needs of women in the three landscapes are implemented. - Actions that are not feasible to implement or have a limited scope for reducing water pollution and marine hypoxia are proposed. - The portfolio structured as part of output 2.2.1 may not have a range of projects suitable for women.
2.2.2. Inclusive blended finance instruments and investment available for the sustainability of water pollution reduction because of public-private dialogues and multi-stakeholder collaborative agreements.							

Specific financial technical assistance for women	Implementation of actions to identify sources of resources and provide technical assistance to facilitate access to long-term financing with a gender perspective, and which considers sources directed to social agrarian structures	Number of events to disseminate information on sources of financing and provide technical assistance for women	No actions like this have been carried out in the project landscapes.	Three events to disseminate funding sources and technical training (1 per landscape)	Reports on the implementation of training	50,000 (Included in the TBWP)	- Women are not prepared with the financial skills to undertake sustainable ventures - Conflicts arise from interventions to promote women's participation in financial activities
Developing inclusive pilot cases	Implementing inclusive pilot practices or demonstrations as part of the product pipeline	Number of pilot cases led by women	No actions like this have been carried out in the project landscapes	At least one pilot case per landscape to be led by women	Reports on the implementation of the pilot cases	150,000 (Included in the TBWP)	There is a risk that all the pilot cases considered will be gender neutral
2.2.4. Recommendations for inclusive criteria within the operating rules and guidelines of public budgetary programs for investment in NbS.							
Classify the actions according to their potential to reduce gender gaps	Implement a prioritization of the actions that result within the catalog of good practices and NBS (activity 3.1.1) according to their gender co-benefits	Number of good practices with estimated gender co-benefits	This type of action has not been carried out before.	100% of the good practices in the portfolio were prioritized according to gender co-benefits	1 catalog with prioritization according to gender co-benefits	25,000 (Included in the TBWP)	There is a risk that gender aspects are not considered in the process of recommending criteria to be considered in budget allocation.
COMPONENT 3							
EXPECTED GENDER RESULTS	ACTIONS	INDICATORS	BASELINE	GOAL	MEANS OF VERIFICATION	\$	RISKS

3.1.1. Inclusive program for the development of organizational, technical and financial capacities to implement good practices and NbS to reduce land-based water pollution and marine hypoxia and facilitate access to financing in the three landscapes.							
Implementation of training actions to increase the financial education of women	Facilitate the increase of women's knowledge in financial matters to carry out sustainable projects	Number of financial training actions aimed at women	This type of action has not been carried out before.	At least 3 trainings (1 per landscape)	Report on training in financial education	125,000 (Included in the TBWP)	- Promoting sustainable financing actions without the women beneficiaries of the project being trained in financial education - Women do not know about financial education
3.2.1. Inclusive municipal projects for the adoption of good practices and NbS for the reduction of water pollution and marine hypoxia supported in the three landscapes							
Women actively participate in inclusive citizen science actions	Carry out actions aimed at ensuring the participation of women in the inclusive monitoring protocol provided for in activity 3.2.1.4 preventing situations of gender-based violence that may arise.	% of women participating in monitoring	This type of action has not been carried out before	At least 50% of the people participating in the monitoring are women	Monitoring protocol process reports	No additional budget is needed	- There is a risk that there will be no women interested in being part of community monitoring. - Problems are created within households due to the participation of women in the monitoring protocol
3.2.2. Projects with local organizations, Indigenous peoples and social enterprises adopting good practices and NBS supported through grants and other sources of funding							
Promoting inclusive BMPs at the local level	Inclusion of gender aspects in the evaluation of "local" BMPs and provision of technical advice during the implementation of projects for the application of good practices and NbS	Number of women's initiatives receiving technical advice	This type of action has not been carried out before	At least 3 initiatives (1 per landscape)	Reports on technical advisory activities	150,000 (Included in the TBWP)	Women's initiatives do not have technical advice and are therefore not well structured.
3.2.3. Restoration and hydrological rehabilitation, and improved management to benefit biodiversity interventions in watersheds and marine-coastal zones supported in three target landscapes with collaboration from government institutions, civil society organizations, local organizations, OSSEs, and women's groups, supported through grants and other funding sources.							

Implementation of inclusive actions for conservation, restoration and hydrological rehabilitation	Design and implement actions for conservation, restoration and hydrological rehabilitation in basins and marine-coastal areas where women actively participate Take necessary measures to prevent gender-based violence that could arise from these activities.	% of actions where women play a leading role	This type of action has not been carried out before	At least 50% of the actions have the leading participation of women	Reports on the implementation of conservation, restoration and hydrological rehabilitation actions	150,000 (Included in the TBWP)	- Women do not want to participate in this activity so as not to have greater workloads - Women do not participate because the meetings related to this activity take place at times and places that are not suitable for women to attend
3.2.4. Participatory community monitoring plan for biodiversity and water quality in marine-coastal basins and zones designed and implemented as a mechanism for local awareness, appropriation and decision-making.							
Promote an inclusive monitoring plan on biodiversity and water quality in basins and marine-coastal zones	Inclusive actions that guarantee the gender perspective throughout the implementation process of the monitoring plan (design, alliances, implementation and dissemination of results) preventing situations of gender-based violence that may arise.	Number of strategies to incorporate gender in the monitoring plan	This type of action has not been carried out before	Three gender mainstreaming strategies (1 per landscape)	Strategy Documents	100,000 (Included in the TBWP)	Gender actions are not considered transversally throughout the entire process of construction and implementation of the monitoring plan
COMPONENT 4							
EXPECTED GENDER RESULTS	ACTIONS	INDICATORS	BASELINE	GOAL	MEANS OF VERIFICATION	\$	RISKS

4.1.1. Knowledge about nutrient pollution and marine hypoxia, as well as innovative solutions to reduce them, will be effectively documented, managed, and shared across the three priority landscapes, encompassing the entire International Programme (IP) and beyond.							
Promote interaction and networking to share knowledge	Carry out “peer exchange” actions with groups of women to learn about community experiences in favor of biodiversity conservation and pollution reduction	Number of exchanges carried out/Number of exchanges planned to be carried out during the implementation of the project	This action has not been developed previously	At least one exchange per project landscape	Report of exchange events carried out	60,000 (Included in the TBWP)	- Women do not want to participate in this type of action because it requires traveling outside the community. - Conflicts arise within households due to women's travel.
4.1.2. Consistent communication activities and products (common messaging, branding, website, etc.) designed and implemented across the three priority landscapes and the entire Integrated Programme (IP).							
Specific needs and roles of women and men within the project are identified.	Gender-sensitive information in the project's communication campaign (CCP) through easily accessible educational resources such as infographics and newsletters. ¹¹⁰	% of campaign actions with gender-sensitive information	This action has not been developed previously	80% of CCP's actions have a gender perspective	Gender content in campaign products	100,000 (Included in the TBWP)	- No communication materials are produced that include the gender perspective - The communication campaign does not highlight the role of women in water management and the reduction of water pollution.
4.1.3. Measures to ensure gender integration are identified and implemented across the three priority landscapes and the entire Integrated Programme (IP).							
Women and men are recognized and supported in their contributions to	Systematization and dissemination of case studies where the key role of women in projects related to the reduction of water	Number of actions that demonstrate the key role of women in the processes of	This type of action has not been developed previously	At least two case studies per landscape generated and disseminated (6 in total)	Published case studies	120,000 (Included in the TBWP)	The contributions of women and men to reducing pollution and marine hypoxia remain undocumented, partly due to women's reluctance to participate in case studies for fear of public exposure.

¹¹⁰Information should be tailored to reach diverse audiences, considering variations in literacy levels and communication preferences.

reducing water pollution	pollution and marine hypoxia is exposed ¹¹¹	combating pollution					The contributions that women and men make to the reduction of pollution and marine hypoxia are unknown because they have not been documented.
Gender knowledge unification among team members	Design of a toolkit for team members (staff and external consultants) that includes key material to raise awareness on gender issues and prevent gender-based violence.	% of staff and consultants provided with the gender toolkit	This type of action has not been developed previously	100% of staff and consultants provide key information on gender issues	Evidence of information dissemination	5,000 (Included in the TBWP)	- Project members do not see the link between gender perspective and their tasks. - Project members have different levels of knowledge about gender, and this makes it difficult to incorporate this issue into the project.
4.3.1. A gender-sensitive project monitoring and evaluation system to track progress is developed and implemented.							
Monitor and evaluate the gender equality actions of the project	Implement monitoring and evaluation actions of the actions contained in the Gender Action Plan	% of the GAP gender actions that are monitored and evaluated	This type of action has not been developed previously	100% of GAP actions are monitored and evaluated	Project progress reports	No additional budget is needed	Actions aimed at achieving gender equality in the project are not monitored or evaluated
Monitor and mitigate gender risks identified as part of risk screening, including Gender-based violence.	Implement actions to mitigate gender risks identified for the project, which must be reported in the project's periodic reports	% of project progress reports that include gender action reports	This action has not been developed previously	100% of the reports generated from the project include the description of activities to mitigate identified gender risks	Reports associated with the ESMP, Gender Action Plan, Stakeholder Participation Plan, and others	100,000 (Included in the TBWP)	The gender risks identified by the project are not monitored and therefore the correct actions are not taken to mitigate them

¹¹¹For example, the women who belong to the mangrove restoration cooperative in Sontecomapan.

COMPONENT 5							
EXPECTED GENDER RESULTS	ACTIONS	INDICATORS	BASELINE	GOAL	MEANS OF VERIFICATION	\$	RISKS
Monitoring the participation of women and men throughout the project implementation period	Specific activities for generating the necessary inputs to monitor and evaluate the project considering gender aspects ¹¹²	% of women who participate and benefit from the project	This action has not been developed previously	At least 40% of the project beneficiaries are women	Periodic reports on project progress	No additional budget is needed	There is a risk of not disaggregating the participation of beneficiaries by gender and therefore not being able to report the information in a specific manner.
Report regularly on the progress of gender inclusion initiatives	Carry out close monitoring of the actions implemented in favor of gender equality in the project with an adaptive management approach ¹¹³	Number of actions in favor of gender equality published on the project portal	This action has not been developed previously	At least 2 reports per year on the progress of gender actions	Periodic reports on project progress	No additional budget is needed	No adjustments are made to measures that do not work as expected and the potential to contribute to gender equality is lost.
Monitoring of potential incidents related to Gender-Based Violence.	Closely monitor complaints submitted to the Grievance Redress Mechanism specific to gender-based violence issues.	Number of reported actions that are closely monitored	This action has not been developed previously	100% of the complaints reported in the GRM are closely monitored	Periodic reports on project progress	No additional budget is needed (It is suggested to support the	- The link between gender-based violence and environmental aspects is not identified - The issue of gender-based violence is not considered within the project initiatives

¹¹²Gender disaggregation in all population-related data is mandatory at all stages, from establishing baselines and objectives to progress reports and final reports. It is also advisable to document data on the age and ethnicity of project beneficiaries.

¹¹³For this activity, it is important to collect qualitative data on the perceptions of the women involved; the results will be used to implement an adaptive management strategy to make timely adjustments to project activities, policies and interventions based on project performance and evolving gender dynamics. This adaptive approach ensures that the GAP remains relevant, effective and able to address changing challenges.

						Spotlight initiative)	
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GENDER INDICATORS

Proposed gender-sensitive indicators for the project:

Two indicators are proposed:

1. Number of direct project beneficiaries disaggregated by gender (50% women).
2. Percentage/number of women who increase their technical and financial capacities for the development and implementation of NBS (Nature-based Solutions) in favor of the reduction of water pollution and marine hypoxia.

Annex 11: Procurement Plan

Project Output	Budget item		List of Goods and Services required	Budget (US\$)	Year	Brief description of anticipated procurement process
	No.	Description				
		Staff & Personnel (including Consultants)				
1.1.1	71300	Data Management	Data Management Expert to systematize, analyze, and share water quality data	19,000	1	Competitive contracting process used by NAFIN
	71300	Water Quality	Water Quality Monitoring Expert to train local teams and staff from key institutions	12,000	1	Competitive contracting process used by NAFIN
	71400	Water Quality	Project Technical Coordinator and Project Manager (35%) to assess water quality capacity and training needs and to develop a the participatory monitoring of water quality program	20,335	1	Competitive contracting process used by UNDP
	71400	Data Management	Field Officer (3; 25%) to support the collection and analysis of water quality data and monitoring	24,548	1	Competitive contracting process used by UNDP
1.1.2	71300	Data Management	Data Management Expert (50%) to operate the information and analysis system	19,000	1	Competitive contracting process used by NAFIN
	71400	Data Management	Project Technical Coordinator and Project Manager (30%) to develop a national strategy for ocean oxygen and nutrient data management	17,430	1	Competitive contracting process used by UNDP
2.1.1	71400	Governance	Governance and Public Policy Specialist (50%) to support the strengthening of existing inclusive multi-stakeholder governance structures and mechanisms	19,800	1	Competitive contracting process used by UNDP
	71400	Governance	Field Officer (3, one per target landscape; 25%) to support improved governance at subnational I levels to reduce NbS water pollution	24,548	1	Competitive contracting process used by UNDP
2.1.2	71300	Governance	Legal Expert to support developing and or updating regulatory land and/or marine management, and integrated watershed management instruments	12,000	1	Competitive contracting process used by NAFIN

	71400	Governance	Governance and Public Policy Specialist (50%) to support the developed and/or updating of planning, regulatory, land and/or marine management, and integrated watershed management instruments	19,800	1	Competitive contracting process used by UNDP
2.2.1	71400	Financial Investment	Sustainable Financing Specialist (12.5%) to develop guidelines for sustainable and inclusive financing and reducing water pollution	4,950	1	Competitive contracting process used by UNDP
2.2.2	71400	Financial Investment	Sustainable Financing Specialist (12.5%) to make available inclusive mixed-financing and investment instruments for sustainable water pollution reduction	4,950	1	Competitive contracting process used by UNDP
2.2.3	71300	Financial Investment	WWTP Expert to conduct the inventory of WWTPs and other wastewater treatment solutions and to propose alternative and innovative treatments	16,000	1	Competitive contracting process used by NAFIN
	71400	Financial Investment	Sustainable Financing Specialist (12.5%) to support the development of investment feasibility assessments for rehabilitating WWTP in selected municipalities	4,950	1	Competitive contracting process used by UNDP
2.2.4	71400	Financial Investment	Sustainable Financing Specialist (12.5%) to develop recommendations for investing criteria in NbS	4,950	1	Competitive contracting process used by UNDP
3.1.1	71400	Capacity Building	Sustainable Financing Specialist (15%) to support financial capacity-building to implement BMPs and NbS	5,940	1	Competitive contracting process used by UNDP
	71400	Capacity Building	Knowledge Management and Capacity Building Specialist (25%) to support the implementation of the capacity-building program to implement BMPs and NbS	9,900	1	Competitive contracting process used by UNDP
3.1.2	71400	Organizational Strengthening	Sustainable Financing Specialist (15%) to support the update and/or development of plans, business models, and organizational manuals for OSSEs	5,940	1	Competitive contracting process used by UNDP
3.1.3	71400	Communities of Practice (CoPs)	Knowledge Management and Capacity Building Specialist (25%) to support thematic CoPs for BMPs	9,900	1	Competitive contracting process used by UNDP
3.2.1	71300	Municipal BMPs	NbS Expert to conduct a municipal-level gender-sensitive assessment of BMPs	12,000	1	Competitive contracting process used by NAFIN
	71400	Municipal BMPs	Sustainable Financing Specialist (10%) to provide financial advise for he implementation of inclusive municipal projects for the adoption of BMPs and NbS	3,960	1	Competitive contracting process used by UNDP

3.2.2	71400	Municipal BMPs	Field Officer (3; 5%) to provide technical support to municipal projects for the adoption of BMPs and NbS	4,910	1	Competitive contracting process used by UNDP
	71300	Local BMPs	NbS Expert to conduct a gender-sensitive assessment of BMPs at the community or local level	12,000	1	Competitive contracting process used by NAFIN
	71400	Local BMPs	Sustainable Financing Specialist (10%) to support the selection and implementation of local projects for the adoption of BMPs and NbS	3,960	1	Competitive contracting process used by UNDP
	71400	Local BMPs	Field Officer (3, 10%) to support the selection and implementation of local projects for the adoption of best practices and NbS	9,819	1	Competitive contracting process used by UNDP
3.2.3	71300	Restoration & Conservation	Biodiversity Conservation Expert to identify priority sites for conservation actions in the watersheds and marine-coastal zones	12,000	1	Competitive contracting process used by NAFIN
	71300	Restoration & Conservation	Restoration Expert to identify priority sites for restoration and hydrological rehabilitation in the watersheds and marine-coastal zones	12,000	1	Competitive contracting process used by NAFIN
	71400	Restoration & Conservation	Field Officer (3; 5%) to support conservation, restoration and hydrological rehabilitation interventions in watersheds and marine-coastal zones	4,910	1	Competitive contracting process used by UNDP
3.2.4	71300	Monitoring Plan	Biodiversity Monitoring Expert to design the biodiversity component of a community and citizen science-based monitoring plan in watersheds and marine-coastal areas	8,000	1	Competitive contracting process used by NAFIN
	71300	Monitoring Plan	Water Quality Monitoring Expert to design the water quality component of a community and citizen science-based monitoring plan in watersheds and marine-coastal areas	8,000	1	Competitive contracting process used by NAFIN
	71400	Monitoring Plan	M&E Officer (30%) to support the implementation of the participatory community and citizen science monitoring plan	14,205	1	Competitive contracting process used by UNDP
	71400	Monitoring Plan	Field Officer (3, one per target landscape; 5%) to support the implementation of the community and citizen science monitoring plan	4,910	1	Competitive contracting process used by UNDP

4.1.1	71400	Knowledge Management	Knowledge Management and Capacity Building Specialist (25%) to lead the documentation, management and sharing of knowledge for the reduction of nutrient pollution and marine hypoxia	9,900	1	Competitive contracting process used by UNDP
	71400	Knowledge Management	Field Officer (3; 25%) to support the documentation, management and sharing of knowledge for the reduction of nutrient pollution and marine hypoxia	24,547	1	Competitive contracting process used by UNDP
4.1.2	71400	Communication & Outreach	Knowledge Management and Capacity Building Specialist (12.5%) to lead communications activities and product development related to the project	4,950	1	Competitive contracting process used by UNDP
4.1.3	71300	Social and Environmental Safeguards	International Safeguards Expert to develop the ESMP, IPP, and other plans	84,000	1	Competitive contracting process used by NAFIN
	71300	Social and Environmental Safeguards	National Safeguards Expert to locally support the development of the ESMP, IPLCs and other plans	48,000	1	Competitive contracting process used by NAFIN
	71400	Social and Environmental Safeguards	Social and Environmental Safeguards Specialist (part time; 50%) to implement all safeguards plans, as appropriate	19,775	1	Competitive contracting process used by UNDP
	71400	Social and Environmental Safeguards	Indigenous Peoples Expert to support FPIC and the implementation of the IPP and project activities with IPs	39,550	1	Competitive contracting process used by UNDP
4.2.1	71400	Programmatic Management	Knowledge Management and Capacity Building Specialist (12.5%) to support programmatic coordination, coherence, and reporting	4,950	1	Competitive contracting process used by UNDP
M&E	71400	M&E	Project M&E Officer (70%)	33,145	1	Competitive contracting process used by UNDP
PMC	71400	Project Management	Project Technical Coordinator and Project Manager	20,335	1	Competitive contracting process used by UNDP
	71400	Project Management	Project Operations Officer	39,550	1	Competitive contracting process used by UNDP
	71400	Project Management	Project Administrator	47,350	1	Competitive contracting process used by UNDP
		Contract Services				

1.1.1	75700	Training	Training of local teams and staff from key institutions for water quality monitoring	15,000	1	Competitive contracting process used by UNDP
1.1.2	71600	Data Management	Firm to develop an information and analysis system based on a web platform (explorer) for water quality data management and decision-making	75,000	1	Competitive contracting process used by NAFIN
	75700	Data Management	Establish inter-institutional agreements to share data for the integration of an information system	2,500		Competitive contracting process used by UNDP
	75700	Data Management	Establish a research and development group to evaluate the existing indices and define water quality indicators	2,500	1	Competitive contracting process used by UNDP
1.1.3	71600	Awareness campaigns	Firm to design and implement awareness campaigns related to integrated watershed management and pollution and hypoxia reduction	10,000	1	Competitive contracting process used by NAFIN
	75700	Gender	Identify gender gaps and assessing how women and men are likely to be affected by and benefit from project activities	2,500	1	Competitive contracting process used by UNDP
2.1.1	75700	Governance	Assess existing governance structure needs	7,500	1	Competitive contracting process used by UNDP
2.1.2	75700	Governance	Develop and or update planning, regulatory, land and/or marine management, and integrated watershed management instruments	10,000	1	Competitive contracting process used by UNDP
2.2.1	75700	Financial Investment	Develop guidelines for sustainable and inclusive financing and reducing water pollution	6,000	1	Competitive contracting process used by UNDP
2.2.2	75700	Financial Investment	Making available to key stakeholders inclusive mixed-financing and investment instruments for sustainable water pollution reduction	3,000	1	Competitive contracting process used by UNDP
2.2.3	75700	Financial Investment	Investment feasibility assessment for rehabilitating WWTPs and other effective technologies to reduce water pollution	6,000	1	Competitive contracting process used by UNDP
3.1.1	75700	Capacity Building	Firms to implement a inclusive technical and financial capacity-development program to reduce land-based water pollution and marine hypoxia	50,000	1	Competitive contracting process used by NAFIN
	75700	Capacity Building	Assessment of BMPs and NbS to reduce land-based water pollution and marine hypoxia	4,000	1	Competitive contracting process used by UNDP

	75700	Capacity Building	Assess training needs and develop culturally appropriate techniques and mechanisms for training various stakeholders	4,000	1	Competitive contracting process used by UNDP
3.2.1	75700	Municipal BMPs	Identify sites to implement BMPs and NbS to reduce water pollution and marine hypoxia at the municipal level	3,750	1	Competitive contracting process used by UNDP
3.2.2	72600	Local BMPs	LVG to implement local projects for the adoption of best practices and NbS	257,000	1	Competitive contracting process used by UNDP
	75700	Local BMPs	Identify sites in each target landscape to implement BMPs and NbS to reduce water pollution and marine hypoxia at the local level	3,750	1	Competitive contracting process used by UNDP
3.2.3	72600	Restoration & Conservation	LVG to implement conservation, restoration and hydrological rehabilitation interventions in watersheds and marine-coastal zones	212,500	1	Competitive contracting process used by UNDP
	75700	Restoration & Conservation	Identify sites and to support the design of conservation, restoration, and hydrological rehabilitation actions in watersheds and marine-coastal areas	4,500	1	Competitive contracting process used by UNDP
3.2.4	75700	Water Quality & Biodiversity	Workshops and meetings related to the design a community and citizen science-based monitoring plan	5,000	1	Competitive contracting process used by UNDP
4.1.2	75700	Communication & Outreach	Workshops and meetings related to project's communication and outreach activities	1,500	1	Competitive contracting process used by UNDP
4.1.3	75700	Social and Environmental Safeguards	Training workshops for the PMU and institutional partners on environmental and social safeguards as per UNDP standards	7,500	1	Competitive contracting process used by UNDP
	75700	Social and Environmental Safeguards	Workshops for SES-related public consultations and to ensure stakeholder engagement	5,000	1	Competitive contracting process used by UNDP
	75700	Social and Environmental Safeguards	Workshops on gender mainstreaming for project partners	5,920	1	Competitive contracting process used by UNDP
	75700	Social and Environmental Safeguards	Workshops/meetings for the grievance mechanism socialization and training	5,000	1	Competitive contracting process used by UNDP

M&E	75700	M&E	Project Inception Workshop	11,000	1	Competitive contracting process used by UNDP
PMC	74100	Project Management	Project audits	6,500	1	Competitive contracting process used by UNDP
		Supplies, commodities & materials				
1.1.1	72300	Water Quality	Material and goods (fuel, paper products, field/lab products, etc.) for the participatory monitoring of water quality	21,000	1	Direct purchases
3.2.4	72300	Water Quality & biodiversity	Materials and goods (fuel, paper products, field/lab products, etc.) related to community and citizen science-based monitoring	9,000	1	Direct purchases
4.1.2	74200	Communication & Outreach	Publication costs of project communication products regarding the reduction of nutrient pollution and marine hypoxia and innovative solutions	2,000	1	Direct purchases
4.1.3	74200	Social and Environmental Safeguards	Audio and printing materials related to social and environmental safeguards assessments and implementation	5,000	1	Direct purchases
PMC	72500	Project Management	Office supplies	1,500	1	Direct purchases
		Equipment, Vehicles & Furniture				
1.1.1	72200	Water Quality	Field equipment (test kits, meters, sensors, buoys, etc.) for the participatory monitoring of water quality	175,000	1	Direct purchases
1.1.2	72200	Data Management	Computer equipment and software related to the development and operationalization of the information and analysis system	15,000	1	Direct purchases
2.1.2	72200	Governance	Printing and audiovisual production for developing and or updating planning, regulatory, land and/or marine management, and integrated watershed management instruments	6,000	1	Direct purchases
2.2.1	72200	Financial Investment	Printing and audiovisual production costs for developing guidelines for sustainable and inclusive financing and reducing water pollution	2,500	1	Direct purchases
3.2.4	72200	Monitoring Plan	Field equipment for the participatory monitoring of water quality and biodiversity	75,000	1	Direct purchases

