



PROJECT EXECUTIVE SUMMARY
GEF COUNCIL SUBMISSION

AGENCY'S PROJECT ID: GF/RLA/07/XX
GEFSEC PROJECT ID: 1346
COUNTRY: Mexico
PROJECT TITLE: Integrated Assessment and Management of the Gulf of Mexico Large Marine Ecosystem
GEF AGENCY: UNIDO
OTHER EXECUTING AGENCY(IES):SEMARNAT
DURATION: Four years
GEF FOCAL AREA: International Waters
GEF OPERATIONAL PROGRAM: OP 9 Integrated Land and Water Component
GEF STRATEGIC PRIORITY: IW2
Pipeline Entry Date: July 2001
ESTIMATED STARTING DATE: January 2008
IA FEE: \$497,500

FINANCING PLAN (US\$)	
GEF PROJECT/COMPONENT	
Project	\$4,502,500
PDF B	\$473,000
<i>Sub-Total GEF</i>	\$4,975,500
<i>Co-FINANCING*</i>	
GEF Agency	
Government	\$96,774,780
Bilateral	
NGOs	
Others	
<i>Sub-Total Co-financing:</i>	\$96,774,780
<i>Total Project Financing:</i>	\$101,750,280
FINANCING FOR ASSOCIATED ACTIVITIES IF ANY:	
LEVERAGED RESOURCES IF ANY:	

*Details provided under the Financial Modality and Cost Effectiveness section

CONTRIBUTION TO KEY INDICATORS OF THE BUSINESS PLAN: In conformity with GEF4 IW priorities, reforms, investments, mechanisms and a regional framework put in place through a TDA-SAP process to address land-based sources of marine pollution that create anoxic “dead” zones in coastal waters, depletion of fisheries, and degradation of coastal resources and processes. Contribute to increasing global coverage of management programs for LMEs. Contribution to WSSD POI sustainable fisheries targets

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT(S):

México: Date: June 25, 2007
 Claudia Grayeb Bayata, Directora General
 Secretaria de Hacienda y Crédito Público

Approved on behalf of the UNIDO. This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for work program inclusion

Dmitri Piskounov
 IA Executive Coordinator
 Date: July 5, 2007

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LIST OF ACRONYMS

APR	Annual Project Report
AWP	Annual Work Plan
CAE	Country Assistance Evaluation
CARICOMP	Caribbean Coastal Marine Productivity
CBO	Community Based Organizations
CCRF	Code of Conduct for Responsible Fisheries
CEC	Commission for Environmental Cooperation
CECADESU	Centro de Capacitación para el Desarrollo Sustentable (Human Resource Development Center for Sustainable Development)
CENAPRED	Centro Nacional de Prevención de Desastres (National Center for Disasters Prevention)
CEO	Chief Executive Officer
CCRF	Code of Conduct for Responsible Fishers
CIMIOC	Commission for the Integrated Management of Oceans and Coasts
CIMOIC	Comisión Intersecretarial para el Manejo Integrado de Océanos y Costas (Inter-ministerial Commission for the Integrated Management of Oceans and Coasts)
CINVESTAV	Centro de Investigación y de Estudios Avanzados del IPN (Research and Advanced Studies Center, National Polytechnic Institute)
CIP	Centro de Investigaciones Pesqueras (Fisheries Research Investigation Center)
CNA	Comisión Nacional del Agua (National Water Commission)
CNHP	National Commission for Priority Wetlands
CONABIO	Comisión Nacional para el Uso y Conocimiento de la Biodiversidad (National Commission on the Use and Knowledge of Biodiversity)
CONAGUA	Comisión Nacional del Agua (National Water Commission)
CONANP	Comisión Nacional de Áreas Naturales Protegidas (National Commission of Natural Protected Areas)
CONAPESCA	Comisión Nacional de Acuacultura y Pesca (National Commission of Aquaculture and Fisheries)
CONAFOR	Comisión Nacional Forestal (National Forestry Commission)
CTA	Chief Technical Advisor
DGIRA	Dirección General de Impacto y Riesgo Ambiental (General Directorship for Environmental Impact and Risks Assessment)
DGPAIRS	Dirección General de Política Ambiental Integración Regional y Sectorial (General Directorship for Environmental Policy, Regional and Sectoral Integration)
DGVS	Dirección General de Vida Silvestre (General Directorship for Wildlife)
DGZFMTC	Dirección General de Zona Federal y Ambientes Costeros (General Directorship of Federal Coastal Zones)
DIM	Data and Information Management
ES	Environmental Studies
EBA	Ecosystem Based Approach
EBM	Ecosystem Based Management
EcoQOs	Ecosystem Quality Objectives
ENOETMC	Estrategia Nacional para el Ordenamiento Ecológico del Territorio en Mares y Costas (National Strategy for the Ecological Land Use Planning of the Territorial Oceans and Coasts)
EPA	Environmental Protection Agency
EPOMEX	Centro de Ecología, Pesquerías y Oceanografía del Golfo de México -Universidad Autónoma de Campeche (Ecology, Fishery and Oceanographic Centre of the Gulf of Mexico - University of Campeche)