	72400	Monitoring Plan	Computer equipment and software for the systematization and analysis of information related to the monitoring of biodiversity and water quality	35,000	1	Direct purchases
4.1.1	72400	Knowledge Management	Audio visual equipment for knowledge management regarding of nutrient pollution and marine hypoxia and innovative solution	15,000	1	Direct purchases
4.1.2	72400	Communication & Outreach	Equipment in support to project's communication and outreach activities	15,000	1	Direct purchases
PMC	72200	Project Management	Office furniture	4,000	1	Direct purchases
	72400	Project Management	Communication equipment and communication charges (phone, internet, etc.); computers and software	14,500	1	Direct purchases
		Travel				
1.1.1	71600	Water Quality	Identification of pollution sources and associated infrastructure in three target landscapes	9,000	1	Direct purchases
	71600	Training	Training and the participatory monitoring of water quality	9,000	1	Direct purchases
1.1.2	71600	Data Management	Participate in data management meetings to submit data to a national/ international repository compatible with GO2DAT	6,000	1	Direct purchases
	71600	Data Management	Develop an information and analysis system for water quality data management and decision-making	4,500	1	Direct purchases
2.1.1	71600	Governance	Strengthening of existing inclusive multi-stakeholder governance structures and mechanisms	7,500	1	Direct purchases
2.1.2	71600	Governance	Develop and or update planning, regulatory, land and/or marine management, and integrated watershed management instruments	5,000	1	Direct purchases
2.2.1	71600	Financial Investment	Develop guidelines for sustainable and inclusive financing and reducing water pollution	2,500	1	Direct purchases
2.2.2	71600	Financial Investment	Making available to key stakeholders inclusive mixed-financing and investment instruments for sustainable water pollution reduction	1,500	1	Direct purchases

2.2.3	71600	Financial Investment	Investment feasibility assessment for rehabilitating WWTPs and other effective technologies to reduce water pollution	4,500	1	Direct purchases
3.1.1	71600	Capacity Building	Participation in technical training workshops on “Nutrient Mitigation Opportunities” led by the INMS	9,000	1	Direct purchases
3.1.3	71600	Communities of Practice (CoPs)	Participation in a workshop to design the learning priorities, governance structure, and workplan of thematic CoPs	3,000	1	Direct purchases
	71600	Communities of Practice (CoPs)	Participation in the CoP annual workshop	3,000	1	Direct purchases
3.2.1	71600	Municipal BMPs	Conduct a municipal-level gender-sensitive assessment of BMPs with different scenarios and expert advice	2,500	1	Direct purchases
	71600	Municipal BMPs	Providing financial advise and technical support to municipal projects for the adoption of BMPs and NbS	1,500	1	Direct purchases
3.2.2	71600	Local BMPs	Conduct a gender-sensitive assessment of BMPs at the community or local level	2,500	1	Direct purchases
	71600	Local BMPs	Provide financial advise and technical support local level projects for the adoption of BMPs and NbS	1,500	1	Direct purchases
3.2.2	71600	Local BMPs	Support demonstration of BMPs and investments to reduce marine hypoxia	28,000	1	Direct purchases
3.2.3	71600	Restoration & Conservation	Provide technical support for the implementation of conservation, restoration and hydrological rehabilitation actions in watersheds and marine-coastal zones	2,000	1	Direct purchases
3.2.4	71600	Monitoring Plan	Design and implement a participatory community and citizen science monitoring plan for biodiversity and water quality	5,000	1	Direct purchases
4.1.1	71600	Knowledge Management	Participate in pairing, learning trips, and other exchanges facilitated by the GCP to foster south-south and north-south knowledge sharing across the CHO regions	10,000	1	Direct purchases
4.1.2	71600	Communication & Outreach	Travel costs related to project's communication and outreach activities	2,500	1	Direct purchases
4.1.3	71600	Social and Environmental Safeguards	Travel expenses and DSA related to the development of social and environmental safeguard related assessments and plans	10,000	1	Direct purchases

	71600	Social and Environmental Safeguards	Travel expenses related to the implementation of SES-related management plans	2,000	1	Direct purchases
4.2.1	71600	Programmatic Management	Participate in the Program Coordination Committee in coordination with the GCP	3,000	1	Direct purchases
	71600	Programmatic Management	Participate in the CHO Annual Stocktaking Meeting	3,000	1	Direct purchases
M&E	71600	M&E	Travel expenses related to M&E	4,430	1	Direct purchases
PMC	71600	Project Management	Travel cost associated to project technical and financial management	4,765	1	Direct purchases
	Total procurement Year 1			2,012,280		

Annex 12: GEF Focal Area Specific Annexes

A. GHG Calculations

1. For Core indicator CI₄, in the Child Project's concept note, an area of 200,000 hectares of priority land was established.
2. This was reviewed during the PPG phase, and the same area was confirmed (in 23 municipalities).
3. For the CO₂ calculation, FAO's *EX-Ante Carbon-balance Tool* was used to calculate greenhouse gas emissions (based on IPCC methodologies).
4. The calculations were developed for a tropical wet climate and low activity clay soils, for the three selected landscapes, with different land uses for a total of 20 years.
5. Through *Afforestation and Reforestation* of 10,400 ha, transforming from degraded land to tropical rainforest, the total projected is 232,700 t of CO₂.
6. For *Forest Degradation and Management*, improving the Tropical Rainforest management, starting from large and moderate degradation of 120,000 ha, the total estimation is 5,744,307 t of CO₂ for the three landscapes.
7. *Rewetted Mangrove* improvement of 2,000 ha yields an improvement of 17,558 t CO₂.
8. Overall total of improvement is 5,994,766 t CO₂.

B. Target Landscape Profiles

Istmo de Tehuantepec Lagoon System

Characterization of the basin system

The Istmo de Tehuantepec Lagoon System landscape corresponds to the Tehuantepec hydrographic basin, located in hydrological region 22, in the state of Oaxaca, Mexico (Figure 1). It is made up of six micro-basins that flow into the Upper and Lower Lagoons (16.2394°, -95.0898 W; 16.2658°, -94.5486° E) (Table 1). The total surface area of the hydrographic basin is 6506.0 km².

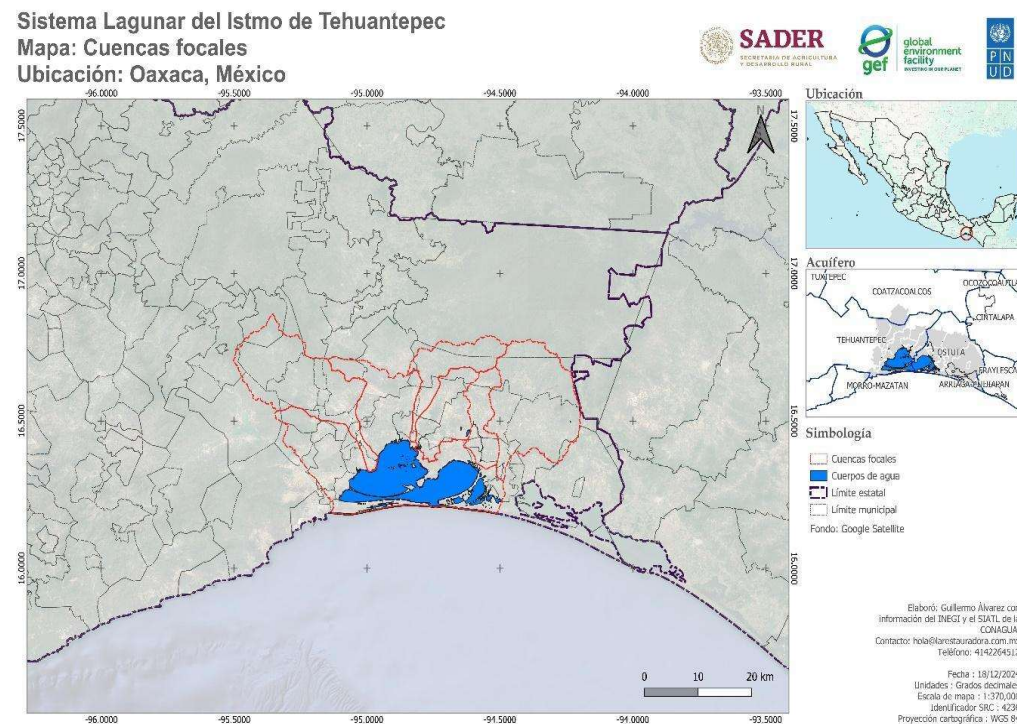


Figure 1. Landscape of the Istmo de Tehuantepec Lagoon System made up of five micro-basins and two lagoons, located in the state of Oaxaca, Mexico.

Table 1. Microbasins and lagoons that make up the Istmo de Tehuantepec Lagoon System landscape.

Micro-basin	Surface (km ²)	Watershed / perimeter (km)	Length of the main channel (km)	Channel condition
Cazadero River	505.7	124.3	52.3	Intermittent
Chicapa River	492.3	165.9	102.9	Perennial
Perros River	1,216.0	220.2	114.3	Perennial
Ostuta River	1,298.8	197.7	84.3	Perennial
Niltepec River	347.9	116.9	53.0	Intermittent
Upper and lower lagoon	2,645.3	410.0	62.3	Intermittent
Total	6,506.0	1,235.0	469.1	

Its watersheds correspond to the orography of the province of Sierra Madre del Sur, which has a series of mountains and ranges that have considerable differences in level. The region comprised by the micro-basins (Table 1) has an altitudinal range that goes from 2240 m above sea level to completely descending, and even exceeding, sea level (with -13 m above sea level). The Upper Lagoon is the body of water that receives the contribution of the micro-basins before flowing into the Pacific Ocean.

The hydrological system of the area made up of the micro-basins corresponds to the delimitation of two administrative aquifers (Tehuantepec no. 2007 and Ostuta no. 2008, both with water availability (CONAGUA, 2024).

The main channels found in the study system correspond to the Cazadero, Chicapa, Perros, Ostuta and Niltepec rivers, which together have a channel length of 406.8 km. Adding the lengths of the Upper and Lower lagoons, the total length of major channels is 469.1 km. 50% of the rivers are perennial, while the other 50% are intermittent (Figure 2, Table 1).

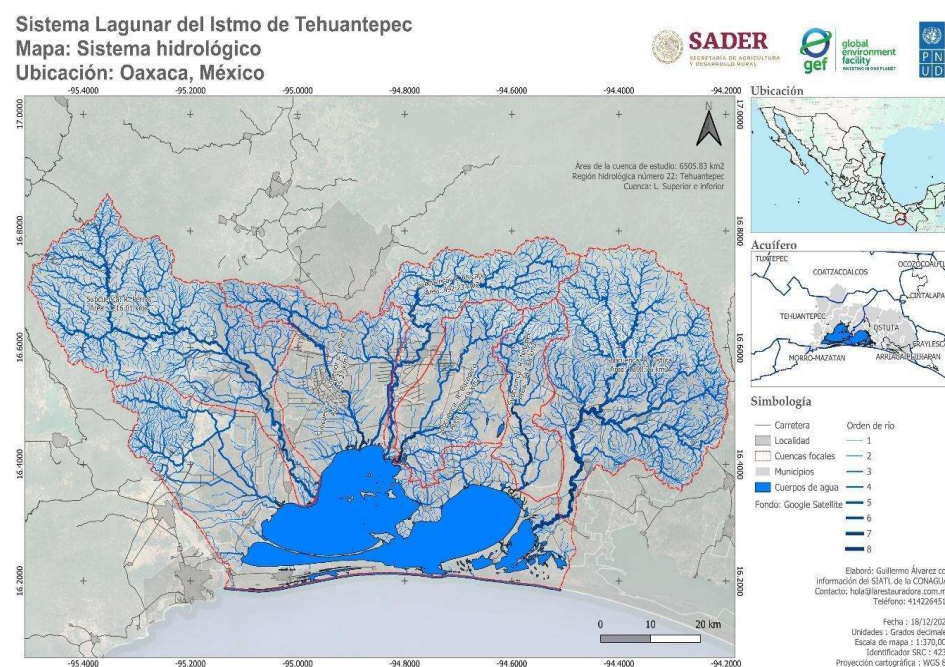


Figure 2. Hydrological system of the Istmo de Tehuantepec Lagoon System landscape, made up of five micro-basins and two lagoons.

Vegetation and land use

The landscape Istmo de Tehuantepec Lagoon System landscape contains a record of 43 different types of land and vegetation use. The main uses are agricultural, pastures, without apparent vegetation or devoid of vegetation, human settlements, and the various strata of secondary shrub or tree vegetation of the ecosystems (INEGI, 2015) (Figure 3 and Table 2). Of the surface, 30% conserves primary vegetation, 37% is secondary vegetation, 33% is transformed soil, and 4% are bodies of water (Table 3).

Table 2. Vegetation and land use in the Istmo de Tehuantepec Lagoon System

Oak Forest	Oak-pine Forest	Pine forest
Pine-oak Forest	Mountain mesophilous forest	Mangrove swamp
Sabanoid	Tall evergreen forest	Low deciduous forest
Low thorny deciduous forest	Medium semi-evergreen forest	Tular

Table 3. Type of vegetation and land use in the Istmo de Tehuantepec Lagoon System

Land use and vegetation	Total area (km ²)	Relative area (%)
Primary vegetation	1,719.4	30
Secondary vegetation	2,142.7	37
Transformed soil	1,877.1	33
Body of water	22.7	0.4

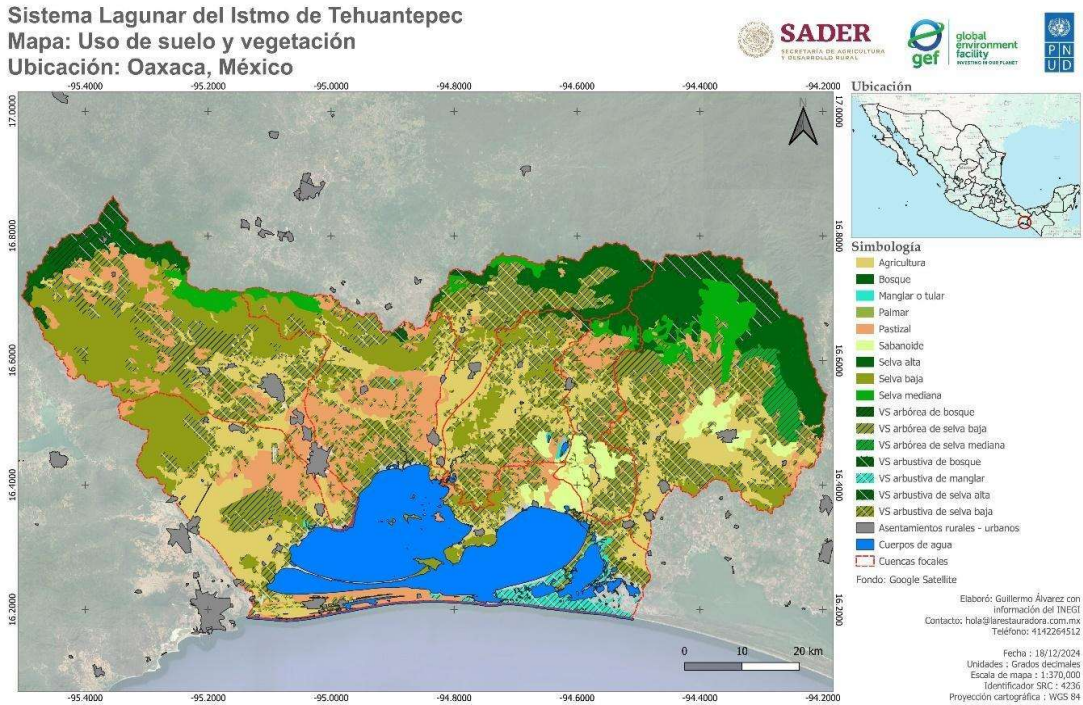


Figure 3. Vegetation and land use in the Istmo de Tehuantepec Lagoon System landscape.

Historical climate

The Istmo de Tehuantepec Lagoon System landscape is characterized by eight distinct climates, ranging from very warm semi-dry (BS1(h)w(w)) to warm humid (Am) (Figure 4). The region under analysis exhibits a fluvial dynamic closely linked to a seasonal rainfall regime, where temporary rivers predominate, complemented by some perennial courses. This dynamic is highly sensitive to the effects of climate change, such as the alteration in precipitation patterns and extreme variability in water availability.

Most of the landscape experiences significant impacts of climate change related to water security, exposure to flooding and droughts (Figure 4).

Sistema Lagunar del Istmo de Tehuantepec

Mapa: Clima y Cambio Climático

Ubicación: Oaxaca, México

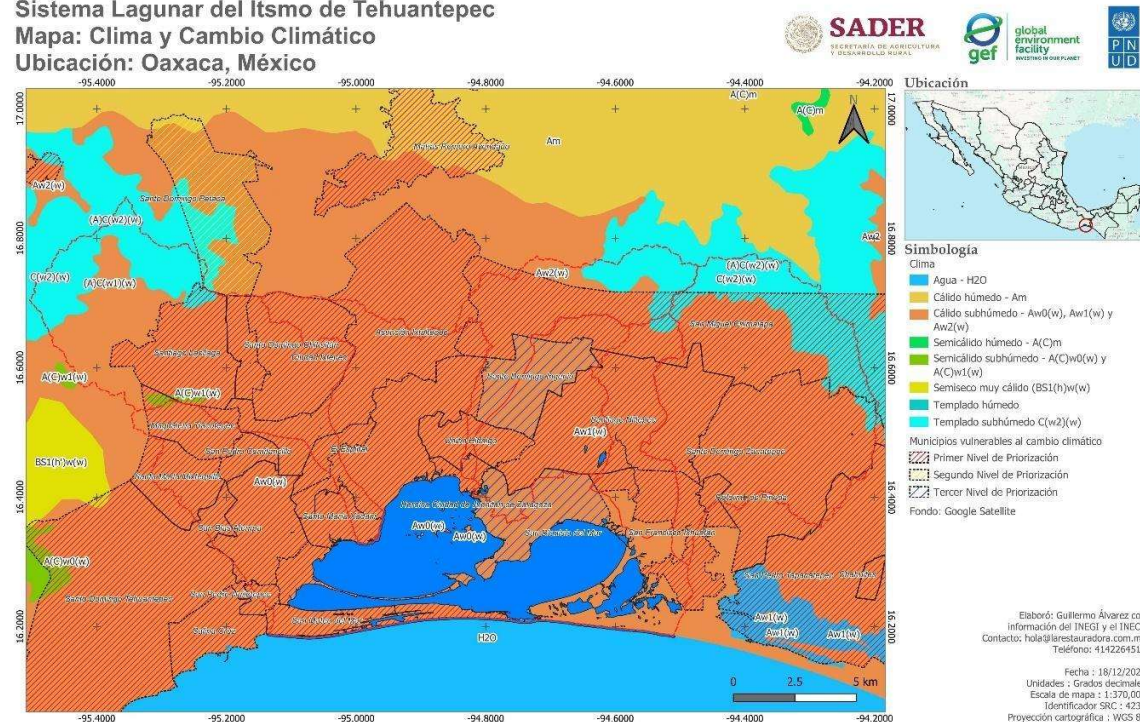


Figure 4. Climates found in the Istmo de Tehuantepec Lagoon System and vulnerability of municipalities that have an impact on its territory.

Political division

The Istmo de Tehuantepec Lagoon System landscape partially or completely comprises a total of 28 municipalities, all belonging to the state of Oaxaca. Twelve of the municipalities are 100% included in the study system. Additionally, 17 municipalities linked to this lagoon system have been prioritized for the implementation of this project (Table 4): Juchitán de Zaragoza, Santiago Niltepec, Salina Cruz, San Blas Atempa, San Dionisio del Mar, San Francisco del Mar, San Francisco, Ixhuatán, San Mateo del Mar, San Pedro Huilotepec, Santa María Xadani, Santo Domingo Ingenio, Santo Domingo Tehuantepec, Unión Hidalgo, Asunción Ixtaltepec, Ciudad Ixtepec and El Espinal.

Table 4. Municipalities that affect the landscape of the Istmo de Tehuantepec Lagoon System and priority for the project.

Municipality	Total municipal area (km ²)	Municipal area within the landscape		Priority for project
		(km ²)	(%)	
Asunción Ixtaltepec	658.9	329.6	50	Yes
Ciudad Ixtaltepec	294.1	293.6	100	Yes
El Espinal	56.1	56.1	100	Yes
Guevea de Humboldt	280.9	89.2	32	No
Heróica Ciudad de Juchitán de Zaragoza	911.3	911	100	Yes
Magdalena Tlacotepec	124.4	124.4	100	No
Reforma de Pineda	33.4	18.6	56	No
San Blas Atempa	208.3	203.6	98	Yes
San Dionisio del Mar	354.9	354.9	100	Yes
San Francisco del Mar	678.1	400.7	59	Yes
San Francisco Ixhuatán	212.6	161.8	76	Yes
San Mateo del Mar	89.7	85.3	95	Yes
San Miguel Chimalapa	1184.2	805.5	68	No
San Pedro Comitancillo	46.8	46.8	100	No
San Pedro Huilotepec	26.5	13.5	51	Yes
Santa María Chimalapa	4547	242	5	No
Santa María Guienagati	389.3	315.3	81	No
Santa María Jalapa del Marqués	729.6	87.6	12	No
Santa María Mixtequilla	147.8	92.4	63	No
Santa María Xadani	86.1	86.1	100	Yes
Santiago Lachiguiri	433	17.2	4	No
Santiago Laollaga	263.1	262.7	100	No
Santiago Miltepec	547.6	547.6	100	Yes
Santo Domingo Chihuitán	71.1	71.1	100	No
Santo Domingo Ingenio	199.2	199.2	100	Yes
Santo Domingo Tehuantepec	1197.7	32.8	3	Yes
Santo Domingo Zanatepec	646.2	518	80	Yes
Unión Hidalgo	112.8	112.8	100	Yes

Demography

Within the Istmo de Tehuantepec Lagoon System landscape, 654 localities are recorded. The largest locality is Heroica Juchitán de Zaragoza, with a population of 88,280 people (52% women); on the other hand, 96 localities are recorded with only one inhabitant. Of the localities within the study area, 639 are rural (representing 97.7%) and 15 are urban (representing 2.3%) (Figure 5 and Table 5).

Sistema Lagunar del Istmo de Tehuantepec
Mapa: Demografía
Ubicación: Oaxaca, México

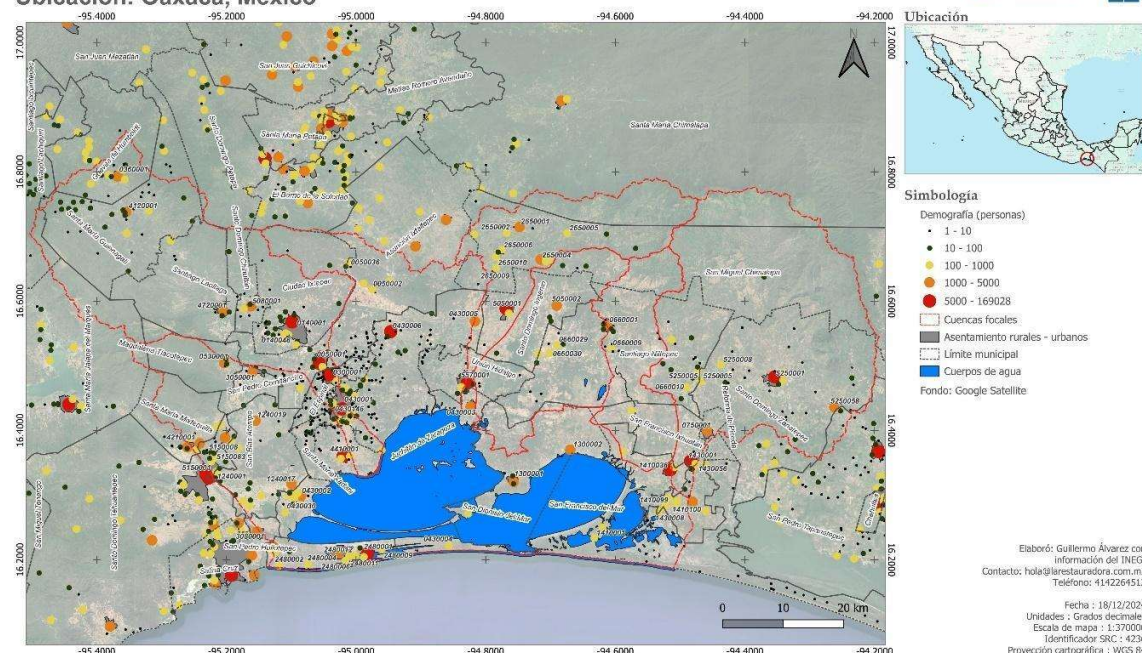


Figure 5. Localities recorded in the Istmo de Tehuantepec Lagoon System

Table 5. Localities with more than 30 inhabitants and population that lives in the municipalities that affect the landscape of the Istmo de Tehuantepec Lagoon System

Municipality	Locality	Total inhabitants (2020)	Women (2020)		Men (2020)		Type of locality
			Total	(%)	Total	(%)	
Asunción Ixtaltepec	Mena	7,616	932	52	3,684	48	Urban
Ciudad Ixtepec	Ciudad Ixtepec	197	88	45	109	55	Rural
Ciudad Ixtepec	Colonia Niza Luba	26,015	3,735	53	2,280	47	Urban
El Espinal	El Espinal	330	172	52	158	48	Rural
Guevea de Humboldt	Guevea De Humboldt	8,125	4,206	52	3,919	48	Urban
Juchitán de Zaragoza	Juchitán De Zaragoza	1,499	780	52	719	48	Urban
Juchitán de Zaragoza	Álvaro Obregón	88,280	46,038	52	42,242	48	Urban
Juchitán de Zaragoza	Chicapa De Castro	3,656	1,842	50	1,814	50	Urban
Juchitán de Zaragoza	Santa María Del Mar	3,423	1,807	53	1,616	47	Urban
Juchitán de Zaragoza	La Venta	775	397	51	378	49	Rural

Municipality	Locality	Total inhabitants (2020)	Women (2020)		Men (2020)		Type of locality
			Total	(%)	Total	(%)	
Juchitán de Zaragoza	La Ventosa	2,208	1,145	52	1,063	48	Rural
Juchitán de Zaragoza	Emiliano Zapata	5,508	2,882	52	2,626	48	Urban
Juchitán de Zaragoza	Colonia 19 De Marzo	530	260	49	270	51	Rural
Juchitán de Zaragoza	Colonia 19 De Marzo	640	344	54	296	46	Rural
Juchitán de Zaragoza	Colonia 19 De Marzo	179	85	47	94	53	Rural
Magdalena Tlacotepec	Magdalena Tlacotepec	211	105	50	106	50	Rural
Santiago Niltepec	Santiago Niltepec	1,234	646	52	588	48	Urban
Santiago Niltepec	Santo Domingo	3,218	1,681	52	1,537	48	Urban
Santiago Niltepec	El Zopilote (Teotepec)	395	184	47%	211	53%	Rural
Santiago Niltepec	Cazadero Arriba	425	14	50	211	50	Rural
Santiago Niltepec	Cazadero Abajo	309	160	52	149	48	Rural
Reforma de Pineda	Reforma De Pineda	243	114	47	29	53	Rural
San Blas Atempa	Santa Rosa	2,660	1,378	52	1.28	48	Urban
San Blas Atempa	Rancho El Llano	2,974	1,495	50	1,479	50	Rural
San Dionisio del Mar	San Dionisio Del Mar	1,008	94	49	514	51	Rural
San Dionisio del Mar	Huamúchil	3,210	1,579	49	1,631	51	Urban
San Francisco del Mar	San Francisco Del Mar Pueblo Viejo	1,815	940	52	875	48	Rural
San Francisco del Mar	San Francisco Del Mar	931	442	47	489	53	Rural
San Francisco Ixhuatán	Santa Rita (Santa Rita Del Mar)	5,461	2,751	50	2,710	50	Urban
San Francisco Ixhuatán	El Vergel Del Maíz	607	297	49	310	51	Rural
San Francisco Ixhuatán	San Francisco Ixhuatán	193	104	54	89	46	Rural
San Francisco Ixhuatán	Las Palmas	5,433	2,740	50	2,693	50	Urban
San Francisco Ixhuatán	Cerro Grande	499	246	49	253	51	Rural
San Francisco Ixhuatán	Cerro Grande	335	169	50	166	50	Rural
San Francisco Ixhuatán	Cerro Chico (Cerritos)	278	133	48	145	52	Rural
San Francisco Ixhuatán	Lázaro Cárdenas	552	273	49	279	51	Rural
San Mateo del Mar	San Mateo Del Mar	173	86	50	87	50	Rural
San Mateo del Mar	Colonia Cuauhtémoc	5,584	2,812	50	2,772	50	Urban
San Mateo del Mar	Colonia Juárez	899	455	51	444	49	Rural
San Mateo del Mar	La Reforma	3,289	1,650	50	1,639	50	Urban
San Mateo del Mar	Costa Rica	262	127	48	135	52	Rural
San Mateo del Mar	Villa Hermosa	796	384	48	412	52	Rural
San Mateo del Mar	San Pablo	654	314	48	340	52	Rural
San Mateo del Mar	Laguna Santa Cruz	919	466	51	453	49	Rural
San Mateo del Mar	Mariano Oviedo Juárez	585	281	48	304	52	Rural

Municipality	Locality	Total inhabitants (2020)	Women (2020)		Men (2020)		Type of locality
			Total	(%)	Total	(%)	
San Mateo del Mar	El Pacífico	117	46	39	71	61	Rural
San Miguel Chimalapa	San Miguel Chimalapa	437	221	51	216	49	Rural
San Miguel Chimalapa	Las Anonas	1,341	656	49	685	51	Urban
San Miguel Chimalapa	Cuauhtémoc Guadalupe	307	144	47	163	53	Rural
San Miguel Chimalapa	Los Limones	352	161	46	191	54	Rural
San Miguel Chimalapa	El Porvenir	461	232	50	229	50	Rural
San Miguel Chimalapa	Vista Hermosa	668	346	52	322	48	Rural
San Pedro Comitancillo	San Pedro Comitancillo	340	185	54	155	46	Rural
Santa María Guienagati	Santa María Guienagati	4,265	2,243	53	2,022	47	Urban
Santa María Mixtequilla	Santa Teresa De Jesús	1,618	861	53	757	47	Urban
Santa María Xadani	Santa María Xadani	499	254	51	245	49	Rural
Santiago Laollaga	Santiago Laollaga	8,632	4,391	51	4,241	49	Urban
Santo Domingo Ingenio	Santo Domingo Ingenio	2,821	1,451	51	1,370	49	Urban
Santo Domingo Ingenio	La Blanca	6,130	3,131	51	2,999	49	Urban
Santo Domingo Chihuitán	Santo Domingo Chihuitán	1,134	579	51	555	49	Rural
Santo Domingo Tehuantepec	Colonia Jordán	1,373	712	52	661	48	Urban
Santo Domingo Tehuantepec	Ejido El Jordán	1,228	650	53	578	47	Rural
Santo Domingo Tehuantepec	Colonia San Luis	283	138	49	145	51	Rural
Santo Domingo Tehuantepec	15 De septiembre	1,083	546	50	537	50	Rural
Santo Domingo Zanatepec	Santo Domingo Zanatepec	245	136	56	109	44	Rural
Santo Domingo Zanatepec	Huanacastal	7,900	4,094	52	3,806	48	Urban
Santo Domingo Zanatepec	Colonia Río Ostuta	740	358	48	382	52	Rural
Santo Domingo Zanatepec	General Pascual Fuentes	319	160	50	159	50	Rural
Unión Hidalgo	Unión Hidalgo	1,268	641	51	627	49	Rural
Asunción Ixtaltepec	Mena	3,949	7,173	51	6,776	49	Urban
Total		241,643	116,343		110,319		

Main productive activities

The main productive activities in this landscape are agriculture, shrimp and tilapia aquaculture farms, and livestock. Regarding agriculture, the main crops are:

- Maize: about 50% of the planted area corresponds to rainfed corn, which is essential for local food and food security in the communities.
- Beans: with 20% of the area, beans are the most important leguminous crop in the state, consumed mainly at the local level.
- Sorghum and other grains: with about 15%, they are mainly used as fodder for the livestock sector and for the production of animal feed.
- Vegetables (tomato, chili, squash): they represent 10% of the area, especially in areas with irrigation infrastructure and intensive production.

Livestock production in 2023 totaled 21,366.78 tons of products, derived from cattle, pigs, sheep, goats, poultry, turkeys and bees (beef, bovine milk, pork, sheep meat, poultry meat, turkey meat, eggs, honey, wax).

Water sources

Proximity to surface and underground water concessions is an important criterion for identifying potential areas for restoration projects. Therefore, water concessions were georeferenced (based on REPDA, CONAGUA), and a buffer of 1000 m was added. The concessions and their areas of influence are distributed along the landscape (Figure 6).

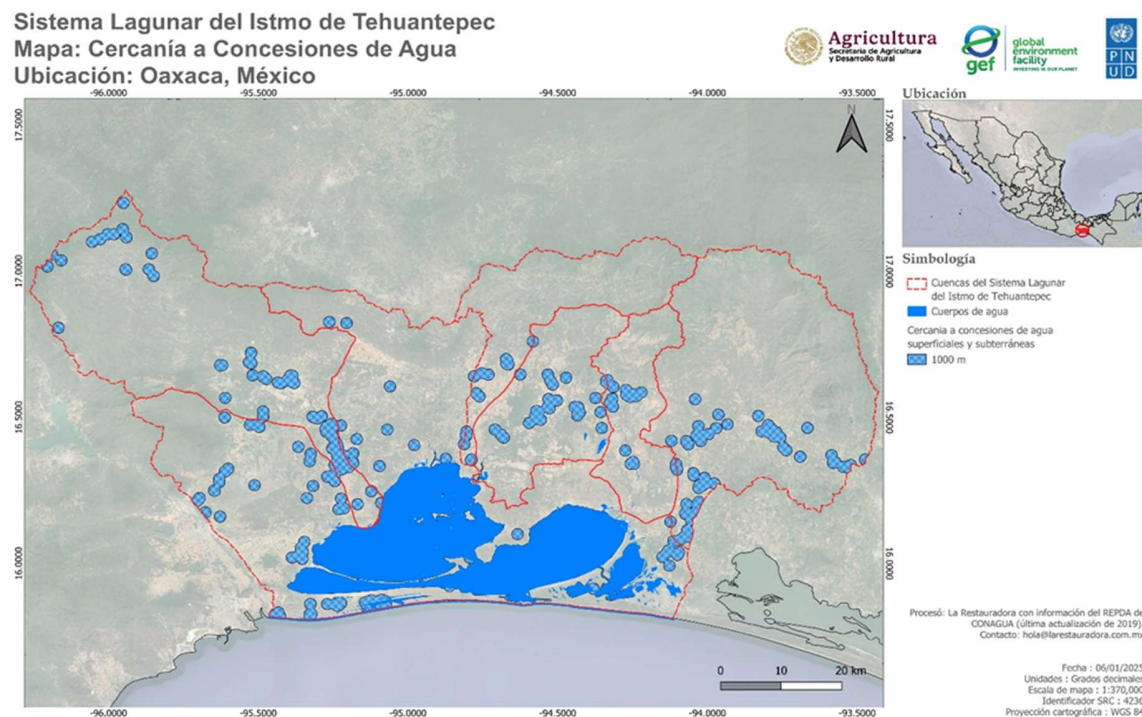


Figure 6. Water concessions and there area of influence in the focal landscape Istmo de Tehuantepec Lagoon System landscape

Water quality problems

To date, there is no water quality data for most of the municipalities that make up the focal site Istmo de Tehuantepec Lagoon System (Figure 7). There is no historical data on water quality and pollutants for both surface and underground water bodies. This represents a great opportunity for this project to establish a baseline for water quality monitoring with a focus from the basin to the sea.

Salina Cruz is one of the municipalities that has data on this matter (Table 6). One of the main sources of water pollution in the municipality is industrial activity, in particular that of the "Antonio Dovalí Jaime" refinery of Petróleos Mexicanos (PEMEX) in charge of the production of gasoline, diesel, and other petroleum products (González, 2007; Badillo, 2020; Ramírez, 2019). It has been calculated that the plant will dump about 13,000 m³ of untreated wastewater into the sea in La Ventosa Bay every day.

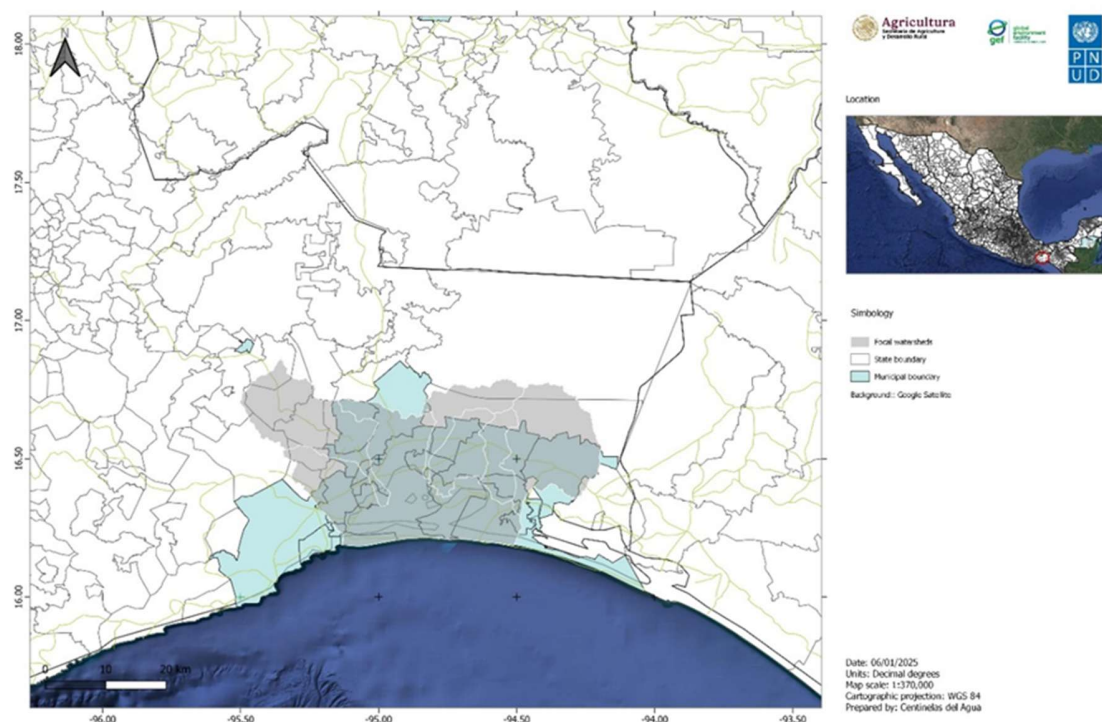


Figure 7. Landscape of the Istmo de Tehuantepec Lagoon System.

Table 6. Identified pollutants in surface and underground water bodies of the municipalities of interest in the Istmo de Tehuantepec Lagoon System landscape

No.	Municipality	Contaminants present in surface bodies	Pollutants present in underground bodies
1	Asunción Ixaltepec	Nitrites, nitrates, sulfates, phosphates, suspended solids, <i>E. Coli</i> , total coliforms, fecal coliforms, total organic carbon, toxicity (in Los Perros River)	No data
2	Ciudad Ixtepec	No data	No data
3	El Espinal	No data	No data
4	Juchitán de Zaragoza	Nitrites, nitrates, pesticides, herbicides, heavy metals (chromium, mercury, cadmium, arsenic), suspended solids, oils, fats (in the upper lagoon, wetlands, and river)	Heavy metals, nitrites, nitrates
5	Salina Cruz	Nitrites, nitrates, total coliforms, cadmium, lead, aromatic hydrocarbons, suspended solids, copper, and zinc (in the lagoon, estuary, and ocean-sea)	Nitrates, total coliforms.

No.	Municipality	Contaminants present in surface bodies	Pollutants present in underground bodies
6	San Blas Atempa	No data	No data
7	San Dionisio del Mar	Nitrites, nitrates, phosphates, nickel, cadmium, suspended solids, total coliforms, fecal coliforms (in the lower lagoon)	No data
8	San Francisco del Mar	Nitrites, nitrates, sulfates, phosphates, total coliforms, fecal coliforms, <i>E. Coli</i> , suspended solids (in the lower lagoon)	No data
9	San Francisco Ixhuatán	No data	No data
10	San Mateo del Mar	Total coliforms, fecal coliforms, sulfates, nitrites, nitrates, suspended solids	No data
11	San Pedro Huilotepec	Total coliforms, fecal coliforms, nickel, sulfates, nitrites, nitrates	No data
12	Santa María Xiadani	Total coliforms, fecal coliforms, nickel, gypsum, sulfates, nitrites, nitrates	No data
13	Santiago Niltepec	No data	No data
14	Santo Domingo Ingenio	No data	No data
15	Santo Domingo Tehuantepec	Nitrates, phosphorus, pesticides, herbicides, fats, oils, lead, mercury, cadmium (in rivers and bay)	Total coliforms, arsenic.
16	Santo Domingo Zanatepec	No data	No data
17	Unión Hidalgo	No data	No data

Problems with water quality in the region and sources of pollutants

Salina Cruz, Oaxaca, faces a water crisis characterized by chronic drinking water shortages, attributed to obsolete infrastructure and failures in distribution lines and pumping systems (Santiago, 2020). Constant leaks in pipelines aggravate this problem, leaving most of the population without reliable access to water resources. The deficient hydraulic network, with corroded pipes and inefficient systems, not only limits the water supply but also represents a potential risk to public health due to the possibility of infiltration of contaminants. One of the main causes of water pollution in the region is industrial activity, in particular that of the "Antonio Dovalí Jaime" refinery of Petróleos Mexicanos (PEMEX), responsible for the production of gasoline, diesel and other petroleum products (González, 2007; Badillo, 2020; Ramírez, 2019).

This facility has been recognized for dumping about 13,000 m³ of untreated wastewater into the sea in La Ventosa Bay every day (Vélez, 2021), due to the inoperability of its wastewater and sewage treatment facilities. This waste has impacted fishing and the well-being of local communities. Available evidence (González, 2007; Badillo, 2020; Ramírez, 2019; Vélez, 2021) suggests that industrial sources, particularly refinery operations, are primarily responsible for water pollution in the area. Every year, the Tehuantepec River receives discharges of wastewater and urban solid waste from the municipalities located in the basin and flows into La Ventosa Bay (Amezquita and Seim, 2016). Furthermore, industrial incidents, such as the fires at the local Petróleos Mexicanos refinery, have raised concerns about the possible contamination of nearby water sources (López, 2024), maintaining uncertainty about the long-term effects on water quality. This set of factors highlights the urgent need for comprehensive measures to ensure safe and sustainable access to water in the region.

Table 7 shows the main pollutants recorded in the study area. In the state of Oaxaca there are few water quality studies, according to Amézquita and Seim (2016), among the studies that stand out are those carried out in the Flor de Guayabal area, Tlacolula, Oaxaca where it was reported that five wells presented values of 0.043 to 0.192 mg / L of arsenic, a value that exceeds the permissible limit in the NOM-127-SSA1-1994, in this study the authors concluded that 54% of the aforementioned population is at risk of chronic exposure to arsenic in drinking water (Caballero-Gutiérrez et al., 2010). In Huajuapán de León, high levels of fecal coliforms were reported in the water from the Yosocuta Dam and

in the effluent from the water treatment plant, values that exceed the permissible limits of the official Mexican standard for water for human use and consumption (Seim and Mendoza, 2011).

Table 7. Main pollutants in the municipality of Salina Cruz, Oaxaca and surrounding areas.

Fountain	Pollutants	References
Oil industry	Polycyclic aromatic hydrocarbons (PAH) Aromatic hydrocarbons (HA) Heavy metals (Cd, Cu, Pb and Zn)	Botello et al., 1995 Gonzalez et al., 2006
Sewage	Total coliforms Heavy metals (As) Fecal coliforms Nutrients	Gonzalez et al., 2006 Seim and Mendoza, 2011

Water treatment

Wastewater discharges are classified as municipal and non-municipal. Municipal wastewater is generated in population centers and collected in urban and rural sewerage systems; non-municipal wastewater is generated by other uses, such as self-sufficient industry, and is discharged directly into national water bodies without being collected by sewerage systems (EAM, 2021).

In the Istmo de Tehuantepec Lagoon System landscape, there are nine Wastewater Treatment Plants (WWTP), with a total installed capacity of 292.2 l/s. Of these, 88.9% are active, treating a flow rate of 249.0 l/s. Notably, no new WWTPs have been installed since 2016 (Table 8). The 18 Wastewater Treatment Plants are currently facing reengineering costs for compliance with the recently updated NOM-001-SEMARNAT-2021, which will limit the efficient treatment of wastewater and will require an extension for compliance in 2027 and a large economic investment.

Table 8. Wastewater treatment plants located in the priority municipalities in the Istmo de Tehuantepec Lagoon System landscape

Municipality	WWTP	Installed Capacity (l/s)	Treated Flow Rate (l/s)	Status	Process	WWTP Receiving Body	Start of Operation (year)
Ciudad Ixtepec	Ixtepec	5	3	Active	Anaerobe	Dog River	2002
El Espinal	El Espinal	12	12	Active	Wetlands	The Dogs River	2016
Salina Cruz	Ampliación Carlos G.F.	12	12	Active	Activated sludge	Zanjon Channel	2007
Salina Cruz	U. H. Pemex	14	14	Active	Activated sludge	Zanjon Channel	1980
Salina Cruz	Salina Cruz I	100	90	Active	Activated sludge	The Windy Bay	2002
Salina Cruz	Salina Cruz II (Refinería Pemex)	100	100	Active	Activated sludge	Industrial reuse	1999
San Blas Atempa	Santa Rosa	4.2	3	Active	Wetlands	No information	2005
Santo Domingo Tehuantepec	Santo Domingo Tehuantepec	30	0	Out of operation	Stabilization Ponds	Tehuantepec River	1999

Santo Domingo Tehuantepec	Fracc. Noria de Infonavit	15	15	Active	Imhoff tank	Tehuantepec River	2000
Total		292.2	249.0				

Table 9. Main sources of pollution, overexploitation, and environmental degradation

Pollution sources	Pollutants	Matrix	Concentration	Reference
Oil industry activity, industrial and domestic discharges	Total Aromatic Hydrocarbons (TAH)	Sediment	67.74 mg/kg	Gonzalez, 2007
	Extractable organic material (MOE)	Sediment	2972.22 mg/kg	
	Arsenic	Sediment	9 mg/kg As	
	Cadmium	Sediment	4.8 mg/kg Cd	
	Copper	Sediment	55 mg/kg Cu	
	Nickel	Sediment	40 mg/kg Ni	
	Vanadium	Sediment	78.34 mg/kg V	
	Chrome	Sediment	25.28 mg/kg Cr	
	Mercury	Sediment	0.70 mg/Kg Hg	
	Lead	Sediment	38.43 mg/kg Pb	
	Zinc	Sediment	70.72 mg/kg Zn	
Infiltration of sewage into the aquifer, discharge of wastewater and urban solid waste	Total coliforms	Water	780 NMP/100 ml	Amézquita and Seim, 2016
	Total dissolved solids	Water	210 - 560 mg/l	
	Chlorides	Water	31.55 - 66.97 mg/l	
	Alkalinity	Water	216.12 - 323.98 mg/l	
	Total hardness	Water	183.47 - 312. mg/l CaCO ₃	
	Sulfates	Water	15.89 - 29.89 mg/l	
	Nitrates	Water	0.058 - 0.246 mg/L	
	Fluorides	Water	0.56 mg/l	
	Dissolved oxygen	Water	2.66 - 3.95 mg/l	
	Arsenic	Water	11.70 - 18.20 µg/L As	
Not specified	Arsenic	Water	0.043- 0.192 mg/l	Caballero-Gutierrez et al., 2010
Petroleum hydrocarbons, municipal and industrial wastes	Total Aromatic Hydrocarbons (TAH)	Sediment	317 ng/g	Botello et al., 1995
Soil erosion from agricultural practices	Total suspended solids	Water	45 - 147 mg/l	Mendoza y Seim, 2021
Nutrient-rich agricultural return water	Total phosphorus	Water	0.20 mg/l	

Pollution sources	Pollutants	Matrix	Concentration	Reference
Not specified	Total dissolved solids	Water	13 - 121 mg/l	Astudillo- Enriquez, 2019
Salts deposited on streets and fertilizer use	Total dissolved solids	Water	400 - 27,730 mg/l	
Residual water	Not specified	Water	Not specified	
	Total coliforms	Water	2312 - 16,999.5 NMP/100 ml	

Sontecomapan Lagoon

Characterization of the basin system

The Sontecomapan Lagoon watershed, Veracruz, is made up of six micro-basins corresponding to the rivers La Palma, Coxcoapan, El Carrizal, Yahualtapan, Arroyo Agua Caliente and Manantial La Poza, all of them delimited around the Sontecomapan Lagoon which has an area of influence of 337 km² (18.5317 °, -95.0365 ° W; 18.5284 °, -94.9934 ° E). The micro-basins correspond to a fraction of the Tecolapilla River sub-basin. The lagoon system is made up of various water basins that include rivers and minor tributaries that supply fresh water and nutrients to the system.

Its landscape corresponds to the orography of the province of Sierra de San Andrés Tuxtla, which is distinguished by the presence of gentle hills located to the east and northwest, and to a greater extent, plains with permanent lagoon systems that occupy large areas. For the region comprised by the delimited micro-basins, altitudes ranging from 2,240 meters above sea level can be found until descending completely to sea level. The Sontecomapan Lagoon is the body of water that receives the contribution of the micro-basins before flowing into the Gulf of Mexico (Figure 8).

The Sontecomapan Lagoon is located in the southern part of the state of Veracruz, in the region of Los Tuxtlas. Its position is key since it is situated in a transition region between the marine and terrestrial ecosystems. The lagoon, with a surface area of 8,921 ha, is linked to the Gulf of Mexico through a system of canals and estuaries (RAMSAR, 2003).



Figure 8. Sontecomapan Lagoon landscape, made up of six micro-basins and a lagoon, located in the state of Veracruz.

Vegetation and land use

The landscape has 12 different types of land use and vegetation, including agricultural uses, pastures, without apparent vegetation or devoid of vegetation, human settlements and the various strata of secondary shrub or tree vegetation of the ecosystems (Table 10) (INEGI, 2015). The flora of the Sontecomapan Lagoon is influenced by its proximity to the sea and the hydrographic terrain conditions of the area. The lagoon has tall evergreen forest vegetation, tular and mangrove extension (dominant vegetation). It has three of the mangrove species reported in Mexico (*Rizhophora mangle* , *Avicennia germinans* and *Laguncularia racemosa*) (Argáez-Márquez, 2023), being one of the most important mangrove extensions on the western coast of the Gulf.

The different types of land use and vegetation include agriculture, mangrove or popal or tular, induced palm grove, tall jungle, secondary arboreal vegetation of forest, secondary shrub vegetation of forest, secondary shrub vegetation of mangrove, secondary shrub vegetation of low jungle, rural-urban settlement and water bodies (Figure 9). The induced palm grove occupies 59% of the area, followed by tall evergreen forest with 21%, then secondary shrub vegetation with 11%, then secondary arboreal vegetation and agriculture with 3%, then popal and human settlements with 1%. The soil of the Laguna de Sontecomapan landscape has been mostly transformed. Together, primary and secondary vegetation occupy 37% of the site's surface (Table 10).