EEZ	Exclusive Economic Zone
ERP	Enterprise Resource Planning
FAO	Food and Agriculture Organization
FONDEN	Fondo de Desastres Naturales (National Fund for Natural Disasters)
FSP	Full Size Project
GEF	Global Environment Facility
GIS	Geographic Information System
GOM	Gulf of Mexico
GPA	Global Programme of Action
HAB	Harmful Algal Blooms
IGO	Intergovernmental Organizations
IGoMC	Interim Gulf of Mexico Commission
IMTA	Instituto Mexicano de Tecnología del Agua (Mexican Institute of Water Technology)
INE	Instituto Nacional de Ecología (National Institute of Ecology)
INEGI	Instituto Nacional de Estadística, Geografía e Informática (National Institute of Statistics, Geography and Informatics)
INP	Instituto Nacional de la Pesca (National Fisheries Institute)
IOC	Comisión Oceanográfica Intergubernamental de la UNESCO (Intergovernmental Oceanographic Commission of UNESCO)
IOCARIBE	Subcomisión para el Gran Caribe de la Comisión Oceanográfica Intergubernamental de la UNESCO (Sub-Commission for the Greater Caribbean of the IOC)
ISC	Intersectoral Committee
IW	International Waters
LBS	Land Based Sources of Pollution
LME	Large Marine Ecosystem
LOE	Letter of Endorsement
LUP	Land Use Planning
MAB	Man and Biosphere
MEXUS	United States-Mexico Fisheries Cooperation Program
MSAR	Magnuson-Stevens Fishery Conservation and Management Act Reauthorization
MOU	Memorandum of Understanding
MPA	Marine Protected Area
NASA	National Aeronautic and Space Administration
NAFTA	North American Free Trade Agreement
NAP	National Action Programme
NCDDC	National Coastal Data Development Center
NEPSDOC	National Environmental Policy for the Sustainable Development of Oceans and Coasts
NGO	Non Governmental Organization
NMFS	National Marine Fisheries Services
NOAA	National Oceanic and Atmospheric Administration
NPA	Natural Protected Areas
OP	Operational Programme
P	Process
PAG	Project Advisory Group
PAH	Polynuclear Aromatic Hydrocarbons
PANDSOC	Política Ambiental Nacional para el Desarrollo Sustentable de Océanos y Costas (National Environmental Policy for the Sustainable Development of Oceans and Coasts)
PCB	Polychlorinated Biphenyl
PCU	Project Coordination Unit
PDF	Project Development Facility

PEMEX	Petróleos Mexicanos (Mexican Oil Company)
PIR	Project Implementation Review
PPCU	Pilot Project Coordination Unit
PROFEPA	Procuraduría Federal de Protección al Ambiente (General Federal Attorney Agency for Environmental Protection)
QA	Quality Assurance
QC	Quality Control
RAMSAR	Ramsar Convention on Wetlands
RCU	Regional Coordinating Unit
ROAR	Results Oriented Annual Report
RPA	Regional Programme of Action
RPA-YUCATAN	Regional Programme of Action for the Yucatan Peninsula
R-TAG	Regional Technical Advisor Committee
SAGARPA	Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación (Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food)
SAP	Strategic Action Programme
SC	Steering Committee
SEAMAP	Southeast Area Monitoring and Assessment Program
SeaWiFS	Sea-viewing Wide Field of View Sensor
SECTUR	Secretaría de Turismo (Ministry of Tourism)
SEDESOL	Secretaría de Desarrollo Social (Ministry of Social Development)
SEFSC	Southeast Fisheries Science Centre
SEGOB	Secretaría de Gobernación (Ministry of the Interior)
SEMAR	Secretaría de Marina (Ministry of the Navy)
SEMARNAT	Secretaría de Medio Ambiente y Recursos Naturales (Ministry of Environment and Natural Resources)
SEP	Secretaría de Educación Pública (Ministry of Public Education)
SCT	Secretaría de Comunicaciones y Transportes (Ministry of Transport and Communications)
SGP	Small Grants Programme
SNIB	Sistema Nacional de Información sobre Biodiversidad de México (Biodiversity National System of Information)
SO	Strategic Objective
SPAW	Specially Protected Areas and Wildlife
SR	Stress Reduction
SSPyPA	Subsecretaría de Planeación y Política Ambiental (Undersecretariat of Planning and Environmental Policy)
STAP	Scientific and Technical Advisory Panel
TDA	Transboundary Diagnostic Analysis
TOR	Terms of Reference
TPR	Tripartite Review
TTT	Technical Task Team
UN	United Nations
UNAM-ICMyL	Universidad Nacional Autónoma de México Instituto de Ciencias del Mar y Limnología (National Autonomous University of Mexico Sea Science and Limnology Institute)
UNCLOS	United Nations Convention of the Law of the Sea
UNEP	United Nations Development Programme
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCO-IOC	UNESCO- Intergovernmental Oceanographic Commission

UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
USA	United States of America
USACE	US Army Corps of Engineers
USGS	US Geological Survey
WECAFC	Western Central Atlantic Fishery Commission
WSSD	World Summit on Sustainable Development

1. PROJECT SUMMARY

PROJECT RATIONALE, OBJECTIVES, OUTPUTS/OUTCOMES, AND ACTIVITIES.

RATIONALE

The distinctive biophysical characteristics of the Gulf of Mexico Large Marine Ecosystem (GoM LME) make it one of the most productive marine ecosystems in the world and an important global reservoir of biodiversity. However, this high productivity is at risk from a suite of anthropogenic threats that include excessive fishing effort, destruction of critical coastal and marine habitats, and nutrient-enrichment resulting in a “Dead Zone” of over 18,000 km² that forms every year – one of the largest hypoxic zones of water in the world. Additionally, the LME is the focus of extensive oil and gas production as well as a rapidly increasing tourism industry.

Many stocks in the Gulf of Mexico are over-fished, or are at (or close to) their maximum yield. Intensive fishing, the primary force driving biomass changes in the GoM LME, is compounded by two other significant factors. Habitat modification, including loss of critical habitats and connectivity, resulting from poorly planned growth in coastal and urban areas along the GoM coast, translates into a trend of urban growth at the expense estuaries, marshes, seagrasses, coral reefs, mangroves and other vital ecotones. According to data from the FAO, in the last 30 years Mexico has lost more than half of its mangrove coverage on both coasts. Depletion and impacts on fish stocks affects both countries given that many stocks are shared, migratory, or connected via egg or larval transport. Loss of habitats impacts on the life cycles of over 90% of GoM coastal and marine species, as does the increasing pollutant and nutrient loads. Economic activities in the GoM are significant for both countries, with 85% of Mexico’s oil extraction originating in the region as well as 72% of the U.S. offshore petroleum production.

These growing anthropogenic threats evidence tight interdependencies in terms of causes and effects, and an LME-wide, ecosystem-based management approach is required to effectively mitigate them in the long-term. However, existing management approaches are not consistent with an ecosystem-based perspective and there are currently no agreed bi-national programmes for managing the GoM resources taking into account ecosystem-based requirements. Furthermore, the two countries have institutional frameworks for coastal and marine resources protection, but no effective regional inter-sectoral project coordination mechanism currently exists. In the absence of GEF intervention, fragmented efforts with a national and an often sectoral focus will continue to be the norm.

The proposed GEF alternative will, through a TDA-SAP process, remove identified constraints and barriers, develop common mechanisms and tools, and promote reforms and investments, to set the bases for application of the ecosystem approach in the management of the GoM LME. This will be complemented by discrete capacity-building activities and pilot projects in three critical aspects of the ecosystem approach: productivity, conservation and adaptive management, and robust monitoring and evaluation frameworks, as well as cross-sectoral engagement. The transition towards the ecosystem-based management of the GoM LME will depend on a greater convergence of policy tools including long-term joint programs and actions, a clearer distribution of competencies at all three levels of government, and a robust monitoring and evaluation program. This will require a truly regional GoM initiative supported through a combination of GEF financing and co-financing including a reoriented baseline.