Table 10. Vegetation and land use in the Sontecomapan Lagoon landscape

Description	Area	
	(ha)	(%)
Palmar induced	19,271.9	59%
Tall evergreen forest	6,726.1	21%
Secondary shrub vegetation	3,570.3	11%
Secondary tree vegetation	1,065.6	3%
Agriculture	955.7	3%
Mangrove swamp	502	2%
Popal	193.9	1%
Human settlements	170.7	1%
Tular	63	0%

Table 11. Surfaces by recategorized USV, in the Laguna de Sontecomapan landscape, located in the state of Veracruz

Land Use and Vegetation	Area	
	(km ²)	(%)
Primary vegetation	74.8	23
Secondary vegetation	46.4	14
Transformed soil	204	63

Laguna de Sontecomapan
Mapa: Uso de Suelo y Vegetación
Ubicación: Veracruz, México

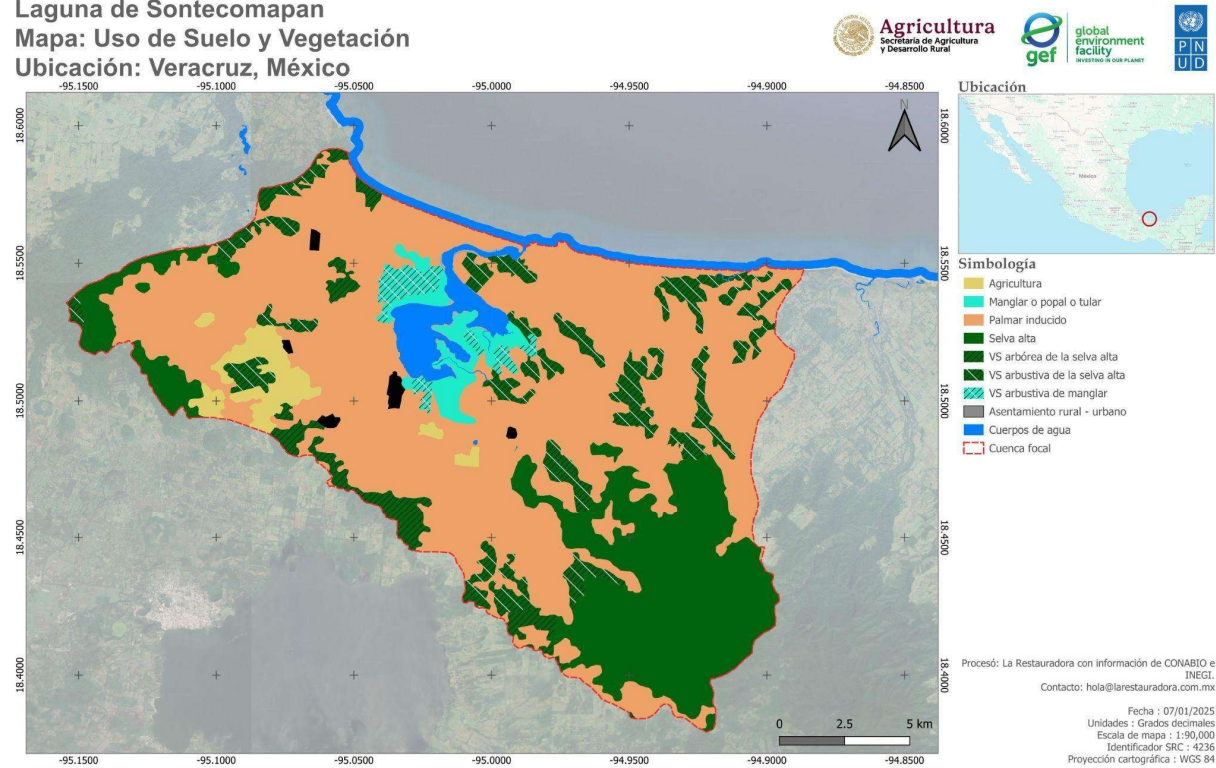


Figure 9. Land use and vegetation in the Laguna de Sontecomapan landscape, located in the state of Veracruz.

Historical climate

The region presents fluvial dynamics influenced by a seasonal rainfall regime, resulting in a predominance of temporary rivers, complemented by some perennial courses. The Laguna de Sontecomapan landscape has three climates: warm humid, warm subhumid, and semi-warm humid (Figure 10). There is a precipitation range of 1900 to 4600 mm, during 2023 it presented an average annual precipitation of 1269.9 mm (CONAGUA, 2023). The temperature ranges between 18 °C and 26 °C, northern winds prevail from September to January and northeasterly winds during the rest of the year (Muciño et al., 2021). The whole landscape is extremely vulnerable to climate change impacts in terms of water security, exposure to flooding and droughts, so it has been prioritized for climate adaptation (Figure 10).

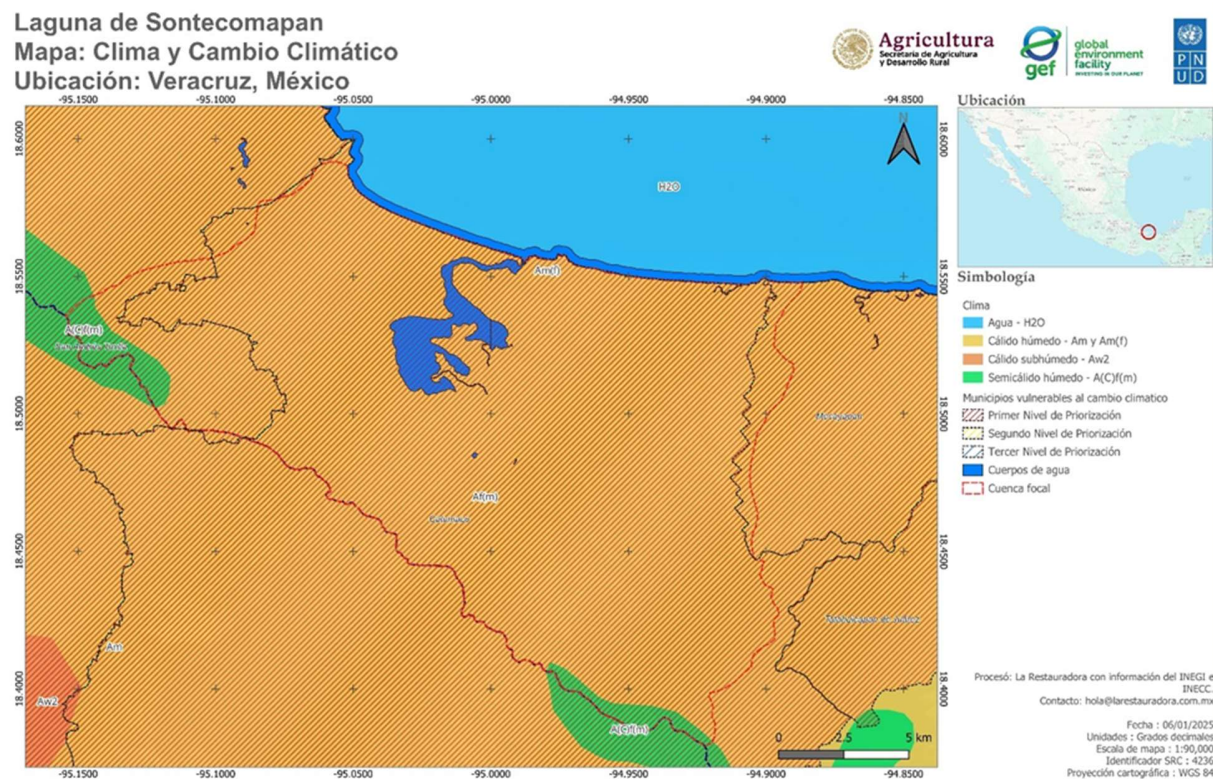


Figure 10. Climate and climate change in the Laguna de Sontecomapan landscape, located in the state of Veracruz.

Political division

The Laguna de Sontecomapan landscape comprises three municipalities that are within the hydrographic delimitation, all belonging to the state of Veracruz. The municipality with the greatest influence is Catemaco (Table 12). The vulnerability indicator indicated in Table 12 integrated the conditions of greatest vulnerability as the First Level of Prioritization, being for the three municipalities those related to the increase in cases of dengue associated with water stress, as well as the repercussions of said water stress on livestock production, especially in the municipality of Mecayapan.

Table 12. Municipalities of influence on the Laguna de Sontecomapan landscape, located in the state of Veracruz.

Name of municipality	Total Municipal Area (km2)	Municipal area occupied by the micro-basin		Priority for the project
		(km2)	(%)	
San Andres Tuxtla	953.9	29	3%	First Level of Prioritization
Catemaco	657	289	44%	First Level of Prioritization

Mecayapam	295.7	8.5	3%	First Level of Prioritization
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Demography

For the Tecolapilla River sub-basin, located in Hydrological Region 28, there are 110 localities. The biggest locality recorded a total population of 2,432 people, while the lowest population record was one person, occurring this way for 16 localities. The information is presented below (Figure 11).



Figure 11. Demography in the Laguna de Sontecomapan landscape, located in the state of Veracruz.

Table 13 shows information related to localities with 30 or more inhabitants, their respective code, the relationship between the number of women and men, as well as the type of locality.

Table 13. Demography in the Laguna de Sontecomapan landscape, located in the state of Veracruz.

Municipality	Locality	Total inhabitants (2020)	Female inhabitants (2020)		Male inhabitants (2020)		Type of locality
			Total	%	Total	%	
Mecayapan	El Paraíso (San Francisco)	117	66	56	51	44	Rural
San Andrés Tuxtla	Cuauhtémoc	160	77	48	83	52	Rural
San Andrés Tuxtla	Adolfo Ruiz Cortines	286	142	50	144	50	Rural
San Andrés Tuxtla	Miguel Hidalgo y Costilla	47	26	55	21	45	Rural
Catemaco	Coxcoapan	632	311	49	321	51	Rural
Catemaco	Calpultéolt (El Morro)	77	37	48	40	52	Rural
Catemaco	Ampliación Limón	109	50	46	59	54	Rural
Catemaco	Dos Amates	595	317	53	278	47	Rural
Catemaco	Gustavo Díaz Ordaz	201	107	53	94	47	Rural
Catemaco	Mario Souza	608	326	54	282	46	Rural
Catemaco	Los Morritos (Agua Nacida)	148	78	53	70	47	Rural
Catemaco	La Palma	769	403	52	366	48	Rural
Catemaco	El Real	322	156	48	166	52	Rural
Catemaco	San Rafael	119	54	45	65	55	Rural
Catemaco	Sontecomapan	2,432	1,262	52	1,170	48	Urban
Catemaco	Península de Moreno	322	157	49	165	51	Rural
Catemaco	Barra de Sontecomapan	377	180	48	197	52	Rural
Catemaco	Adolfo López Mateos (El Marinero)	121	53	44	68	56	Rural
Catemaco	Tres de Mayo	239	128	54	111	46	Rural
Catemaco	Perla de San Martín	271	138	51	133	49	Rural

Main productive activities

The main productive activities in this landscape are agriculture, sheep and cattle raising, and fishing. Regarding agriculture, the main crops are:

- Maize: about 40% of the planted area corresponds to corn, becoming the main crop for the region.
- Sugar cane: with 25% of the area, is fundamental to agro-industrial development, both for domestic consumption and export.
- Coffee: with about 15%, being a traditional crop in high altitude areas and a key economic source for small producers.
- Citrus (orange and lemon): together they account for approximately 10% of the cultivated area, with a significant presence in micro-regions with tropical climates.

Livestock production in 2023 for the included municipalities totaled 26,243.49 tons of products, derived from cattle, pigs, sheep, goats, poultry, turkeys, and bees (beef, bovine milk, pork, sheep meat, poultry meat, turkey meat, eggs, honey, wax).

Water sources

Proximity to surface and underground water concessions is an important criterion for identifying potential areas for restoration projects. Therefore, water concessions were georeferenced (based on REPDA, CONAGUA), and a buffer of 1000 m was added. The concessions and their areas of influence are distributed along the landscape (Figure 12).

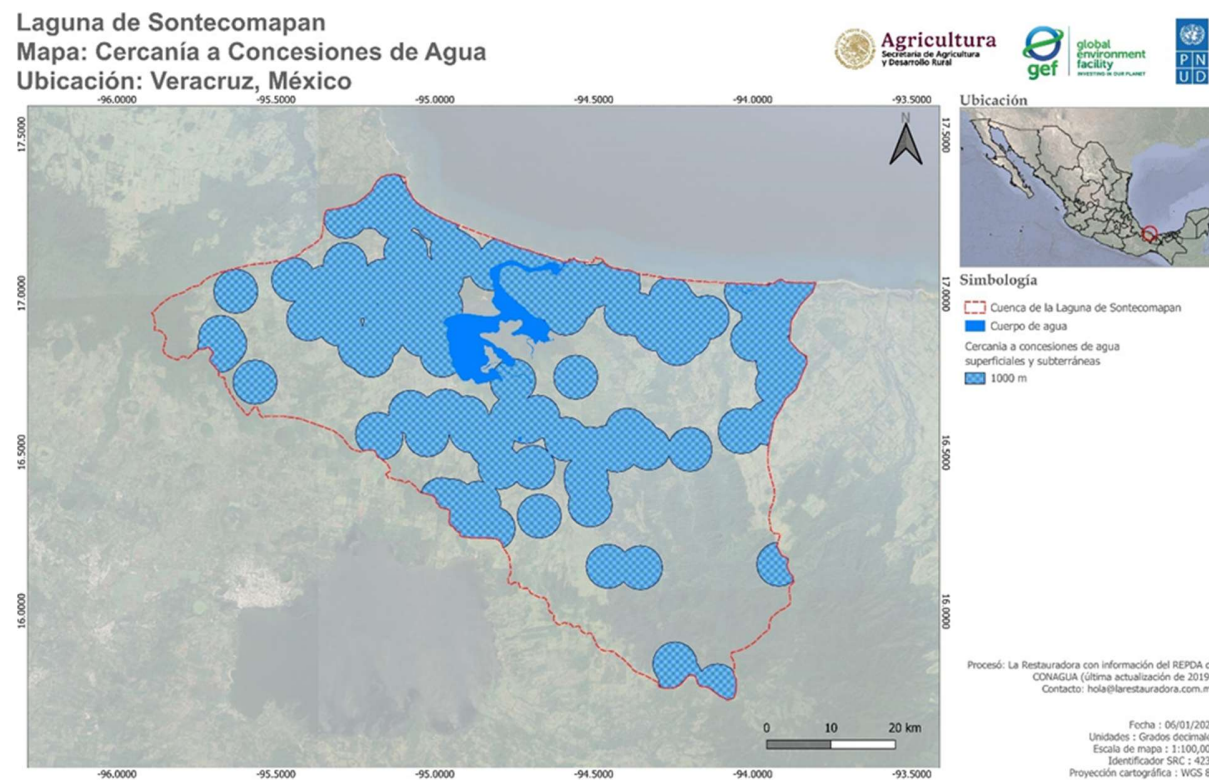


Figure 12. Proximity to water concessions, in the Laguna de Sontecomapan landscape, located in the state of Veracruz.

Water quality problems

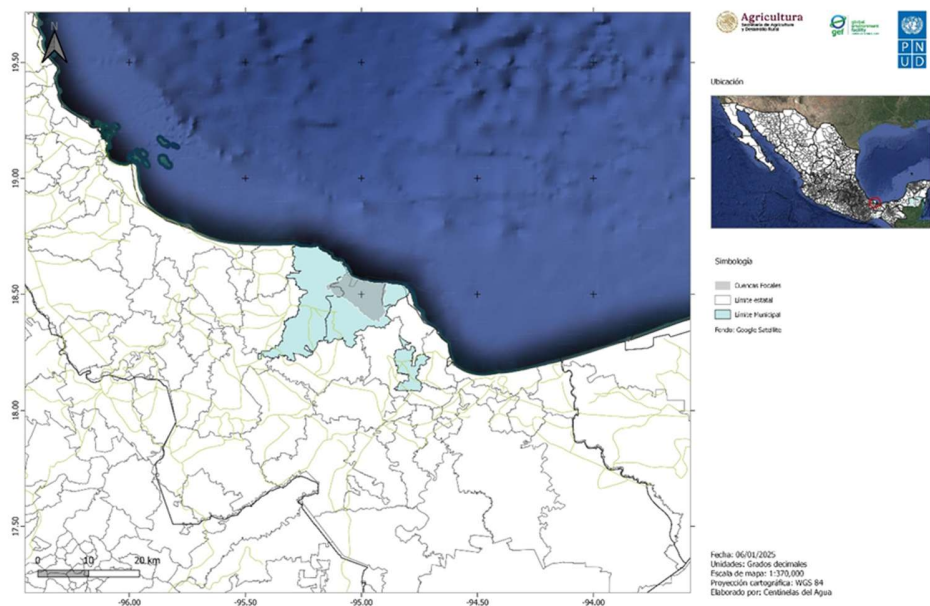


Figure 13. Sontecomapan Lagoon Landscape

Data about pollutants in water bodies was identified for two municipalities, including chemical compounds (nitrites, ammonium, nitrates, phosphates, total phosphorus, orthophosphates), microbiological indicators (fecal coliforms, enterococci), and other parameters (BOD, COD, dissolved solids, suspended solids, heavy metals) are included.

In San Andrés Tuxtla, the presence of enterococci (33 NMP/100 ml) is reported. The absence of data for other contaminants does not necessarily imply that they are absent, but that they were not measured or were not found in detectable concentrations. For Catemaco a greater amount of data is observed, highlighting the concentrations of ammonium (200 µg/L), nitrates (310 µg/L), phosphates (206 µg/L), and total phosphorus (300.7 µg/L). The presence of fecal coliforms (52 NMP/100 ml) indicates contamination of fecal origin. The values of BOD (6.76 mg/l) and COD (43.55 mg/l) suggest the presence of biodegradable organic matter. Low concentrations of heavy metals such as chromium and mercury are also reported (Table 14).

Table 14. Contaminants present in surface and underground water bodies of the municipalities of interest in the Laguna de Sontecomapan landscape

Pollutants in surface water	Veracruz		References
	San Andres Tuxtla	Catemaco	
Nitrites (mg/l)	-	46 µg/L	Perez Curiel, 1994; SEMARNAT, 2018
Ammonium (mg/l)	-	200 µg/L	Perez Curiel, 1994
Nitrates (mg/l)	-	310 µg/L	Perez Curiel, 1994
Phosphates (mg/l)	-	206 µg/L	Perez Curiel, 1994
Total phosphorus (mg/l)	-	300.7 µg/L	Perez Curiel, 1994

Fecal Coliforms (MPN/100 ml)	-	52 NMP/100 ml	SEMARNAT, 2018
Enterococci (MPN/100 ml)	33 NMP/100 ml	-	SEMARNAT, 2002
BOD (mg/l)	-	6.76	SEMARNAT, 2018
COD (mg/l)	-	43.55	SEMARNAT, 2018
Orthophosphates (mg/l)	-	0.301	SEMARNAT, 2018; Perez Curiel, 1994
Dissolved solids (mg/l)	-	89.6	SEMARNAT, 2018
Suspended solids (mg/l)	-	10	SEMARNAT, 2018
Total arsenic (mg/l)	-	<0.0001	SEMARNAT, 2018
Total cadmium (mg/l)	-	<0.00004	SEMARNAT, 2018
Chromium (mg/l)	-	0.005	SEMARNAT, 2018
Total lead (mg/l)	-	<0.00005	SEMARNAT, 2018
Total mercury (µg/l)	-	0.0025	SEMARNAT, 2018
Total nickel (mg/l)	-	<0.0007	SEMARNAT, 2018

Water and sanitation

The municipality of San Andrés Tuxtla has approximately 44,789 inhabited private homes, of which 43,473 have piped water available and 38,893 have drainage available (EAM, 2021) (Table 15).

Table 15. Percentage of homes with water and drainage availability in San Andrés Tuxtla (EAM, 2021).

Indicator	Housing	Percentage
With availability of piped water	43,473	97%
With drainage available	38,893	88%

Problems with water quality in the region and sources of pollutants

In San Andrés Tuxtla, water quality faces considerable challenges due to several sources of pollution. The National Water Commission (CONAGUA) has detected 60 highly polluted sites in Veracruz, including rivers and streams in the Los Tuxtlas area, which exhibit critical levels of fecal bacteria and biodegradable organic matter (RENAMECA, 2022). The main causes of pollution include emissions of both domestic and industrial wastewater (Morosini, 2004), excessive use of agrochemicals in agriculture and livestock farming, and excessive deforestation that intensifies soil erosion (Díaz, 2004). These activities favor the existence of nitrates, phosphates, bacteria and sediments in the water bodies of the area.

The environmental repercussions of oil activities in the state of Veracruz have left an unfavorable panorama. Dredging and drilling of wells have caused hydrological damage by impacting rivers, lagoons and estuaries, accelerating a process of salinization and water contamination causing multiple health problems, significantly reducing fishing and aquaculture activity in a large region. In addition, numerous activities of the different stages of the oil production process were established and carried out in ecologically vulnerable areas of the coast of Veracruz (Morosini, 2004). In these areas there are marine environments, littorals, estuaries, flood zones, inland waters, in other words, wetlands of great ecological vulnerability.

Deforestation and soil erosion in the region (Del Ángel et al., 2007), caused by the growth of production activities, contribute significantly to the transfer of sediments and nutrients into waterways (Escobar, 2002). Likewise, inadequate management of solid waste, such as plastics and metals, intensifies surface and underground pollution. The lack of infrastructure for wastewater management exacerbates this problem, while uncontrolled urbanization promotes runoff contaminated with hydrocarbons and heavy metals.

These causes of pollution, combined with natural phenomena such as erosion and geological mineralization, deteriorate water quality, promoting eutrophication, microbial contamination, and damage to the aquatic ecosystems in the area.

Table 16 reports the main pollutants that negatively impact water quality in the municipality of San Andrés, Tuxtla, and its surroundings, also known as the Tuxtlas (Catemaco, Huellean de Ocampo, and Santiago Tuxtla).

Table 16. Main pollutants in the area of influence of the Sontecomapan Lagoon in the municipality of San Andrés, Tuxtla Veracruz and surrounding areas.

Sources	Pollutants	References
Domestic waste	Fecal coliforms, Hydrogen sulfide, Organic matter	Torres and Pérez, 2002, Vázquez et al., 2004
Oil industry	Heavy metals (Ni, V, Cu, Co, and Cr)	Morosini, 2004
Agricultural industry	Fertilizers, Insecticides, Herbicides	Díaz, 2004

Water treatment

Wastewater discharges are classified as municipal and non-municipal. Municipal wastewater is generated in population centers and collected in urban and rural sewerage systems; non-municipal wastewater is generated by other uses, such as self-sufficient industry, and is discharged directly into national water bodies without being collected by sewerage systems (EAM, 2021).

In the municipalities prioritized for the Laguna de Sontecomapan landscape, there are two Wastewater Treatment Plants (WWTP), with a total installed capacity of 160.0 l/s. Both plants are active, treating a flow rate of 99.0 l/s. It is noteworthy that no new WWTPs have been installed since 2013 (Table 17). The two Wastewater Treatment Plants are currently facing reengineering costs for compliance with the recently updated NOM-001-SEMARNAT-2021, which will limit the efficient treatment of wastewater and will require an extension for compliance in 2027 and a large economic investment.

Table 17. Wastewater Treatment Plants located in the priority municipalities in the Laguna de Sontecomapan landscape

Municipality	WWTP	Installed Capacity (l/s)	Treated Flow Rate (l/s)	Status	Process	WWTP Receiving Body	Year of start of operation
Catemaco	Catemaco Plant	60	59	Active	Stabilization ponds	Tepetapan River, tributary of the Catemaco Lagoon	2013
San Andrés Tuxtla	Asunción Ixtaltepec	100	40	Active	Stabilization ponds	Tajalate River	2002

Total	160.0	99.0	
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Table 18. Main sources of pollution, overexploitation and environmental degradation

Pollution sources	Pollutants	Matrix	Concentration	Relationship and/or consequences of contaminants in water	Reference
Demographic increase and wastewater input	Nitrites	Water	46 µg/L	The reported concentrations of nitrite in the lake indicate that there are very efficient nitrification processes in this area of the lake.	Perez-Curiel, 1994
Not specified	Ammonium	Water	200 µg/L	Dense concentration of plankton whose metabolic activity releases soluble nitrogen compounds.	
Fertilizers used in the lake basin and sewage water	Nitrates	Water	488 µg/L	High nitrate concentrations in the water suggest that the inputs of nitrogenous compounds to the lake are relatively high and it is likely that a significant part of them is introduced into the lake through the discharge of untreated sewage.	
Not specified	Total phosphorus	Water	300.70 µg/L	Phosphorus accumulation in deep waters is also related to low phytoplankton densities and production rates, so the nutrient is not in high demand.	
Not specified	Orthophosphates	Water	206 µg/L	Much of the phosphorus is incorporated into the phytoplankton biomass.	
Domestic dumping and use of pesticides	Total coliforms	Water	Not specified	Lake Catemaco is considered a eutrophic system, with high levels of nutrients, primary productivity and pollution.	Torres y Pérez, 2002 Vázquez et al., 2004
	Hydrogen sulfide	Water	Not specified		
	Organic material	Water	Not specified		
Felling of surrounding vegetation	Sediments supply	Water	Not specified		
Industrial and municipal discharges	Mercury	Water	Not specified	In the case of the Coatzacoalcos River (in the south of Veracruz), the levels detected in both sediments and organisms make the region a critical due to toxic substances.	Morosini, 2004
	Lead	Water	Not specified		
	Cadmium	Water	Not specified		
Oil industry activities	Nickel	Water	Not specified		
	Vanadium	Water	Not specified		
Dumping of fertilizers, insecticides and herbicides	Not specified	Water	Not specified	-	Díaz, 2004

Pollution sources	Pollutants	Matrix	Concentration	Relationship and/or consequences of contaminants in water	Reference
Increase in deforestation, increase in livestock and agricultural area	Not specified	Water	Not specified	In the last decade, changes in water quality have been negative, as a result of the aforementioned activities.	Del Ángel, 2011

Hondo River Basin

Characterization of the basin system

The Hondo River Basin landscape comprises the Chetumal Bay hydrographic basin, located in hydrological region 33, and is made up of two micro-basins. These micro-basins are those of the Hondo and Escondido rivers that flow into the coasts of Chetumal (18.498°, -88.391°) (Figure 14).

Bahía de Chetumal

Mapa: Cuencas focales

Ubicación: Quintana Roo, México

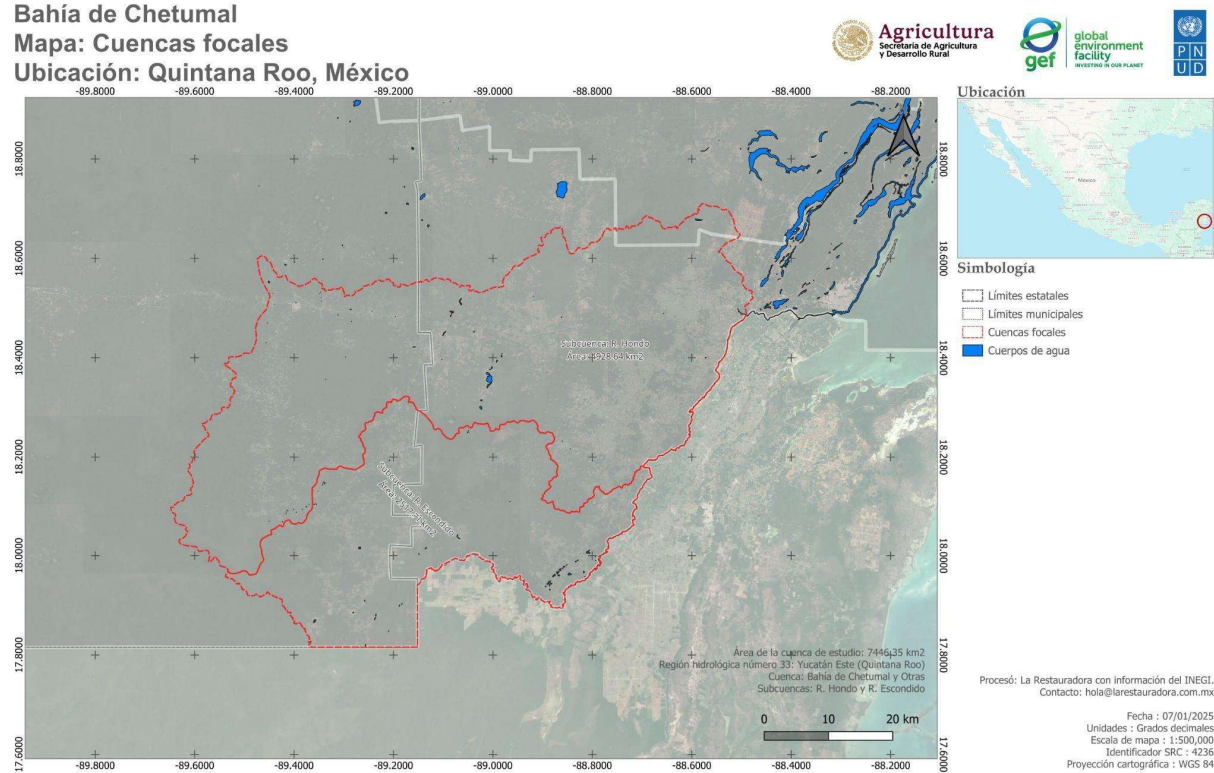


Figure 14. Landscape of the Hondo River Basin, located in the states of Quintana Roo and Campeche.

Its watersheds correspond to the orography of the Yucatán Península, which features the Karso Yucatecan subprovince, which is the largest and is made up of limestone rocks and the presence of fossils, mainly from a reef environment. It is characterized by presenting flat relief and abundant sinking structures or sinkholes known locally as "aguadas" and flooded collapse structures or cenotes. The landscape altitudinal range goes from 250 meters above sea level, to completely descending to sea level. The bays receive the water contributed by the micro-basins before tributating to the Caribbean Sea.

The micro-basins of the Hondo and Escondido rivers have shapes corresponding to an elongated oblong morphology, with a dendritic drainage network in its longest channel, and annular in the endorheic channels observed in the Escondido River basin (Figure 15). On the other hand, these micro-basins are recognized as transboundary, since their watershed is shared with the territory of Belize; however, that section has not been considered for this document.

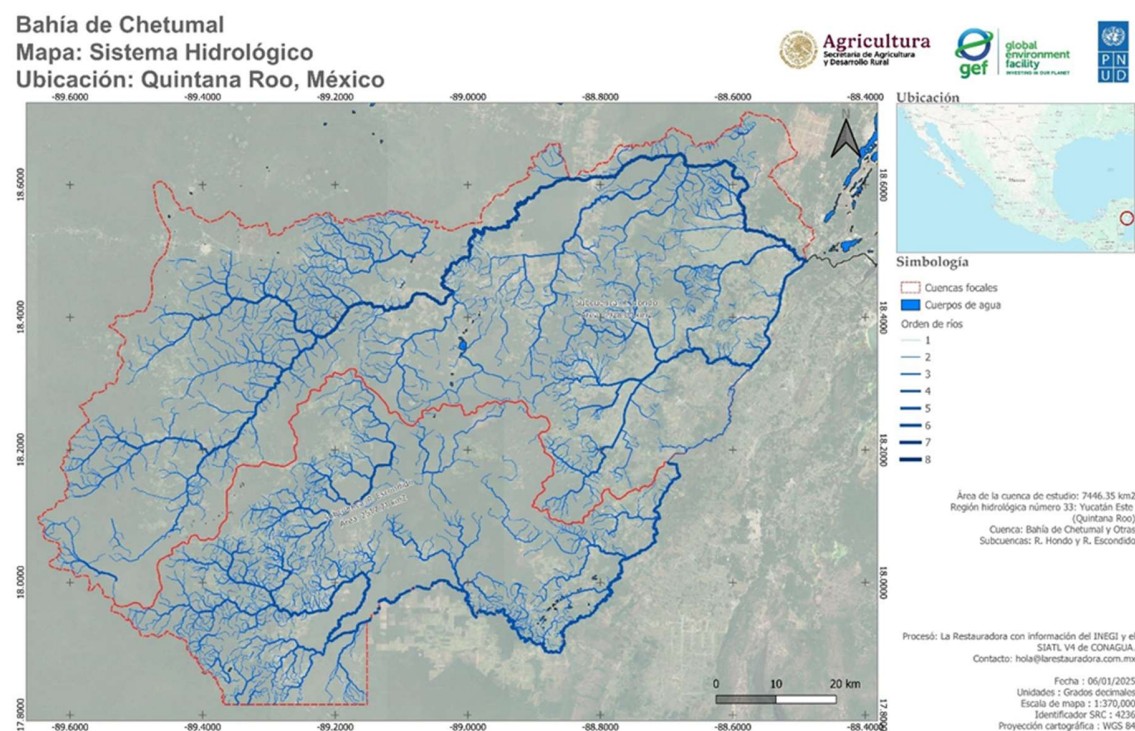


Figure 15. Hydrological system landscape of the Hondo River Basin, located in the states of Quintana Roo and Campeche.

Vegetation and land use

The landscape has 37 different types of land and vegetation use, including agricultural uses, pastures, without apparent vegetation or devoid of vegetation, human settlements and the various strata of secondary shrub or tree vegetation (Table 19, Figure 16).

Table 19. Land use and vegetation in the Hondo River Basin landscape, located in the states of Quintana Roo and Campeche.

Description	Area	
	(ha)	(%)
Medium semi-evergreen forest	218,750.9	33
Secondary tree vegetation	181,206.6	28
Agriculture	99,298.3	15
Secondary shrub vegetation	98,186.4	15
Palmar induced	60,531.4	9
Sub-deciduous thorny lowland forest	36,896.4	6
Upper evergreen forest	27,879.6	4
Tular	5,492.9	1
Human settlements	5,145.2	1
Natural palm grove	3,812.2	1
Herbaceous secondary vegetation	3,185.1	0
Sheet	1,971.8	0
Mangrove swamp	1,299.9	0
Body of water	660.9	0
Devoid of vegetation	77.4	0

Bahía de Chetumal
Mapa: Uso de Suelo y Vegetación
Ubicación: Quintana Roo, México

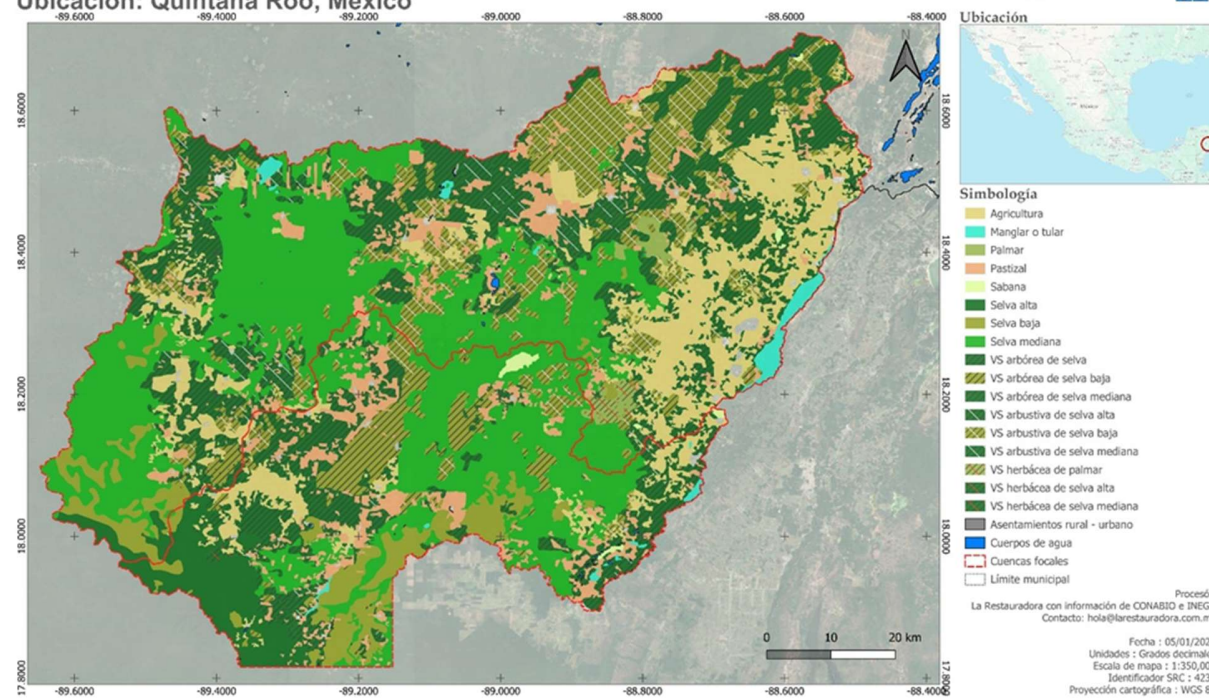


Figure 16. Land use and vegetation in the Hondo River Basin landscape, located in the states of Quintana Roo and Campeche.

Historical climate

The landscape of the Hondo River Basin presents the warm subhumid climates Aw0, Aw1, Aw0(x'), Aw2(x') and Aw3(x'), with the Warm Subhumid climate being predominant (Figure 17). Additionally, the vulnerability that the municipalities face to climate change has been identified.

Bahía de Chetumal
Mapa: Clima y Cambio Climático
Ubicación: Quintana Roo, México

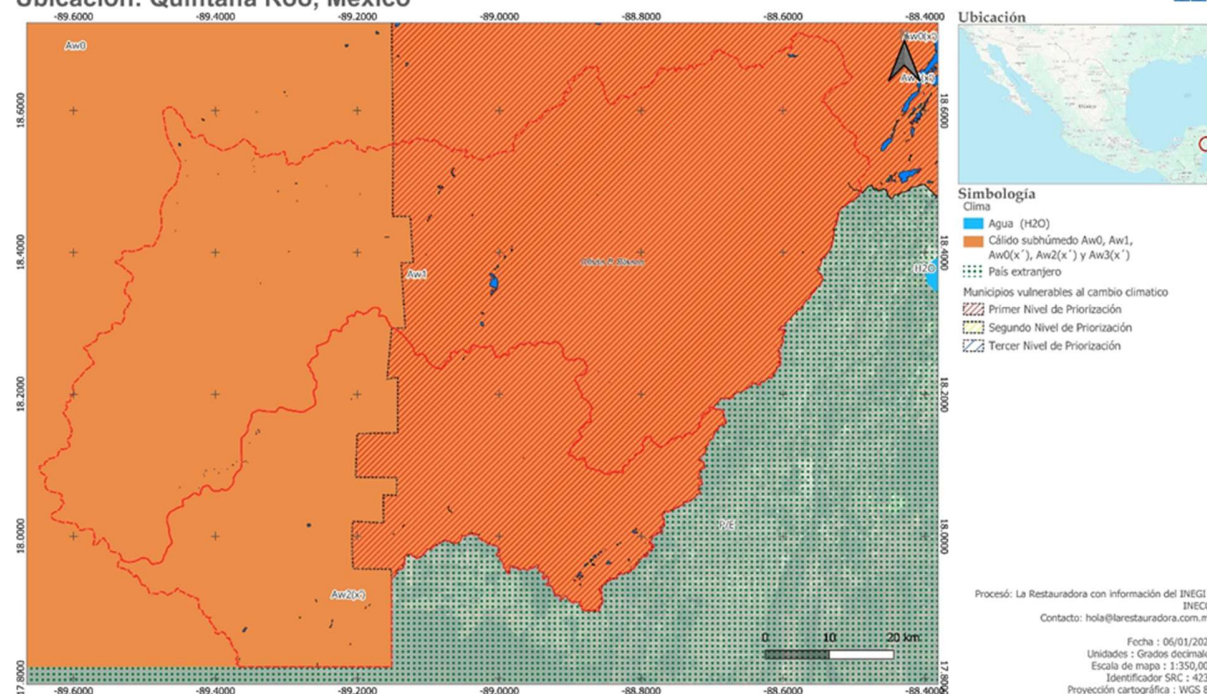


Figure 17. Climate and climate change in the Hondo River Basin landscape, located in the states of Quintana Roo and Campeche.

Political division

Three municipalities comprise the Hondo River landscape, being Othón P. Blanco and Bacalar belonging to the state of Quintana Roo, and in the demarcation of Campeche, Calakmul, where the basin occupies 32% of the surface of the first, and for the second 37% (Table 20).

Table 20. Municipalities of influence in the micro-basins of the Hondo River Basin landscape, located in the states of Quintana Roo and Campeche.

Name of municipality	Total Municipal Area (km ²)	Municipal area occupied by the micro-basin		Priority
		(km ²)	(%)	
Othon P. Blanco	13,897	4,234	30%	First level of prioritization
Calakmul	8,617	3208	37%	Not a priority
Bacalar	6,058	132	2%	First level of prioritization

As we have mentioned before, this vulnerability index integrates the municipalities with the most vulnerable conditions as the First Level of Prioritization. In the case of the municipalities of Othón P. Blanco and Bacalar, there is a record of an increase in cases of Dengue, an increase in vulnerability in extensive livestock farming to floods, as well as to the consequent flooding of human settlements.

Demography

In the Hondo River landscape, a total of 955 localities were identified. The highest recorded population for these localities is 169,028 people, and that the lowest population record was one person, occurring this way for 212 localities (Figure 18; Table 21).

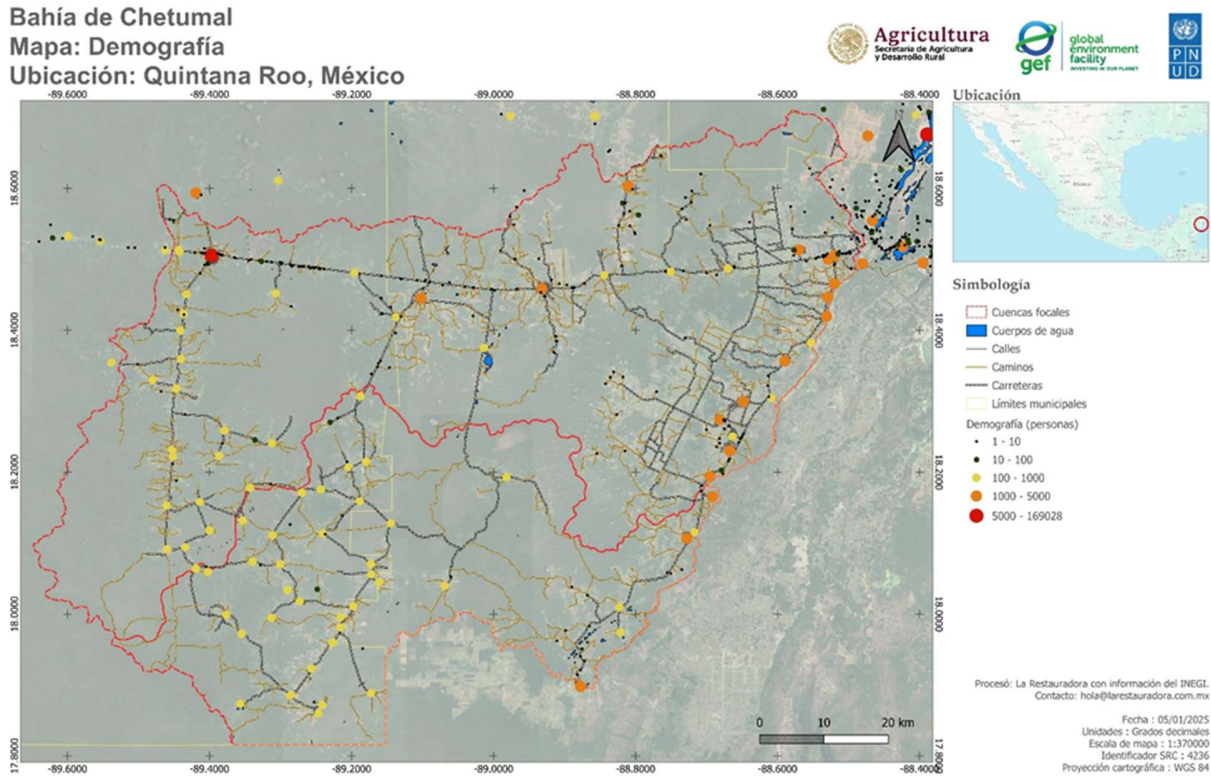


Figure 18. Demography in the Hondo River Basin landscape, located in the states of Quintana Roo and Campeche.

Table 21. Demography in the Hondo River Basin landscape, located in the states of Quintana Roo and Campeche.

Municipality	Locality	Total inhabitants (2020)	Female inhabitants (2020)		Male inhabitants (2020)		Type of locality
			Total	%	Total	%	
Othón P. Blanco	Álvaro Obregón Viejo	133	9	52	64	48	Rural
Othón P. Blanco	Allende	939	467	50	472	50	Rural
Othón P. Blanco	Cacao	2,079	999	48	1,080	52	Rural
Othón P. Blanco	Esteban Baca Calderón	256	119	46	137	54	Rural
Othón P. Blanco	Caobas	1,507	746	50	761	50	Rural
Othón P. Blanco	Cocoyol	1,041	496	48	545	52	Rural
Othón P. Blanco	San Francisco Botes	685	339	49	346	51	Rural
Othón P. Blanco	Francisco Villa	963	496	52	467	48	Rural
Othón P. Blanco	Jesús González Ortega	717	344	48	373	52	Rural
Othón P. Blanco	Nachi Cocom	878	428	49	450	51	Rural
Othón P. Blanco	Nicolás Bravo	3,699	1,867	50	1,832	50	Urban
Othón P. Blanco	Palmar	1,102	532	48	570	52	Rural
Othón P. Blanco	Revolución	103	56	54	47	46	Rural
Othón P. Blanco	Ramonal	1,061	501	47	560	53	Rural
Othón P. Blanco	Sabidos	1,532	788	51	744	49	Rural
Othón P. Blanco	Ucum	1,676	858	51	818	49	Rural
Othón P. Blanco	La Unión	1,104	527	48	577	52	Rural
Othón P. Blanco	Sacxán	1,080	525	49	555	51	Rural
Othón P. Blanco	Tomás Garrido Canabal	243	123	51	120	49	Rural
Othón P. Blanco	Javier Rojo Gómez	3,103	1,547	50	1,556	50	Urban
Othón P. Blanco	Álvaro Obregón	2,841	1,413	50	1,428	50	Urban
Othón P. Blanco	Carlos A. Madrazo	1,951	985	50	966	50	Rural
Othón P. Blanco	Pucté	2,040	,010	50	1,030	50	Rural
Othón P. Blanco	Sergio Butrón Casas	2,138	1,030	48	1,108	52	Urban
Othón P. Blanco	Tres Garantías	770	376	49	394	51	Rural
Othón P. Blanco	Dos Aguadas	171	87	51	84	49	Rural
Othón P. Blanco	Morocoy	1,436	708	49	728	51	Rural

Municipality	Locality	Total inhabitants (2020)	Female inhabitants (2020)		Male inhabitants (2020)		Type of locality
			Total	%	Total	%	
Othón P. Blanco	José Narciso Rovirosa	1,125	533	47	592	53	Rural
Othón P. Blanco	San José de la Montaña	205	99	48	106	52	Rural
Othón P. Blanco	Icaiché	185	101	55	84	45	Rural
Othón P. Blanco	Santa Rosa	188	99	53	89	47	Rural
Othón P. Blanco	Pedro Joaquín Coldwell	796	09	51	87	49	Rural
Calakmul	Xpujil	2,729	2,938	51	2,791	49	Urban
Calakmul	Dieciséis de Septiembre (Laguna Alvarado)	173	84	49	89	51	Rural
Calakmul	Los Alacranes	168	73	43	95	57	Rural
Calakmul	Los Ángeles	585	278	48	07	52	Rural
Calakmul	Arroyo Negro	266	135	51	31	49	Rural
Calakmul	Blasillo	268	122	46	46	54	Rural
Calakmul	Santo Domingo (El Sacrificio)	644	315	49	329	51	Rural
Calakmul	El Carmen II (Las Carmelas)	336	179	53	157	47	Rural
Calakmul	Caña Brava	211	102	48	109	52	Rural
Calakmul	Cerro de las Flores	101	45	45	56	55	Rural
Calakmul	Cristóbal Colón	361	171	47	190	53	Rural
Calakmul	Dos Lagunas	294	148	50	146	50	Rural
Calakmul	Dos Naciones	309	162	52	147	48	Rural
Calakmul	Felipe Ángeles	344	176	51	168	49	Rural
Calakmul	La Guadalupe	335	167	50	168	50	Rural
Calakmul	Guillermo Prieto	289	135	47	154	53	Rural
Calakmul	Gustavo Díaz Ordaz (San Antonio Soda)	555	266	48	289	52	Rural
Calakmul	Heriberto Jara Corona	356	169	47	187	53	Rural
Calakmul	Hermenegildo Galeana	126	63	50	63	50	Rural
Calakmul	Eugenio Echeverría Castellot (El Carrizal)	226	113	50	113	50	Rural

Municipality	Locality	Total inhabitants (2020)	Female inhabitants (2020)		Male inhabitants (2020)		Type of locality
			Total	%	Total	%	
Calakmul	Ingeniero Ricardo Payro Jene (Polo Norte)	695	347	50	348	50	Rural
Calakmul	José María Morelos y Pavón (Civalito)	443	228	51	215	49	Rural
Calakmul	Josefa Ortiz de Domínguez (Icaiché)	250	126	50	124	50	Rural
Calakmul	Justo Sierra Méndez	196	94	48	102	52	Rural
Calakmul	Lázaro Cárdenas Número 2 (Ojo de Agua)	370	69	46	201	54	Rural
Calakmul	Ley de Fomento Agropecuario (La Misteriosa)	450	228	51	222	49	Rural
Calakmul	La Lucha	315	143	45	172	55	Rural
Calakmul	La Lucha	133	71	53	62	47	Rural
Calakmul	El Manantial	402	200	50	202	50	Rural
Calakmul	Manuel Castilla Brito	523	273	52	250	48	Rural
Calakmul	Manuel Crescencio Rejón	324	170	52	154	48	Rural
Calakmul	Narcizo Mendoza	424	216	51	208	49	Rural
Calakmul	Niños Héroes	260	126	48	134	52	Rural
Calakmul	Nuevo Campanario	389	198	51	191	49	Rural
Calakmul	Nuevo Paraíso	223	100	45	123	55	Rural
Calakmul	Nuevo Progreso	67	36	54	31	46	Rural
Calakmul	Nuevo San José	304	133	44	171	56	Rural
Calakmul	Nuevo Veracruz	164	76	46	88	54	Rural
Calakmul	Once de Mayo	358	170	47	188	53	Rural
Calakmul	Pioneros del Río Xnohá	326	157	48	169	52	Rural
Calakmul	Cinco de Mayo (Plan de Ayala)	484	50	52	234	48	Rural
Calakmul	Quiché de las Pailas	365	162	44	203	56	Rural
Calakmul	San Miguel	167	86	51	81	49	Rural

Municipality	Locality	Total inhabitants (2020)	Female inhabitants (2020)		Male inhabitants (2020)		Type of locality
			Total	%	Total	%	
Calakmul	Los Tambores de Emiliano Zapata	257	17	46	140	54	Rural
Calakmul	El Tesoro	418	208	50	210	50	Rural
Calakmul	Tomás Aznar Barbachano (La Moza)	194	95	49	99	51	Rural
Calakmul	Unidad y Trabajo	144	66	46	78	54	Rural
Calakmul	Valentín Gómez Farías	386	203	53	183	47	Rural
Calakmul	Veinte de Noviembre	419	199	47	220	53	Rural
Calakmul	Veintiuno de Mayo (Lechugal)	241	118	49	123	51	Rural
Calakmul	La Victoria	194	91	47	103	53	Rural
Calakmul	La Virgencita de la Candelaria	414	197	48	217	52	Rural

Main productive activities

The main productive activities in this landscape are agriculture, sheep and cattle raising, and fishing. Regarding agriculture, the main crops are:

- Corn: 35% of the total agricultural area, being the main self-consumption and cash crop in rural areas.
- Soybean and sorghum: together, they account for about 25% of the area, mainly for animal feed and the oil industry.
- Sugarcane: with 15% of the area, its production is concentrated in areas with available irrigation and suitable soils.
- Citrus and tropical fruit trees: around 10%, with growing importance in export and industrial processing (juices, essential oils).
- Livestock production in 2023 for the included municipalities totaled 20,232.95 tons of products, derived from cattle, pigs, sheep, goats, poultry, turkeys, and bees (beef, bovine milk, pork, sheep meat, poultry meat, turkey meat, eggs, honey, wax).