Within this integrated approach, the project will address specific IW Priorities, in particular reduction of nutrient over-enrichment from land-based pollution that creates anoxic “dead” zones in coastal waters, and restoration and maintenance of coastal and marine fish stocks and associated biological diversity, complemented by efforts to address degradation of coastal resources and processes. In particular, the

“dead zone” that forms every year in the Gulf of Mexico in critical areas for commercial and recreational fisheries will require cross-sectoral, integrated suites of measures and reforms to address this issue as detailed in the IW Strategy. The project will also develop mechanisms and undertake reforms for maintaining fisheries resources to within safe biological limits, and encourage the sustainable use of all exploited living marine resources in the GOM LME. As an OP9 initiative, it emphasizes the multi-focal connections that characterize the system. The project seeks to create a co-operative framework, together with the necessary capacities, thereby enabling Mexico and the U.S. to address both imminent threats to the water body and develop joint ecosystem-based management approaches

OBJECTIVES AND OUTPUTS/OUTCOMES

The *long-term development/environmental goal* of the project is to promote a more sustainable development of the Gulf of Mexico LME through ecosystem-based management approaches. The *project objective* is to set the foundations for LME-wide ecosystem-based management approaches for the rehabilitation of marine and coastal ecosystems, recovery of depleted fish stocks, and reduction of nutrient overloading.

OUTCOME 1: Transboundary issues analysed and priorities defined [Total Cost US\$25,170,000 Co-financing: US\$24,742,000; GEF Request: US\$427,500]

Rationale: The Transboundary Diagnostic Analysis (TDA) initiated in the PDF-B phase will be updated. Priority knowledge gaps within the GoM LME will be filled, in the areas of productivity, biodiversity, pollution and eutrophication, socio-economic conditions, legal/regulatory review, stakeholder analysis. Capacity to undertake environmental assessments will be enhanced through the provision of training and joint work between the United States and Mexico.

Outputs:

- 1.1 Capacities and gaps in regional monitoring methods/standards identified
- 1.2 Key ecosystem assessment and management gaps identified
 - 1.2.1 Biodiversity hot spots in the GoM LME assessed and key knowledge gaps identified
 - 1.2.2 Existing information and data on status and trends in fisheries assessed
 - 1.2.3 Ecosystem-wide nutrient over-enrichment and contaminant sources, flows and levels assessed
 - 1.2.4 Environmental impacts of transboundary pollution on the GoM ecosystem assessed
 - 1.2.5 Information on nutrient over-enrichment and related Harmful Algal Blooms (HABs) collected and integrated
- 1.3 Governance analysis of relevant policy and regulatory frameworks completed
- 1.4 Analysis undertaken of the socioeconomic impacts of priority transboundary issues, including a preliminary LME wide economic valuation of near shore and marine goods and services
- 1.5 TDA revised, finalized, published and disseminated

OUTCOME 2: Country agreement on and commitment to regional and national policy, legal and institutional reforms to address the agreed priority transboundary issues previously defined [Total Cost US\$10,130,000 Co-financing: US\$9,000,000; GEF Request: US\$1,130,000]

Rationale:

The Strategic Action Programme (SAP) and associated National Action Programmes (NAPs) will enable the littoral states to reach a consensus on ecosystem priorities, targets, governance reforms, programmes and projects to protect, manage, restore and sustain the shared resources of the GoM LME. It will include an estimation of the required financial resources and a strategy to mobilize these resources. The SAP will play a key role in ensuring that global environmental benefits are provided in tandem with facilitating sustainable and environmentally sound economic development in the LME over the coming decades. Targeted strategies to address the key transboundary issues identified in the preliminary TDA will inform

and enhance development of the SAP focusing on reduction and control of nutrient over-enrichment, sustainable management and use of exploited living marine resources, as well as the recovery of depleted fish stocks to within safe biological limits, and the establishment of representative marine protected areas in both countries. Additionally, the pilot projects (see outcome 3) will feed back into the SAP/NAP development process. Robust stakeholder involvement, including strong interaction with the private sector (oil and gas, fisheries, tourism and other industries), will underpin the SAP. Together with the TDA, it will be a living document, which is actively incorporated into the LME adaptive management approach. The development of the SAP will be supported by a series of capacity building and institutional strengthening activities, some of which are entirely co-financed by the countries. These are indicated in the Outputs below as Fully Co-Financed.