Water sources

Using data from CONAGUA water concessions located within the “Bahía Chetumal” polygon, we explored those areas with possible access to water, which can greatly facilitate conservation and ecological restoration actions. Figure 19 below shows the area of influence of the water concessions with a radius of 1,000 meters, which are distributed throughout the basin. The areas represented correspond to the concessions, but not to bodies of water.

Laguna de Sontecomapan
Mapa: Cercanía a Concesiones de Agua
Ubicación: Veracruz, México

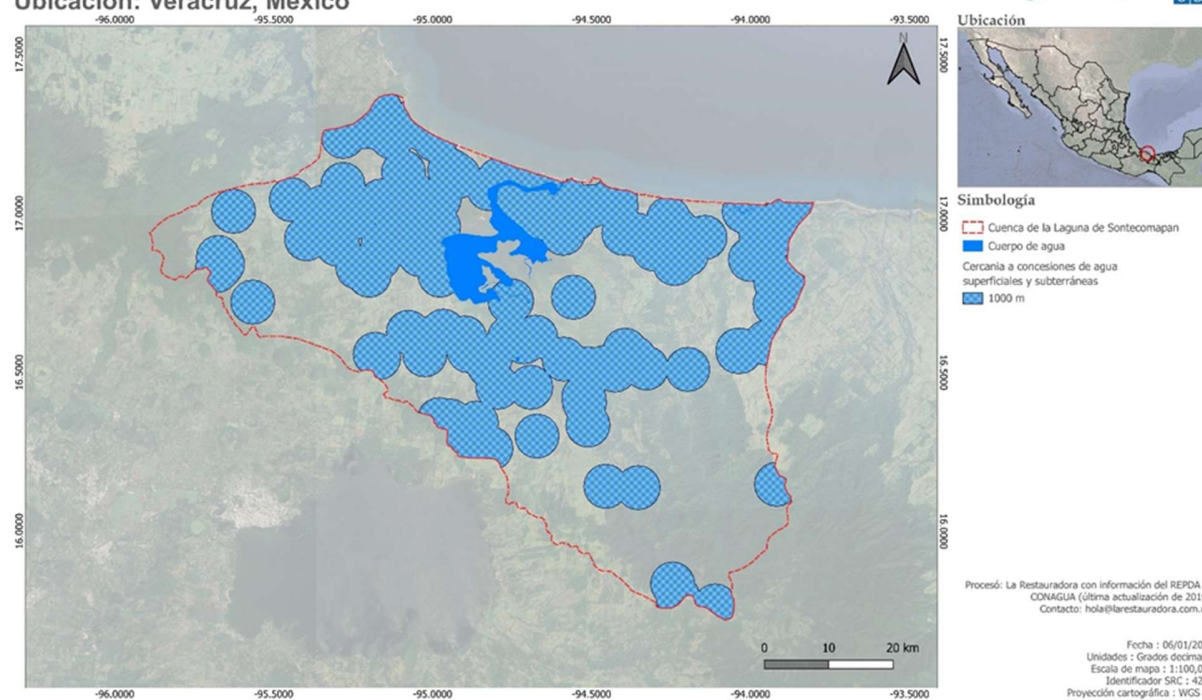


Figure 19. Proximity to water concessions in the Hondo River Basin landscape, located in the states of Quintana Roo and Campeche.

Water quality problems in the Hondo River area

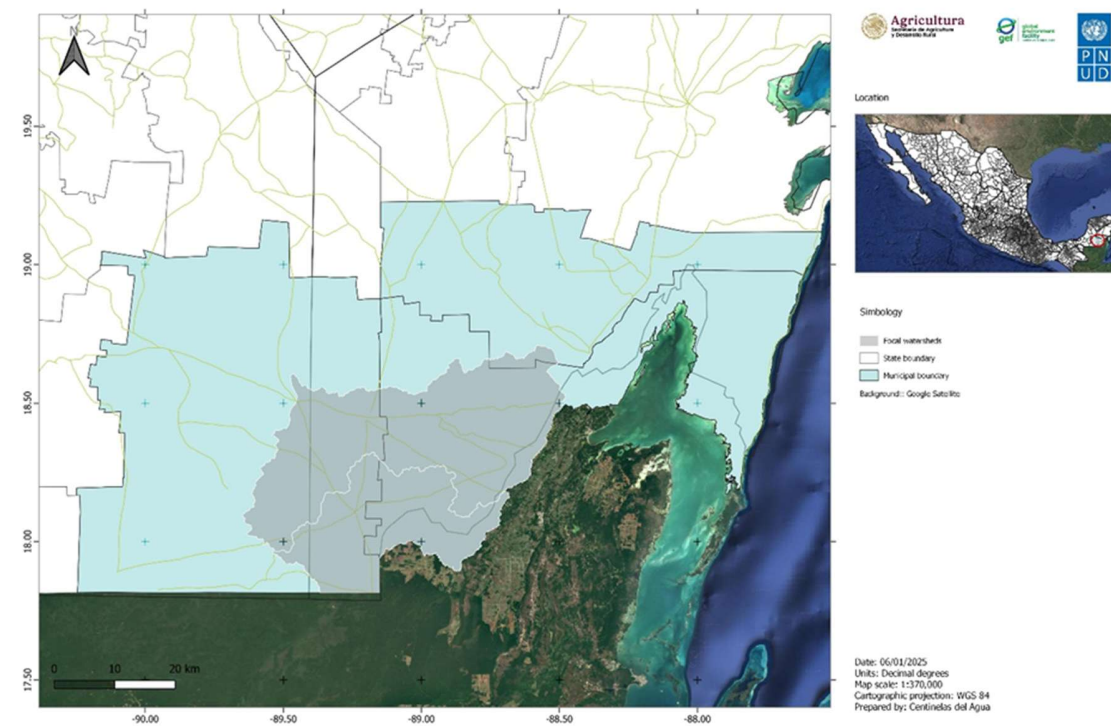


Figure 20. Hondo River Basin Landscape

Othon P. Blanco, Quintana Roo

Othón P. Blanco belongs to the Yucatan East hydrological region (33) with 100%. The Chetumal Bay and other basins (85.92%) and closed basins (14.08%). The sub-basins include Chetumal Bay (43.13%), Rio Hondo (17.18%), Xpechil-Felipe Carrillo Puerto -Chunhuhub-Yoactún-L. Paiyegua (13.39%), Rio Escondido (12.35%), La Ascensión and Espíritu Santo Bays (4.75%) and Becanchén-L. Chichancanab-Loché-Xkanhá-No name (0.69%), and Other (8.51%).

The Hondo River, located southwest of Chetumal Bay, forms the natural border with Belize. Its course is winding and lacks beacons or other navigation devices. However, it can travel for approximately 160 km between the town of La Union and the mouth of the bay. Its course flows northeast, with a depth that varies between 5 m and 15 m and a maximum width of 55 m. The bottom is composed of a mixture of mud, logs and stones; the riverbank, composed of low forest, savannah and mangroves, is affected during the rainy season, changing the height up to 2 meters above the river level.

Chetumal Bay is located northwest of Bacalar Lagoon. From the Hondo River, the lagoon follows a limestone fault line that runs from northeast to southwest. Subterranean streams flow into this lagoon. It is approximately 50 km long and 2 km wide. Some of its waters reach the Hondo River through the fluvial flow of the Chac estuary; there are seven cenotes that disperse their waters through a network of lagoons composed of the Chile Verde, Guerrero, rapids and saltwater lagoons, which end in Chetumal Bay. The Zaragoza Canal is a body of water located in Chetumal, it is an artificial canal that connects the city with Chetumal Bay. It is a waterway that has historically been used both for navigation and for draining the city's waters.

In Chetumal, there are a number of challenges directly linked to pollution and water resource management. The discharge of wastewater, whether domestic or industrial, without appropriate treatment, facilitates the distribution of contaminated water into rivers and nearby bodies of water. In addition, the excessive use of plastics, particularly in urban areas close to bodies of water such as the Hondo River and Chetumal Bay, has increased pollution, creating microplastics that harm both water quality and aquatic life (García et al., 2018).

Agricultural and livestock activities also contribute to this problem, since the application of agrochemicals, such as pesticides and fertilizers, contaminates surface and underground water bodies, harming local biodiversity and human health (Eúan et al., 2002). Different studies have reported the presence of heavy metals derived from industrial activities and the discharge of toxic products into Chetumal Bay (García and Gold, 2002; Jiménez, 2016; Pérez and Cerón, 2012), in addition to the infiltration of saline waters into aquifers near the coast (Bautista et al., 2011), which threatens the quality of groundwater. Although oil and chemical spills are less common, they constitute a considerable danger due to the possible damage they can cause to water bodies in the area (Álvarez-Legorreta, 2014).

Although efforts have been made, the infrastructure necessary for the proper treatment of water remains insufficient, which makes efficient and safe water management in the city difficult (Castilla, 2024). The massive felling of trees and changes in land use in areas close to water ecosystems also favor the deterioration of water quality, modifying the natural filtering and cleaning processes (Álvarez, 2001). In the face of these challenges, it is essential to implement effective actions to safeguard water resources and ensure sustainable access to water for the inhabitants of Chetumal. Table 22 presents the main pollutants reported in Chetumal Bay.

Table 22. Main pollutants in the city of Chetumal, Othón P. Blanco, Quintana Roo and surrounding areas.

Sources	Pollutants	References
Agricultural industry	Nutrients, herbicides, insecticides, salts, organochlorine pesticides	Eúan et al., 2002
Sewage	Organic matter, phosphates, fecal coliforms, nitrates, detergents, aromatic hydrocarbons (HA)	Jimenez, 2013, Gomez-Castillo, 2014, Alvarez-Legorreta, 2014
Domestic waste	Heavy metals, (Cd, Pb, Hg and As)	Gonzalez et al., 2008

Calakmul, Campeche

Calakmul is located in the southeastern sector of the state of Campeche. Located in the basins of Laguna Cerrada (56.55%), Laguna de Términos (32.57%), Chetumal Bay (10.83%) and Champotón (0.05%), which belong to the Hydrological Regions (31) Western Yucatan (54.02%), (30) Grijalva-Usumacinta (32.57%) and (33) Eastern Yucatan (13.51%) (Huítzl López, 2014).

The water table of the municipality of Calakmul has an area of between 60 and 300 meters above sea level, with a high gypsum content, which makes the water unsuitable for human consumption or irrigation (Huítzl López, 2014). The forests of Calakmul function as a regulator of surface and underground water flows, allowing cities located in lower

areas of the peninsula such as Campeche, Mérida, Chetumal and Cancún to benefit from the preservation of large forest areas in the area, which promote the infiltration of water that feeds the aquifers (García, et al., 2002).

On May 23, 1989, a federal decree was published protecting the forests of the southern Yucatan Peninsula, establishing the Calakmul, Campeche Biosphere Reserve (RBC), with an area of 723,185.12 ha. It includes two central areas and a buffer zone: the central zone I (south) has 147,915.50 ha, the central zone II (north) has 100,345.0 ha and the central buffer zone has 474,924.62 ha (García et al., 2002). The forests of Calakmul have suffered during the last decades due to a process of human colonization and the replacement of vegetation by agricultural and livestock activities (Pat, 2000; García and Pat, 2001).

In previous decades, the forest did not have constant human occupation, since the activities carried out were of a temporary nature, mainly the extraction of latex from the chicozapote to make chicle and the selective extraction of valuable woods, especially cedar and mahogany. Rábago (2024) carried out detailed analyses on groundwater samples in the Calakmul Biosphere Reserve during 2022 and 2023. The results indicate that the predominance of certain ions suggests interactions with different types of rocks characteristic of the area, promoting implications for water quality due to high sulfate values. Maximum *E. Coli* values of 51.20 NMP/100 and 14.13 mg/g in nitrates were also reported.

In the municipality of Calakmul, the main source of water is rainwater harvesting thanks to the implementation of different programs; however, the installation of rainwater harvesting systems is a benefit for a small number of residents. Residents also resort to other methods for acquiring water, such as using plot-based waterholes and ponds for agricultural work. There are also numerous deep wells where water is extracted, and certain areas are managed by the aqueduct, which is highly complained about by people in the communities due to the poor quality of the water (Huítztl López, 2014).

The presence of contaminants in Calakmul's groundwater constitutes a constant source of contaminants to the basins linked to the region by their hydrological and hydrographic connection; in addition, they pose a health hazard for the population, given that they constitute the only source of water supply (of low quality) for the majority of the inhabitants.

The main pollutants found in the municipalities of the study site are described below (Table 23).

Table 23. Contaminants present in surface and underground water bodies of the municipalities of interest, in the Cuenca del Río Hondo landscape.

No.	Municipality	Contaminants present in surface bodies	Pollutants present in underground bodies
1	Bacalar	Nitrites, phosphates, nitrates, total organic carbon, sulfates, fecal coliforms and total coliforms	Nitrites, nitrates, phosphates, sulfates, gypsum, enterococci, total coliforms, fecal coliforms, E. Coli, heavy metals, pesticides
2	Calakmul	Organic matter, gypsum, nitrates, bacteria, pesticides, herbicides	Sulfates, hardness, fecal coliforms and urban solid waste.
3	Othon P. Blanco	Heavy metals, nitrites, nitrates, sulfates, emerging compounds, sulfates, total coliforms, fecal coliforms, enterococci	Phosphates, sulfates, chlorides, gypsum, carbonates, hardness

Water treatment

Wastewater discharges are classified as municipal and non-municipal. Municipal wastewater is generated in population centers and collected in urban and rural sewerage systems; non-municipal wastewater is generated by other uses, such as self-sufficient industry, and is discharged directly into national water bodies without being collected by sewerage systems (EAM, 2021).

In the prioritized municipalities of Hondo River landscape focal site, there are seven Wastewater Treatment Plants (WWTPs), with a total installed capacity of 179.0 l/s. All plants are active, treating a flow rate of 102.99 l/s. It is noteworthy that no new WWTPs have been installed since 2013 (Table 24). The seven Wastewater Treatment Plants are currently facing reengineering costs for compliance with the recently updated NOM-001-SEMARNAT-2021, which will limit the efficient treatment of wastewater and will require an extension for compliance in 2027 and a large economic investment.

Table 24. Wastewater Treatment Plants located in the priority municipalities of the Hondo River landscape.

Municipality	WWTP	Installed Capacity (l/s)	Treated Flow Rate (l/s)	Status	Process	WWTP receiving body	Year of start of operation
Othon P. Blanco	FOVISSSTE V	5	2.85	Active	Activated sludge	Aquifer	1980
Othon P. Blanco	Saint Mary	2	2	Active	Activated sludge	Aquifer	1980
Othon P. Blanco	Centenary	120	85.74	Active	Activated sludge	Aquifer	1980
Othon P. Blanco	Bacalar	30	0.4	Active	Activated sludge	Aquifer	2011
Othon P. Blanco	Huay-Pix	5	2	Active	Dual	Aquifer	2005
Othon P. Blanco	Mahahual	10	5	Active	Activated sludge	Aquifer	2003
Othon P. Blanco	Second Lieutenant Lopez	7	5	Active	Activated sludge	Aquifer	2003
Total		179.0	102.99				

Table 25. Main sources of pollution, overexploitation and environmental degradation

Pollution sources	Pollutants	Matrix	Concentration	Reference
Agriculture	Toxic waste	Not specified	Water	Olvera (2010)
Domestic wastewater discharges, pesticides, agrochemicals, sugar production	Toxic waste and hydrocarbons	Not specified	Water	Álvarez (2001)
Agriculture and livestock	Organic material and agrochemicals	Not specified	Water	CONABIO
Recreative activities	Coliforms	> 200 NMP/100 ml	Water	Programa de Desarrollo Urbano de Chetumal-Calderitas-Subteniente López-Huay-Pix y Xul-Há
Agriculture	Nutrients	Not specified	Water	Eúan et al., 2002
	herbicides	Not specified	Water	
	Insecticide	Not specified	Water	
	Pesticides	Not specified	Water	
Wastewater	Organic material	Not specified	Water	Jiménez, 2013
	Phosphates	Not specified	Water	Gómez-Castillo, 2014
	Coliforms	Not specified	Water	Álvarez-Legorreta, 2014

	Nitrates	Not specified	Water	
	Detergents	Not specified	Water	
	Aromatic hydrocarbons	Not specified	Water	
Domestic waste	Cadmium	Not specified	Water	González et al., 2008
	Lead	Not specified	Water	
	Mercury	Not specified	Water	
	Arsenic	Not specified	Water	

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C. Assessment of Hypoxia Conditions in the Project Target Landscapes

The National Water Commission (CONAGUA, its acronym in Spanish) develops a systematic monitoring of water quality in the main water bodies of the country, through the Water Quality Monitoring National Network (RENAMECA, its acronym in Spanish). Based on RENAMECA – the official national data – a total of 1,013 records for the *coastal zones* of the three focal landscapes of the project are available: 724 records for the Isthmus of Tehuantepec Lagoon System; 26 records for the Sontecomapan Lagoon; and 263 records for the Hondo River (Figures 1, 2 and 3).

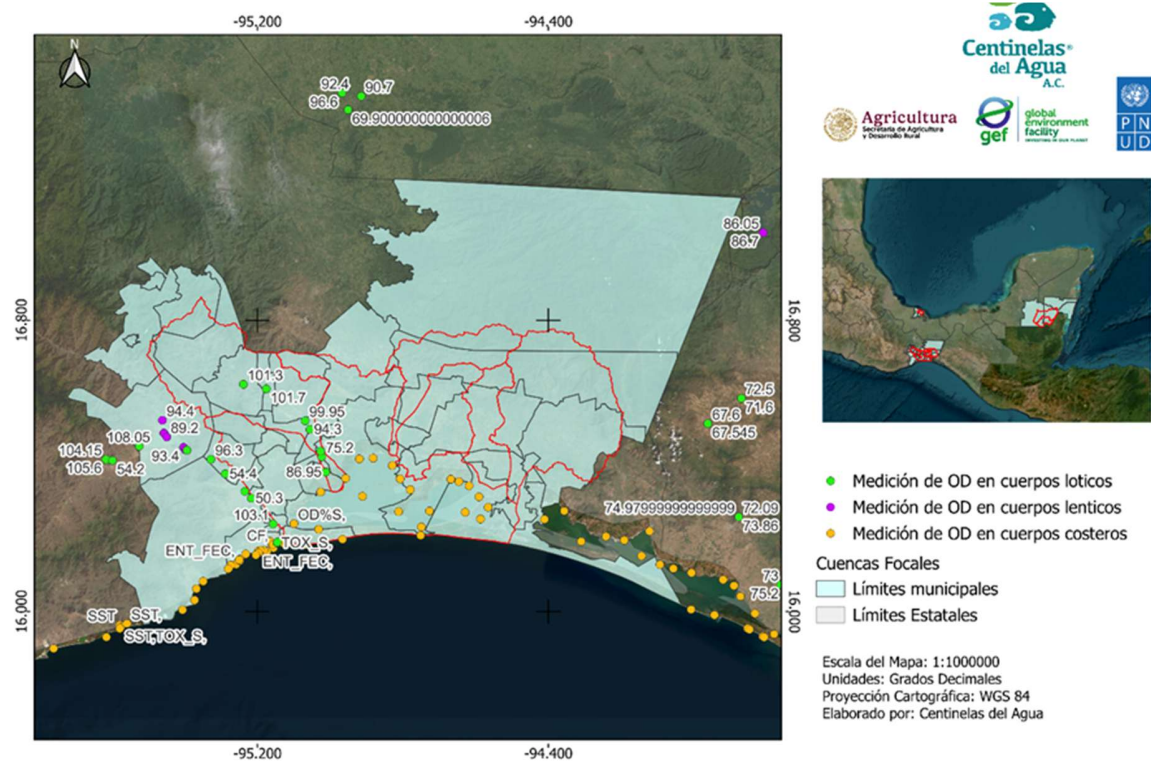


Figure 1. RENAMECA dissolved oxygen sampling sites in coastal and mainland. In yellow, coastal sites inside the Isthmus of Tehuantepec Lagoon System are shown.

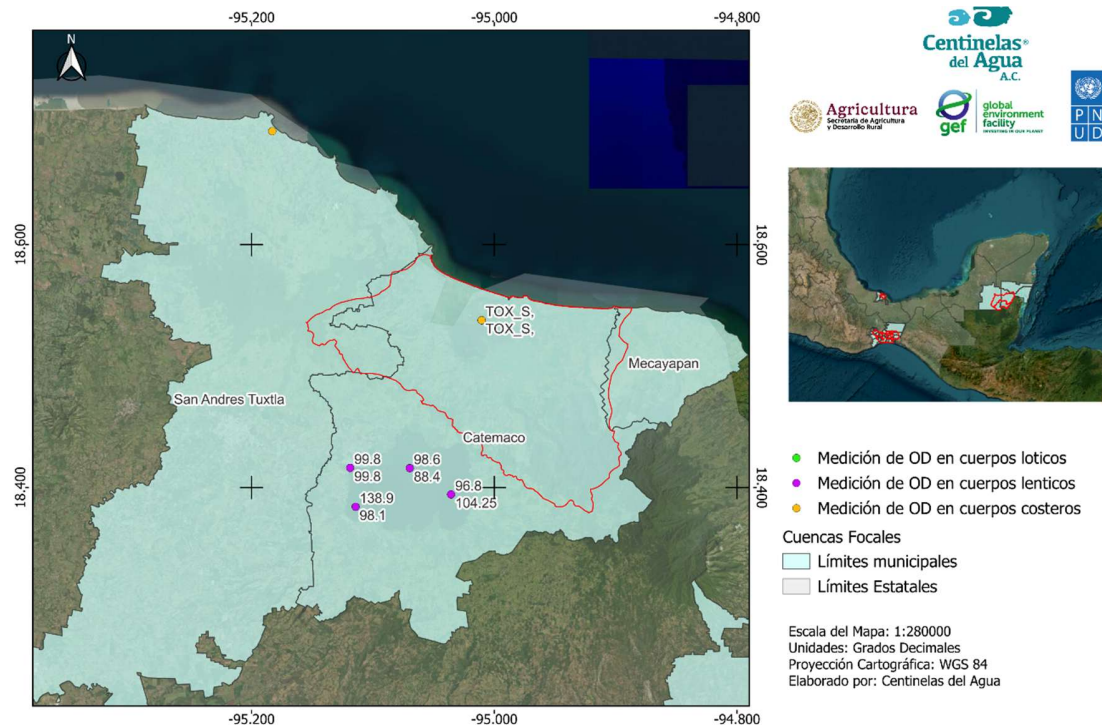


Figure 2. RENAMECA dissolved oxygen sampling sites in coastal and mainland. In yellow, coastal sites inside the Sontecomapan Lagoon are shown.

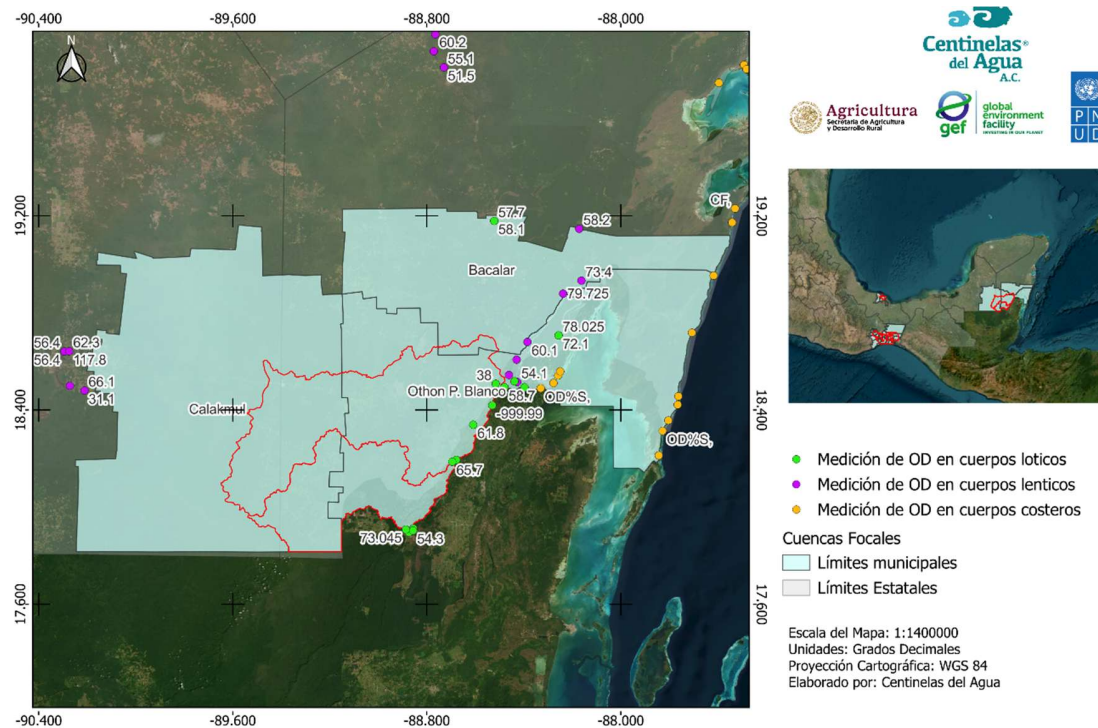


Figure 3. RENAMECA dissolved oxygen sampling sites in coastal and mainland. Shown in yellow are the coastal sites influenced by the Hondo River landscape.

Available RENAMECA's records for the Isthmus of Tehuantepec Lagoon System date from 2013 to 2020. According to them, the range of dissolved oxygen is **>1 to 15.8 mg/l**. Although 77.35% of the data indicates a concentration above 5 mg/l, 20.72% of the records are between 2 and 5 mg/l, which suggests a tendency towards anoxicity. Moreover, 1.93% of the records are below 2 mg/l, which directly refers to hypoxia. Regarding the Sontecomapan Lagoon, records also date from 2013 to 2020. The range of dissolved oxygen records is **4.2 to 9.3 mg/l**. Although no record suggests anoxicity (below 2 mg/l), 3.85% of them are between 2 and 5 mg/l, which suggests a tendency towards anoxicity. For the Hondo River, records date from 2012 to 2020. The range of dissolved oxygen records is **>1 to 17.58 mg/l**. Although most records are above 5 mg/l, 22.43% of them suggest a tendency towards anoxicity (values between 2 and 5 mg/l), and 1.90% of the records refer to hypoxia.

On the other hand, non-official records identified dissolved oxygen concentrations of 0.45 ml/l for areas no more than 80 km from the Isthmus of Tehuantepec Lagoon System (Maske et al., 2019). For the Sontecomapan Lagoon, Juárez Silva (2022) recorded concentration between 0 and 5 mg/l of dissolved oxygen on the surface of the lagoon, and between 1 and 4 mg/l at the bottom of the lagoon.

Although RENAMECA provides data, it should be highlighted that there has been no data taken systematically and periodically since 2020. Therefore, data referring to hypoxia or hypoxia-prone conditions should be considered of utmost importance. Moreover, the three landscapes recorded toxicity, which threatens ecosystems, communities, and local

economies. The Isthmus of Tehuantepec Lagoon System toxicity record is 7.6 units; while the record for the Sontecomapan Lagoon is 8.9 units, and for the Hondo River is 2 units (CONAGUA, 2024).

Therefore, the project will establish the baseline for eutrophication and hypoxia during project implementation, through monitoring actions included in component 1. The project will also establish a water quality monitoring system in these sites to assess the extent of the problem and to propose solutions.

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Annex 13: Additional agreements

Letters of financial commitments included in a separate file.

Annex 14: Signed LOA between UNDP and IP requesting UNDP Support Services

N/A

Annex 15: GEF CEO Endorsement/Approval

See separate file

Annex 16: On-Granting Provisions Applicable to the Implementing Partner

On-granting is built into the design and in compliance with the [UNDP Policy on Low Value Grants \(LVGs\)](#).

On-Granting Provisions Applicable to the Implementing Partner

Whereas the Implementing Partner (“IP”) has been selected by UNDP and the Government to undertake grant-making activities under the Agreement in accordance with the Project/Portfolio Document (Annex A), the IP agrees to be bound by the following additional provisions:

1. Grant Award Process

- 1.1 The IP shall be fully accountable for the completion of all grant-making activities in accordance with its financial regulations, rules and policies, to the extent that they are consistent with UNDP’s grant policies and Financial Regulations and Rules. If they are not consistent, UNDP’s grant policies and Financial Regulations and Rules must be followed.
- 1.2 The IP shall conduct an assessment of grant recipient proposal(s) against set selection criteria established in the Project/Portfolio Document or in the call for proposals, and shall submit eligible grant proposal(s) to the Project/Portfolio Board or designated grant selection committee for consideration and final selection.
- 1.3 The IP shall ensure that:
 - a. The grant award process is organized in a fully transparent manner that guarantees impartiality and equal treatment to all applicants;
 - b. All stages of the grant award process are formally documented through standardized checklists and forms;
 - c. Grants are awarded in accordance with formal rules of procedure, including adequate due diligence policies and processes;
 - d. The evaluation process is based solely on the established criteria for eligibility, selection and exclusion as indicated in the call for proposals;
 - e. The grant recipient is duly organized and in good standing in its state/country of organization, as well as the eligibility of activities to be carried out with the grant award;
 - f. All applicants are notified in writing of the grant award outcome;
 - g. The grant award decision is made public within a reasonable timeframe following its issuance;
 - h. Grant funds are channeled transparently and effectively to grant recipients;
 - i. No grant is awarded retroactively for activities already started or completed at the time of the application; and
 - j. Procedures are in place (and set forth in any agreements the IP enters into with grant recipients pursuant to this Agreement) to:

- i. Recover grant funds unduly paid, and/or to prevent and address irregularities and fraud by the grant recipient; and
- ii. Suspend, reduce or terminate the grant if the grant recipient fails to comply with its obligations.

1.4 Funding provided by the IP to any individual grant recipient shall not exceed \$150,000 per individual grant and \$300,000 on a cumulative basis within the same programme period.

2. Managing and Monitoring Performance of Grant Recipient(s)

- 2.1 The IP shall supervise and monitor the grant recipient's activities and its achievement of specified results pursuant to the grant proposal selected by the Project/Portfolio Board or designated grant selection committee, including the schedules set forth therein.
- 2.2 The IP shall measure the grant recipient's performance based on results achieved against agreed performance targets in the grant agreement. Performance shall be monitored and assessed through the progress narrative and financial reports specified in Section 3 below.
- 2.3 The IP shall ensure that each deliverable for which a grant recipient is responsible for achieving has an effective performance target against which the grant recipient must report periodically and which the IP will monitor through regular reporting, at least on an annual basis.
- 2.4 UNDP may, during the term of the Agreement, undertake various independent assurance measures (such as spot checks or audits) regarding the IP's activities that are the subject of this Agreement, including monitoring and oversight, as well as independent assurance measures of the Responsible Party (where applicable) and grant recipients' programmatic and financial activities.

3. Reporting and Audit

- 3.1 The IP shall have in place its own systems to assess and monitor the grant recipient's activities and use of grant funds, including reporting and audit requirements.
- 3.2 The IP shall ensure the timeliness and accuracy of the grant recipient's reporting in relation to the grant and shall be responsible for the management of the grant recipient's audits. The IP shall determine the frequency of audits of grant recipient(s), evaluate audit quality, and monitor audit findings and any corrective measures to ensure resolution. Notwithstanding the above, UNDP shall have the right to audit or review the IP's and the grant recipient's related books and records as it may require.
- 3.3 The IP shall consolidate the reporting from grant recipient(s) and submit **annual financial and narrative progress reports** to UNDP no later than 30 days after the end of the year. In the event that the IP engages a Responsible Party to undertake its grant-making obligations and responsibilities (as further described in Section 5 below), the IP shall cause the RP to consolidate the **annual financial and narrative progress reports** from grant recipient(s) and submit the aforementioned to the IP no later than 30 days after the end of the year. The IP will in turn review and submit the consolidated reports to UNDP no later than 45 days after the end of each year.
- 3.4 The IP shall provide progress reports ("Performance Reports") including financial and narrative information, to UNDP at least 30 days before the expected release of the next tranche or at least annually within 30 days after the end of each year until the activities have been completed. In the event disbursement of funds from UNDP to the IP is to be made quarterly, Performance Reports should be submitted to UNDP on a quarterly basis. The Performance Reports should include a dated certification by the IP's representative with institutional responsibility for financial reporting.

- 3.5 The IP shall ensure that the grant recipient(s) are audited in accordance with the terms of the relevant agreements. Upon request, the IP shall furnish or cause to be furnished to UNDP a copy of audit reports of the grant recipient(s).

4. Responsibility of the IP

- 4.1 The IP shall be solely liable for claims by third parties arising from the grant recipient's acts and/or omissions in the course of performing activities under the agreement entered into with the IP pursuant to this Agreement. UNDP shall assume no responsibility for the actions of grant recipients and shall in no way be held liable for third party claims arising therefrom.

5. Engagement of a Responsible Party to Undertake the IP's Grant-Making Responsibilities and Obligations

In the event that the IP engages a Responsible Party ("RP") to undertake its grant-making responsibilities, the IP agrees to the following additional provisions:

- 5.1 In selecting an RP to undertake the grant-making activities, the IP shall use the same capacity assessment process and due diligence standards applied by UNDP to assess the IP's financial and grant management skills prior to signing this Agreement.¹¹⁴ The IP shall select the RP in consultation with the Project/Portfolio Board, as such term is defined in the Project/Portfolio Document, and which includes UNDP and the IP.
- 5.2 The IP shall sign an agreement with the RP, the terms of which shall be subject to, and construed in a manner that is fully in accordance with, all of the provisions of this Agreement. The IP shall remain responsible for the acts and omissions of the RP in relation to the on-granting activities as if they were the acts and omissions of the IP.
- 5.3 The IP shall ensure that all provisions, commitments and performance standards that apply to the IP in Paragraphs 1 – 3 above shall apply to the RP unless otherwise agreed by UNDP.
- 5.4 The IP shall ensure that each responsibility contracted to the RP has an effective performance indicator against which the RP must report periodically and which the IP will monitor through regular reporting and spot-checking, at least on an annual basis.
- 5.5 Funding provided by the RP to any individual grant recipient shall not exceed \$60,000 per individual grant and \$120,000 on a cumulative basis within the same programme period.
- 5.6 The disbursement of grant-making funds from UNDP to the IP shall be made quarterly and in arrears upon submission to and acceptance by UNDP of the quarterly narrative and financial reports provided in Paragraph 3.4 above.

¹¹⁴ The UNDP Partner's Capacity Assessment tool is available here - [Partner Capacity Assessment](#).

- 5.7 Payments from the IP to the RP must be made as Performance-Based Payments and contingent solely upon or subject to the achievement of specific results. The RP shall self-finance all or a significant portion of the grant funds necessary to achieve the required measurable results until the pre-agreed performance measures are achieved by the RP and the grant recipients, as measured and approved by UNDP.
- 5.8 The IP shall ensure that the RP is audited in accordance with the terms of the relevant agreements. Upon request, the IP shall furnish or cause to be furnished to UNDP a copy of audit reports of the RP.
- 5.9 Any attempted or purported assignment, delegation or other transfer of obligations of the IP set forth in the above on-granting Provisions shall be void and have no effect, except with the prior written consent of UNDP.

Annex 17: Terms of Reference for Project Board

UNDP Standard Terms of Reference (ToR) for the Project Board of Forging Partnerships for the Ocean: Reducing Water Pollution in Mexico through Sustainable Solutions (UNDP PIMS ID number: 9744)

I. Background

All UNDP projects must be governed by a multi-stakeholder board or committee established to review performance based on established monitoring and evaluation metrics and high-level implementation issues to ensure quality delivery of results. For the purpose of this ToR and to ensure standardization, henceforth, as regards project documentation, such a body shall only be referred to by one of two names: 'Project Board' or 'Project Steering Committee.'¹¹⁵ The [Project Board or Project Steering Committee] is the most senior, dedicated oversight body for a UNDP 'Development Project', which is defined in the PPM as an instrument where UNDP "Delivers outputs where UNDP has accountability for design, oversight and quality assurance of the entire project."

II. Duties and Responsibilities

The two prominent (mandatory) roles of the [Project Board or Project Steering Committee] are as follows:

- 1) **High-level oversight of the project** (as explained in the ["Provide Oversight"](#) section of the PPM). This is the primary function of the [Project Board or Project Steering Committee]. The [Project Board or Project Steering Committee] reviews evidence of project performance based on monitoring, evaluation and reporting, including progress reports, monitoring missions' reports, evaluations, risk logs, quality assessments, and the combined delivery report. The [Project Board or Project Steering Committee] is the main body responsible for taking corrective actions as needed to ensure the project achieves the desired results. And its function includes oversight of annual (and as-needed) assessments of any major risks to the programme or project, and related decisions/agreements on any management actions or remedial measures to address them effectively.

The [Project Board or Project Steering Committee] also carries the role of quality assurance of the project taking decisions informed by, among other inputs, the project quality assessment. In this role the Board is supported by the quality assurer, whose function is to assess the quality of the project against the corporate standard criteria. This function is performed by a UNDP programme or monitoring and evaluation officer to maintain independence from the Project Technical Coordinator and Project Manager regardless of the project 's implementation modality.

The [Project Board or Project Steering Committee] reviews updates to the project risk log.

- 2) **Approval of key project execution decisions** (as explained in the ["Manage Change"](#) section of the PPM). The [Project Board or Project Steering Committee] has an equally important, secondary role in approving certain adjustments above provided tolerance levels, including substantive programmatic revisions (major/minor amendments), budget revisions, requests for suspension or extension and other major changes (subject to additional funding partner/donor requirements).

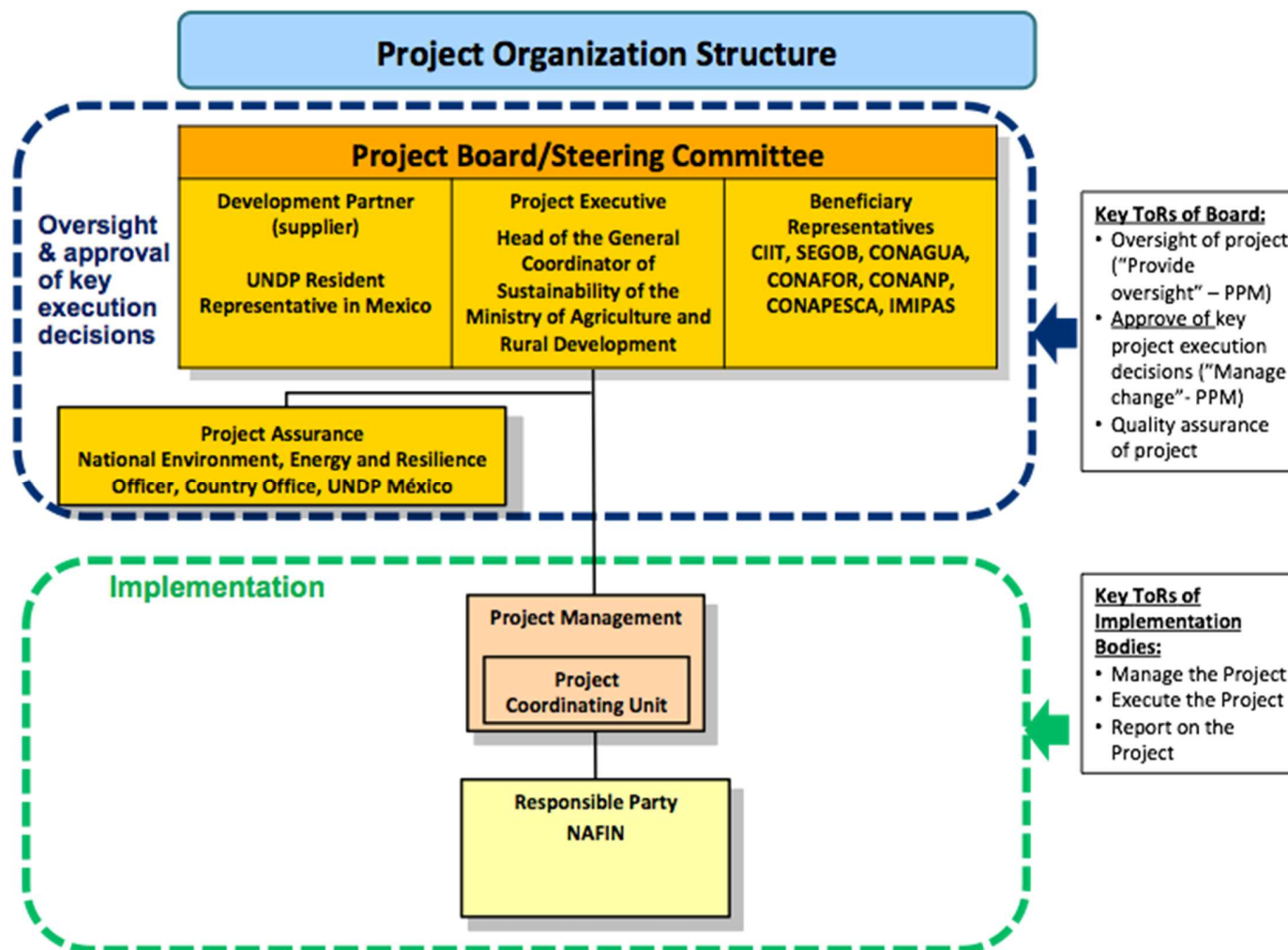
¹¹⁵ Please insert the appropriate entity name in the relevant sections in the document. Where this ToR refers to "Board" it is intended to apply to both these entities and should be changed accordingly to match the entity chosen for the specific project

The [Project Board or Project Steering Committee] is responsible for making management decisions by consensus when required, including the approval of project plans and revisions, and the Project Technical Coordinator and Project Manager 's tolerances. The [Project Board or Project Steering Committee] approves annual work plans and reviews updates to the project risk log.

Within the overall governance and management arrangements of the project, the role of the [Project Board or Project Steering Committee] as regards these two key functions (*'High-level oversight of the project' and 'Approval of key project execution decisions'*) is distinct from the roles of entities involved in the implementation of the project, namely the implementing partner (IP), responsibilities parties (if applicable), service providers and project staff.

The diagram below outlines the main entities involved (and their respective responsibilities) in the 'oversight/approval of key execution decisions' layer and the 'implementation' layer of the project structure.

Diagram 1 – Standard Figure of Project Organization Structure vis-à-vis oversight & approval and implementation roles



In cases where UNDP or a national government entity are concurrently playing roles and represented in both layers of the project organization structure, the entity must seek to separate its project oversight and implementation duties and describe in the relevant project document a: 1) satisfactory internal institutional arrangement for the separation of oversight and implementation functions in different departments of said entity and; 2) clear lines of responsibility, reporting and accountability within the entity between their oversight and implementation functions.

In order to ensure UNDP's ultimate accountability, the [Project Board or Project Steering Committee] decisions should be made in accordance with [the Quality Standards for Programming](#) that shall ensure management for development results, best value money, fairness, integrity, transparency and effective national and international competition. An effective [Project Board or Project Steering Committee] needs credible data, evidence, quality assurance and reporting to aid decision making (see next section on supporting functions to the Board). The [Project Board or Project Steering Committee] also needs to be accountable to protect against conflicts of interest and fraud.

Specific responsibilities of the [Project Board or Project Steering Committee] include the following:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints, and promote gender equality and social inclusion (LNOB) in the project implementation;
- Review project performance based on monitoring, evaluation and reporting, including standard quality assurance checks, progress reports, risk logs, spot checks/audit reports and the combined delivery report;
- Address any high-level project issues as raised by the Project Technical Coordinator and Project Manager and project assurance;
- Provide guidance on emerging and/or pressing project risks and agree on possible mitigation and management actions to address specific risks (including ensuring compliance with UNDP's Social and Environmental Standards, Fraud/corruption, Sexual Exploitation and Abuse and Sexual Harassment);
- Agree or decide on Project Technical Coordinator and Project Manager's tolerances as required, within the parameters set by UNDP ([Manage Change](#) in the PPM) and the donor, and provide direction and decisions for exceptional situations when the Project Technical Coordinator and Project Manager's tolerances are exceeded;
- Advise on major and minor amendments to the project within the parameters set by UNDP and the donor;
- Agree or decide on a project suspension or cancellation, if required; (note that for GEF and GCF projects it is UNDP that decides to suspend or cancel and project and the [Project Board or Project Steering Committee] is informed/consulted only).
- Provide high-level direction and recommendations to the project management unit to ensure that the agreed deliverables are produced satisfactorily according to plans.
- Receive and address project level grievance, including overseeing whatever specific compliance and stakeholder response (or grievance) mechanisms have been put in place so that individuals and communities potentially affected by the project have access to effective mechanisms and procedures for raising concerns about the social and environmental performance of the project¹¹⁶.
- Engage in the low value grant selection process where there is no Grant Selection Committee, as guided by the [Low Value Grants – UNDP Operational Guide](#).

Note: Specific requirements may apply for donor-funded projects, such as GEF- or GCF-financed projects. Please refer to the provisions in the project document.

Additional responsibilities of the [Project Board or Project Steering Committee] can include, but are not limited to, the following:

- Ensure coordination between the various donors and government-funded projects and programmes;
- Report to relevant inter-ministerial bodies or higher-level oversight bodies;
- Ensure coordination with multiple government agencies and their participation in project activities;
- Track and monitor co-financing for this project;
- Appraise the annual project implementation report, including the quality assessment rating report;
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;

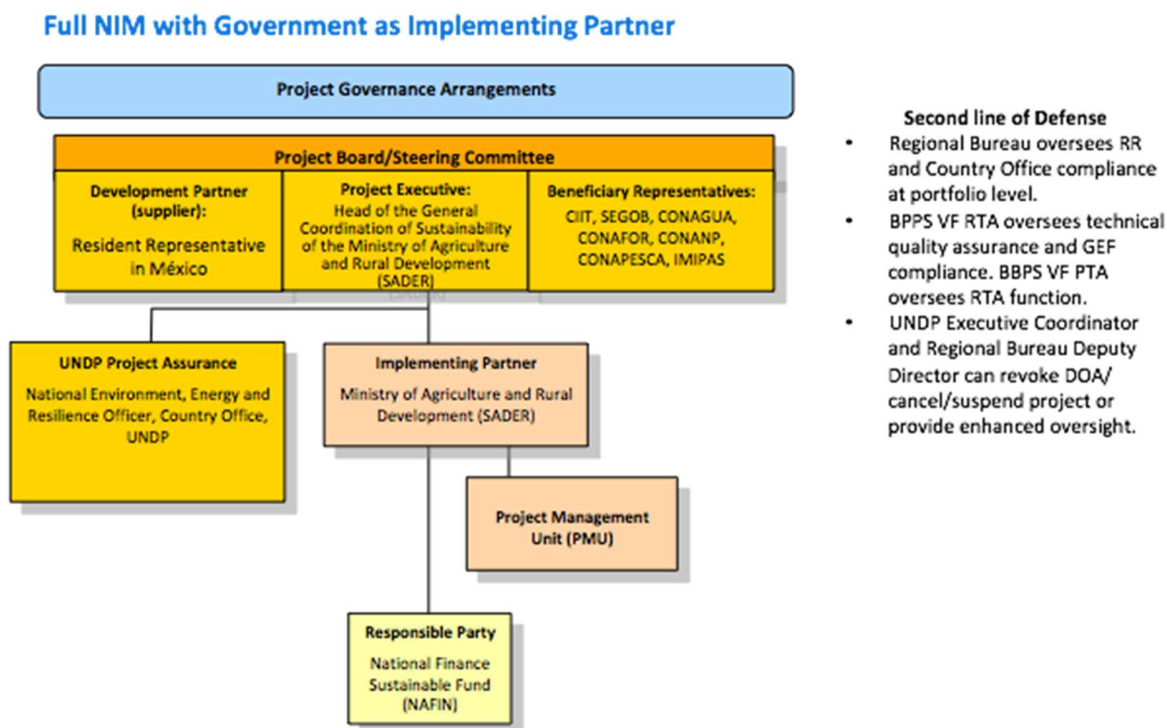
¹¹⁶ The responsibilities of the board in this regard should follow [UNDP's Social and Environmental Standards](#) (SES) as codified in the PPM. It should be noted that while a project board can play a role in addressing or assisting with the compliance and stakeholder response (or grievance) mechanisms put in place for a given project (as part of their quality assurance and oversight function), this will be in addition to and does not substitute for UNDP's core responsibility to ensure compliance with the SES throughout the project management cycle as part of UNDP's Programming Quality Assurance system.

- Act as an informal consultation mechanism for stakeholders;
- Approve the Project Inception Report, Mid-term Review and Terminal Evaluation reports and corresponding management responses;
- Review the final project report package during an end-of-project review meeting to discuss lessons learned and opportunities for scaling up;
- Providing guidance or reporting protocols to technical committees or sub-bodies reporting to the Board (if applicable);

III. Composition of the [Project Board or Project Steering Committee]

As noted in the diagram below, every [Project Board or Project Steering Committee] in a UNDP project has three categories of formal members (e.g. voting members). The role of every formal [Project Board or Project Steering Committee] member must correspond to one of these three roles and be identified accordingly in the project documentation.

Diagram 2 – Standard Figure for a Project Organization Structure



The three categories of [Project Board or Project Steering Committee] members are the following:

- 1) **Project Director/Executive(s):** This is an individual(s) who represents ownership of the project and chairs (or co-chairs) the [Project Board or Project Steering Committee]. The executive usually is the most senior national counterpart for nationally implemented projects (typically from the same entity as the Implementing Partner), and it must be UNDP for projects that are direct implementation (DIM). In exceptional cases, two individuals from different entities can co-share this role and/or co-chair the [Project Board or Project Steering Committee]. If the project executive co-chairs the [Project Board or Project Steering Committee] with a representative of another category, it typically does so with a development partner representative. The project director will be defined in accordance with the UNDP Program and Operations Policies and Procedures through a competitive contracting process based on the terms of reference.

- 2) **Beneficiary Representative(s):** This is an individual(s) representing the interests of those groups of stakeholders who will ultimately benefit from the project. Their primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries. Often representatives from civil society, industry associations, community groups or other government entities benefiting from the project can fulfil this role. If the project has a specific geographic focus, often representatives from the government entities in the targeted area/region will play this role. There can be multiple beneficiary representatives in a [Project Board or Project Steering Committee]. The Beneficiary Representative(s) are representatives of the institutions of the Ministry of the Interior, the Interoceanic Corridor of the Isthmus of Tehuantepec, the National Water Commission, the National Commission of Protected Natural Areas, the National Forestry Commission, the National Commission of Aquaculture and Fisheries, and the Mexican Institute of Fisheries and Aquaculture Research.
- 3) **Development Partner(s):** Individuals representing the interests of the parties concerned that provide funding, strategic guidance and/or technical expertise to the project¹¹⁷. There can be multiple development partners representatives in a [Project Board or Project Steering Committee]. The Development Partner(s) representative(s) is UNDP Mexico Country Office Management UNDP through Resident Representative or Deputy Resident Representative.

A UNDP representative must always be represented in the [Project Board or Project Steering Committee] in either the project executive or development partner role. Where applicable, representatives from responsible parties to the project cannot sit on the [Project Board or Project Steering Committee] as a formal voting member; they can (if requested) attend board meetings as observers. Since the chief responsibility of the Board is to provide high-level oversight of project implementation, to avoid any conflicts of interest, it is not appropriate for representatives of third party entities engaged by the project to provide services – whether responsible parties or contractors/service providers – to concurrently sit on the Board. Representatives of responsible parties can attend board meetings (as observers) but can have no official role in board decision-making. The same principle applies to the Project Technical Coordinator and Project Manager who in attending and presenting at board meetings, does so in a non-voting capacity.

In cases where the inputs and guidance of responsible parties or other entities formally engaged in providing goods or services to the project are needed by the Board on a recurring basis, it is recommended to establish appropriate advisory or technical committees or working groups composed of those entities that can formally report to the Board, while ensuring the impartiality and integrity of board decisions happening independent of those bodies (see Section V of the ToR).

[Board representation in crisis setting: TBD]

IV. Standard [Project Board or Project Steering Committee] Protocols

The [Project Board or Project Steering Committee] must meet one time annually at a minimum. It is recommended that the timing of board meetings be agreed upon in advance and corresponds to key project reporting or work planning milestones. This [Project Board or Project Steering Committee] will meet two [2] times annually.

[Project Board or Project Steering Committee] members cannot receive remuneration from project funds for their participation in the Board. However, it is allowable for board members to be reimbursed from project funds for certain reasonable, qualified expenses related to travel or lodging to attend board meetings. Such protocols are outlined in this ToR and the benefits are applicable to all eligible board members in accordance with the UNDP Program and Operations Policies and Procedures.

All [Project Board or Project Steering Committee]s must have rules for quorum and documentation/minuting of board decisions. All board decisions and minutes should be kept by the project management unit and UNDP. Guidelines on decisions taken in between board meetings or virtually should be clearly elaborated in the Terms of Reference (ToR) of the [Project Board or Project Steering Committee]

¹¹⁷ With the exception of responsible parties or any firms/entities engaged by the project to provide technical expertise with project funds

Unless otherwise specified, [Project Board or Project Steering Committee] decisions are made by unanimous consensus. If a consensus cannot be reached within the Board, the final decision shall rest with the UNDP representative on the [Project Board or Project Steering Committee] or a UNDP staff member with delegated authority as the programme manager.¹¹⁸

It is required that as per internationally recognized professional standards and principles of sound governance, conflicts of interest affecting board members in performing their duties must be formally disclosed if not avoidable. Where a board member has a specific personal conflict of interest with a given matter before the board, he/she must recuse oneself from their participation in a decision. No board member can vote or deliberate on a question in which he/she has a direct personal or pecuniary interest not common to other members of the board.

All board members should be presented with a ToR for the [Project Board or Project Steering Committee], which will include the responsibilities already outlined and indicate agreed board practices and logistics.

V. Standard Outputs of [Project Board or Project Steering Committee] Meetings

In its oversight function, the [Project Board or Project Steering Committee] will (at a minimum) review and assess the following project-related evidence at each meeting:

- Assessment of project progress to date against project output indicators (as documented in the project document results framework)
- Approval/review of annual work plans
- Assessment of the relevant Monitoring & Evaluation mechanisms, including all evaluations¹¹⁹
- Review and assessment of the Project Risk Log (with updating/amendments as needed)
- Assessment of project spending, based on a review of the combined delivery report
- Review of required resources versus available funding (if applicable) and steps taken to reduce funding gap identified at the project design stage

This will be in addition to the review and approval of any required project execution decisions.

The output of every [Project Board or Project Steering Committee] should be a written record (minutes) that captures the agenda and issues discussed and the agreed upon action items and decisions (if applicable). Each report should clearly document the members attending the meeting (as well as all participants in the meeting) and the modality used to agree on a certain action or decision (whether formal voting or no-objection or other mechanism). All records of board meetings should be documented and kept by UNDP in their quality assurance function (see next section).

VI. Support Functions to the [Project Board or Project Steering Committee]

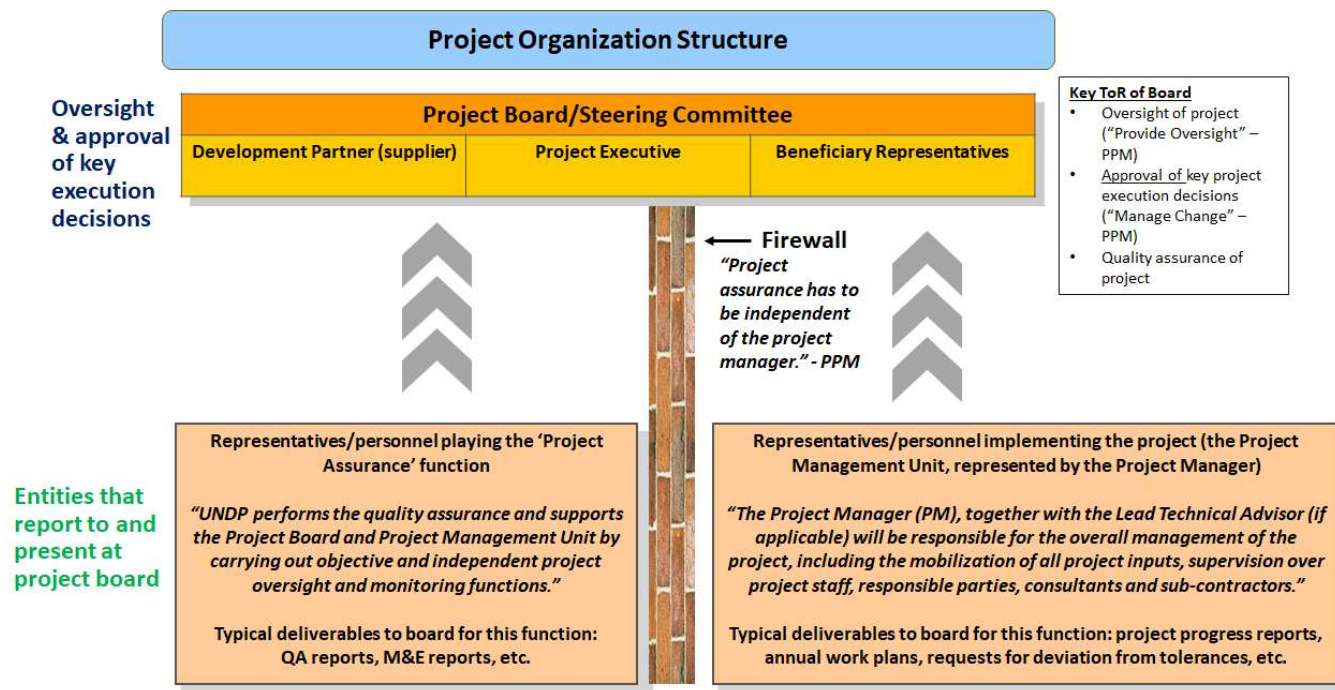
There are two main entities/functions outside the [Project Board or Project Steering Committee] structure whose role is to report to the [Project Board or Project Steering Committee] and support board members in effectively fulfilling their roles: project assurance and project management.

The diagram below explains the primary role of these two entities in the context of their support to Board operations. A description of these two entities follows.

Diagram 3 – Standard Figure of Project Organization Structure – Board Support Entities

¹¹⁸ UNDP has this special right since the ultimate legal and fiduciary accountability for a UNDP project, irrespective of modality, rests with UNDP and UNDP must (in line with its obligations to donors and to the Executive Board) be able to ensure that no action is taken by any body in a UNDP project that contravenes UNDP rules and regulations.

¹¹⁹ Including audit reports and spot checks.



Project Assurance: Project assurance is the responsibility of each [Project Board or Project Steering Committee] member; however, UNDP has a distinct assurance role for all UNDP projects in carrying out objective and independent project oversight and monitoring functions. UNDP performs quality assurance and supports the [Project Board or Project Steering Committee] (and Project Management Unit) by carrying out objective and independent project oversight and monitoring functions, including applying UNDP's social and environmental management system to ensure the SES are applied through the project cycle. The [Project Board or Project Steering Committee] cannot delegate any of its quality assurance responsibilities to the Project Technical Coordinator and Project Manager . Project assurance is totally independent of project execution. UNDP will provide support services for the implementation of the project. Protocols have been established with the implementing agency to disaggregate the roles of operation and quality assurance of the project, which are described in the Letter of Agreement attached to this document.

A designated representative of UNDP playing the project assurance role is expected to attend all [Project Board or Project Steering Committee] meetings and support board processes as a non-voting representative. It should be noted that while in certain cases UNDP's project assurance role across the project may encompass activities happening at several levels (e.g. global, regional), at least one UNDP representative playing that function must, as part of their duties, specifically attend board meetings and provide board members with the required documentation required to perform their duties.

The UNDP representative playing the main project assurance function is: National Officer for Environment, Energy and Resilience at UNDP Mexico.

Project Support, this function is often covered by the Project Management Unit: The Project Technical Coordinator and Project Manager (also called project coordinator) is the senior most representative of the Project Management Unit (PMU) and is responsible for the overall management of the project on behalf of the Implementing Partner, including

the mobilization of all project inputs, supervision over project staff, responsible parties, consultants and sub-contractors. The Project Technical Coordinator and Project Manager typically presents key deliverables and documents to the Board for review and approval, including progress reports, annual work plans, adjustments to tolerance levels and risk logs.

A designated representative of the PMU is expected to attend all board meetings and present the required progress reports and other documentation needed to support board processes as a non-voting representative.

The primary PMU representative attending board meetings is: The project director, to be defined in accordance with the UNDP Program and Operations Policies and Procedures.

Annex A – Acknowledgement of this ToR by each designated official [Project Board or Project Steering Committee] member

Note: The form/evidence for this acknowledgement must be included as an annex or codified in other ways (e.g. note to file or minutes of a board meeting)

The formal acknowledgement of the ToR by board members can be done via various procedures, including the following options:

- 1) Having copies of the ToR be signed by each appointed board member at the Appraise and Approve stage (LPAC) and then having all signed copies attached as an annex to the Project Document
- 2) Having the final ToR be signed by each appointed board member at the first project board meeting after Project Document signing with the approvals recorded in the minutes of the meeting

In both cases, the signature or acknowledgement should include the name, title and category of board representation for the person signing

Annex 18: GEF Core indicators

GEF Core Indicators worksheet included as a separate document.

Annex 19: GEF Taxonomy

Level 1	Level 2	Level 3	Level 4
☒ Influencing models	☒ Transform policy and regulatory environments		
	☒ Strengthen institutional capacity and decision-making		
	☒ Convene multi-stakeholder alliances		
	☒ Demonstrate innovative approaches		
	☒ Deploy innovative financial instruments		
☒ Stakeholders			
	☒ Indigenous Peoples		
	☒ Private Sector		
		☒ Capital providers	
		☒ Financial intermediaries and market facilitators	
		☐ Large corporations	
		☐ SMEs	
		☒ Individuals/Entrepreneurs	
		☐ Non-Grant Pilot	
		☐ Project Reflow	
	☒ Beneficiaries		
	☒ Local Communities		
	☒ Civil Society		
		☒ Community Based Organization	
		☒ Non-Governmental Organization	
		☒ Academia	
		☐ Trade Unions and Workers Unions	
	☒ Type of Engagement		
		☒ Information Dissemination	
		☒ Partnership	
		☒ Consultation	
		☒ Participation	
	☒ Communications		
		☒ Awareness Raising	
		☒ Education	
		☒ Public Campaigns	
		☒ Behaviour Change	
☒ Capacity, Knowledge and Research			
	☒ Enabling Activities		
	☒ Capacity Development		
	☒ Knowledge Generation and Exchange		

	☒ Targeted Research		
	☒ Learning		
		☒ Theory of Change	
		☒ Adaptive Management	
		☒ Indicators to Measure Change	
	☒ Innovation		
	☒ Knowledge and Learning		
		☒ Knowledge Management	
		☒ Innovation	
		☒ Capacity Development	
		☒ Learning	
	☒ Stakeholder Engagement Plan		
☒ Gender Equality			
	☒ Gender Mainstreaming		
		☒ Beneficiaries	
		☒ Women groups	
		☒ Sex-disaggregated indicators	
		☒ Gender-sensitive indicators	
	☒ Gender results areas		
		☒ Access and control over natural resources	
		☒ Participation and leadership	
		☒ Access to benefits and services	
		☒ Capacity development	
		☒ Awareness raising	
		☒ Knowledge generation	
☒ Focal Areas/Theme			
	☒ Integrated Programs		
		☐ Commodity Supply Chains (Good Growth Partnership)	
			☐ Sustainable Commodities Production
			☐ Deforestation-free Sourcing
			☐ Financial Screening Tools
			☐ High Conservation Value Forests
			☐ High Carbon Stocks Forests
			☐ Soybean Supply Chain
			☐ Oil Palm Supply Chain
			☐ Beef Supply Chain
			☐ Smallholder Farmers
			☐ Adaptive Management
		☐ Food Security in Sub-Sahara Africa	
			☐ Resilience (climate and shocks)
			☐ Sustainable Production Systems
			☐ Agroecosystems

		☐ Land and Soil Health
		☐ Diversified Farming
		☐ Integrated Land and Water Management
		☐ Smallholder Farming
		☐ Small and Medium Enterprises
		☐ Crop Genetic Diversity
		☐ Food Value Chains
		☐ Gender Dimensions
		☐ Multi-stakeholder Platforms
	☐ Food Systems, Land Use and Restoration	
		☐ Sustainable Food Systems
		☐ Landscape Restoration
		☐ Sustainable Commodity Production
		☐ Comprehensive Land Use Planning
		☐ Integrated Landscapes
		☐ Food Value Chains
		☐ Deforestation-free Sourcing
		☐ Smallholder Farmers
	☐ Sustainable Cities	
		☐ Integrated urban planning
		☐ Urban sustainability framework
		☐ Transport and Mobility
		☐ Buildings
		☐ Municipal waste management
		☐ Green space
		☐ Urban Biodiversity
		☐ Urban Food Systems
		☐ Energy efficiency
		☐ Municipal Financing
		☐ Global Platform for Sustainable Cities
		☐ Urban Resilience
	☒ Biodiversity	
	☐ Protected Areas and Landscapes	
		☐ Terrestrial Protected Areas
		☐ Coastal and Marine Protected Areas
		☐ Productive Landscapes
		☐ Productive Seascapes
		☐ Community Based Natural Resource Management
	☒ Mainstreaming	
		☐ Extractive Industries (oil, gas, mining)
		☐ Forestry (Including HCVF and REDD+)
		☒ Tourism

		☒ Agriculture & agrobiodiversity
		☒ Fisheries
		☐ Infrastructure
		☐ Certification (National Standards)
		☐ Certification (International Standards)
	☐ Species	
		☐ Illegal Wildlife Trade
		☐ Threatened Species
		☐ Wildlife for Sustainable Development
		☐ Crop Wild Relatives
		☐ Plant Genetic Resources
		☐ Animal Genetic Resources
		☐ Livestock Wild Relatives
		☐ Invasive Alien Species (IAS)
	☒ Biomes	
		☒ Mangroves
		☒ Coral Reefs
		☒ Sea Grasses
		☒ Wetlands
		☒ Rivers
		☐ Lakes
		☒ Tropical Rain Forests
		☒ Tropical Dry Forests
		☐ Temperate Forests
		☐ Grasslands
		☐ Paramo
		☐ Desert
	☒ Financial and Accounting	
		☐ Payment for Ecosystem Services
		☐ Natural Capital Assessment and Accounting
		☐ Conservation Trust Funds
		☒ Conservation Finance
	☐ Supplementary Protocol to the CBD	
		☐ Biosafety
		☐ Access to Genetic Resources Benefit Sharing
	☐ Forests	
	☐ Forest and Landscape Restoration	
		☐ REDD/REDD+
	☐ Forest	
		☐ Amazon
		☐ Congo
		☐ Drylands

	☐ Land Degradation		
		☐ Sustainable Land Management	
			☐ Restoration and Rehabilitation of Degraded Lands
			☐ Ecosystem Approach
			☐ Integrated and Cross-sectoral approach
			☐ Community-Based NRM
			☐ Sustainable Livelihoods
			☐ Income Generating Activities
			☐ Sustainable Agriculture
			☐ Sustainable Pasture Management
			☐ Sustainable Forest/Woodland Management
			☐ Improved Soil and Water Management Techniques
			☐ Sustainable Fire Management
			☐ Drought Mitigation/Early Warning
		☐ Land Degradation Neutrality	
			☐ Land Productivity
			☐ Land Cover and Land cover change
			☐ Carbon stocks above or below ground
		☐ Food Security	
	☒ International Waters		
		☐ Ship	
		☒ Coastal	
		☐ Freshwater	
			☐ Aquifer
			☒ River Basin
			☐ Lake Basin
		☐ Learning	
		☒ Fisheries	
		☐ Persistent toxic substances	
		☐ SIDS : Small Island Dev States	
		☐ Targeted Research	
		☒ Pollution	
			☐ Persistent toxic substances
			☐ Plastics
			☒ Nutrient pollution from all sectors except wastewater
			☒ Nutrient pollution from Wastewater
		☐ Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		☐ Strategic Action Plan Implementation	

		☐ Areas Beyond National Jurisdiction	
		☒ Large Marine Ecosystems	
		☒ Private Sector	
		☒ Aquaculture	
		☐ Marine Protected Area	
		☒ Biomes	
			☒ Mangrove
			☒ Coral Reefs
			☒ Seagrasses
			☐ Polar Ecosystems
			☒ Constructed Wetlands
	☐ Chemicals and Waste		
		☐ Mercury	
		☐ Artisanal and Scale Gold Mining	
		☐ Coal Fired Power Plants	
		☐ Coal Fired Industrial Boilers	
		☐ Cement	
		☐ Non-Ferrous Metals Production	
		☐ Ozone	
		☐ Persistent Organic Pollutants	
		☐ Unintentional Persistent Organic Pollutants	
		☐ Sound Management of chemicals and Waste	
		☐ Waste Management	
			☐ Hazardous Waste Management
			☐ Industrial Waste
			☐ e-Waste
		☐ Emissions	
		☐ Disposal	
		☐ New Persistent Organic Pollutants	
		☐ Polychlorinated Biphenyls	
		☐ Plastics	
		☐ Eco-Efficiency	
		☐ Pesticides	
		☐ DDT - Vector Management	
		☐ DDT - Other	
		☐ Industrial Emissions	
		☐ Open Burning	
		☐ Best Available Technology / Best Environmental Practices	
		☐ Green Chemistry	
	☒ Climate Change		
		☐ Climate Change Adaptation	
			☐ Climate Finance

		☐ Least Developed Countries
		☐ Small Island Developing States
		☐ Disaster Risk Management
		☐ Sea-level rise
		☐ Climate Resilience
		☐ Climate information
		☐ Ecosystem-based Adaptation
		☐ Adaptation Tech Transfer
		☐ National Adaptation Programme of Action
		☐ National Adaptation Plan
		☐ Mainstreaming Adaptation
		☐ Private Sector
		☐ Innovation
		☐ Complementarity
		☐ Community-based Adaptation
		☐ Livelihoods
		☒ Climate Change Mitigation
		☒ Agriculture, Forestry, and other Land Use
		☐ Energy Efficiency
		☐ Sustainable Urban Systems and Transport
		☐ Technology Transfer
		☐ Renewable Energy
		☐ Financing
		☐ Enabling Activities
		☐ Technology Transfer
		☐ Poznan Strategic Programme on Technology Transfer
		☐ Climate Technology Centre & Network (CTCN)
		☐ Endogenous technology
		☐ Technology Needs Assessment
		☐ Adaptation Tech Transfer
		☐ United Nations Framework on Climate Change
		☐ Nationally Determined Contribution
	☒ Rio Markers	
		☒ Paris Agreement
		☒ Sustainable Development Goals
		☐ Climate Change Mitigation 0
		☒ Climate Change Mitigation 1
		☐ Climate Change Mitigation 2
		☒ Climate Change Adaptation 0
		☐ Climate Change Adaptation 1
		☐ Climate Change Adaptation 2

Annex 20: Results of the Partners Capacity Assessment Tool (PACT) and HACT Micro Assessment

Attached as a separate file.

Annex 21: Summary of meeting with FAO to discuss responses to comments on Mexico's Child Project

Meeting with to Discuss Responses to Comments on Mexico's CHO CP Wednesday, 9 April 09:00-10:00 AM (Mexico City Time) via Teams

Participants

- Lorenzo Galbiati, CHO IP Coordinator and FAO's GEF International Waters Leader
- Lucilla Minelli, FAO's GEF International Waters Specialist
- Joana Troyano, Programme Associate at UNDP's Regional Office
- Gabriel Jaramillo, Regional Technical Specialist on Ecosystems and Biodiversity, UNDP
- Valeria Petrone, UNDP's Mexico Country Office
- Benjamin Vivas, International PPG Coordinator, UNDP Consultant for Mexico's Child Project
- Martha Rosas, National PPG Coordinator, UNDP Consultant for Mexico's Child Project

Update on the CHO IP by FAO

FAO recently received feedback on the Global Coordination Project (GCP) from the GEF Secretariat (GEF Sec). They are currently updating the GEF-8 Clean and Healthy Ocean Integrated Program (CHO IP) Programmatic Brief to include this feedback. FAO expects to submit the revised GCP document by April 18.

The most significant changes in the Programmatic Brief involve details about the governance framework of the CHO IP, pending the definition of the Program Coordination Committee. Additionally, a new output has been added to Component 4, which requires all national projects to report and coordinate with the Integrated Program (IP). These updates should not necessitate major budget adjustments. **The updated Programmatic Brief will be available on April 10, and these changes must be reflected in all child project documents.**

Furthermore, FAO plans to conduct a soft launch of the project during the 24th Annual Large Marine Ecosystems (LME) Consultant Meeting (LME24) in May 2025, contingent on the participation of the agencies or some teams. FAO also announced plans to produce a short publication. Each child project is required to submit a summary that includes a brief overview of the project along with a snapshot of the coastal environment in Mexico where the activities will take place. Finally, they mentioned that a CHO IP inception meeting is anticipated for September or October.

FAO apologized for the delay in their response, explaining that it takes time to provide precise instructions due to the involvement of four implementing agencies and five partners. Each change must be discussed and agreed upon with all partners involved.

Comments and requested changes to the Mexican Child Project

UNDP acknowledged that the GEF Sec requested a meeting with FAO, the CHO IP's Lead Agency, prior to the resubmission of Mexico's Child Project ProDoc and CEO Endorsement Request (ER). Additionally, UNDP considered it essential to review the most relevant comments of the GEF Secretariat with the FAO. The table below presents the comments along with FAO's recommendations for addressing each one.

GEF Secretariat's Comments	FAO's Recommendations
1. Before resubmission, please hold a meeting with FAO, Lead Agency for the IP, to ensure coordination compliance. Please document the date of this meeting and issues/issues addressed in the review sheet.	The online meeting was conducted on April 9 from 09:00 to 10:00 AM (Mexico City Time). The meeting notes outlining agreements will be attached.
2. Please discuss the GCP coordination activities under 4.2 with FAO to ensure activities are in line with new institutional arrangements and updated programmatic activities.	FAO conveyed that an additional reporting requirement under section 4.2 was introduced to ensure coordination between child projects and the GCP. In addition to reporting to national stakeholders, reporting to the IP GCP will also be necessary. This new reporting requirement will be added to the Project Manager's responsibilities. No new activities are included under this output, as participation in international meetings and Thematic Working Groups has already been requested.
3. Please ensure the project document meets the program requirements set out in the Programmatic Brief shared by FAO. Before resubmission, please hold a meeting with FAO, Lead Agency for the IP, to ensure coordination compliance. Please document the date of this meeting and issues/issues addressed in the review sheet.	The online meeting with FAO took place on April 9, from 9:00 to 10:00 AM (Mexico City Time). The updated Programmatic Brief was sent on April 10. Both the Project Document (ProDoc) and the CEO Endorsement Request (ER) were revised to ensure they comply with the program requirements outlined in the new version of the Programmatic Brief shared by FAO.
4. Please consult with FAO, IP Lead Agency, on Core Indicator 7 target; please coordinate with FAO on the targeting for Core Indicator 7 (#LMEs).	The UNDP indicated that resources related to International Waters were granted without any commitments. The FAO noted that Indicator 7 consists of four sub-indicators. Sub-indicators 7.1, 7.2, and 7.3 should be incorporated for baseline construction, but they do not need to be included in reporting. In contrast, Sub-indicator 7.4 does not need to be reported and should be recorded as 0. The UNDP clarified that indicators 7.1 and 7.2 involve transnational efforts, while the Forging Partnerships for the Ocean Project is a national initiative. Additionally, the UNDP mentioned that the Government of Mexico has not been informed of this matter. FAO further clarified that there is no commitment related to International Waters. However, since the CHO IP operates with the LME framework, the Mexican Child Project will have a regional impact. No international commitment is associated with indicators 7.1 and 7.2; the only obligation with IW:LEARN is to communicate with other LME projects and report on their endorsement. There is no commitment to prepare either a Transboundary Diagnostic Analysis (TDA) or a Strategic Action Program (SAP).

GEF Secretariat's Comments	FAO's Recommendations
	This information should be explained in the indicator table, where the calculation methods for the indicators can be detailed. It should be noted that while 7.1 and 7.2 are activated, the focus is not primarily on these indicators. As it is a national project, they cannot be asked to do this. However, a review may be requested to determine whether an SAP exists and how the project may contribute to it.
5. Please review the Results Framework with FAO to ensure it is compliant with IP Programmatic Brief.	FAO requested verification of the Project Results Framework to ensure it aligns with GCP's latest version of the Programmatic Brief. The programmatic indicators for the CHO IP are included, and FAO has confirmed that all indicators are already accounted for.
6. Please note that the GCP will handle all direct engagements with IW:LEARN, so the activity "Contribute to IW:LEARN activities, including participation in at least one International Waters Conference (IWC), preparation of knowledge products, and participation in other learning opportunities" should be instead captured under 4.1.2 activities. The Mexico child project will not participate in person in the IWC.	Regarding IW:LEARN, the responsibility to participate in the conferences will not lie with the country but rather with the GCP. It would be beneficial if the national counterparts allocate resources to participate in an IW:LEARN meeting. The travel budget can remain, but it should not specify how the resources will be allocated. The funds that are freed up could be dedicated to knowledge products or other activities. The new Programmatic Brief will include proposed language to clarify this.

Finally, UNDP announced that the Mexico Child Project is set to be resubmitted on April 18.