Outputs:

- 2.1 Strategies and actions developed for the reduction and control of nutrient over-enrichment and HABs and for the elimination of dead zones
 - 2.1.1. Regional Plan of Action for the Yucatan Peninsula (RPA-YUCATAN) developed and implemented by Mexico as a major contribution to reduce land based sources of pollution into the GoM LME - *Fully Co-Financed*
 - 2.1.2. Strategic Partnerships developed between GoM LME programme and institutions responsible for integrated management of the major GoM river basins, as well as the main coastal cities
 - 2.1.3. Stocktaking undertaken of the Papaloapan watershed Commission to define opportunities for replication in the Grijalva-USUMACINTA and PANUCO river basins in order to provide for strong inter-linkages between watershed management authorities and coastal managers
 - 2.1.4. Strategies developed for harmonizing legislative, policy and regulatory frameworks on agricultural practices at LME wide levels, building upon the Gulf of Mexico Governors Alliance
- 2.2 Strategies and actions formulated for sustainable management and use of exploited living marine resources, and for the recovery of depleted fish stocks to within safe biological limits
 - 2.2.1. Bilateral initiatives for regional surveying of productivity and oceanography, stock assessment and population assessments encouraged and strengthened - *Fully Co-Financed*
 - 2.2.2. A review undertaken of effectiveness of compliance measures with existing fisheries legal and regulatory frameworks in both countries, especially with regards to illegal, unregulated and unreported fishing (IUU), excessive fishing capacity, and enforcement and surveillance, and appropriate reforms and measures proposed.
 - 2.2.3. Fisheries management plans developed for selected key commercial fisheries
- 2.3 Establishment of representative marine protected areas (MPAs)
 - 2.3.1. Recovery plans developed for depleted priority non-commercial species and associated marine flora and fauna for additional species not currently addressed
 - 2.3.2. Management and capacity building requirements defined for the restoration of degraded marine coastal wetlands
 - 2.3.3. Marine and coastal spatial zoning processes in individual countries strengthened and implemented thus enhancing sectoral links among sectoral users in marine and coastal zones- *Fully Co-Financed*
 - 2.3.4. LME-wide strategies for conserving biodiversity and habitats in the coastal zones of GoM LME supported and harmonized at a regional level
- 2.4 The Strategic Action Programme (SAP) and National Action Programmes (NAPs) formulated and endorsed at the highest levels
- 2.5 Commitments to SAP implementation obtained and sustainable financing arrangements formulated

OUTCOME 3: LME-wide ecosystem-based management approaches encouraged and strengthened through the successful implementation of Pilot Projects [Total Cost US\$45,014,780 Co-financing: US\$42,854,780; GEF Request: US\$2,160,000]

Rationale: A priority focus within the overall project is to deliver tangible global benefits in the participating countries through the selection and implementation of ‘on-the-ground’ activities. Consequently, clearly defined regional and national pilot demonstration projects to advance SAP implementation will be undertaken during the execution of the full project. Three priority pilot projects were jointly identified by participating countries during the PDF phase that are fully incremental and will assist Mexico to participate more robustly in ongoing programmes undertaken by the United States, and assist both countries to strengthen regional approaches to ecosystem-based management of the LME.

The pilots are all sited in the same area, Terminos Lagoon, in order to achieve greater cost-effectiveness, maximize synergies and set the foundations for integrated, ecosystem-based approaches to natural resource management. By setting the pilots in the same location, the pilot strategies will generate practical experiences to address a complex baseline of overlapping policies and competencies for protected area conservation, social and economic development, and threats to terrestrial, coastal and marine biodiversity. The harmonized development of the three pilots will moreover contribute to defining a stronger baseline, and help enable the development of validated integrated approaches that will facilitate upscaling to other States and at a national level. Options for replication beyond the project area will also be enhanced.

Pilot Project 1: Enhanced natural habitat conservation in the coastal and marine areas of the Gulf of Mexico LME

Extensive coastal wetlands, critical ecosystems for the exceptional productivity of fish and shellfish, provide essential habitat rich in biodiversity, and provide important ecosystem services associated with the improvement of water quality, sediment filtration, and flood and erosion control. The pilot will use the opportunities available to protect these fragile habitats, including through the use available data, to assess present coastal land use patterns, to define and protect healthy ecosystems, and to conduct restoration in areas with degraded or lost coastal habitats. The United States has extensive expertise in habitat restoration (particularly with salt marshes, sea grasses, and mangroves) and in bringing stakeholders at all levels to consensus in designing and implementing habitat projects. This expertise will be made available to Mexico in order to increase opportunities and chances of success. The project will therefore promote the ecosystem approach for conservation and management of wetlands, particularly mangrove ecosystems, sea grass beds and sand dunes, in order to maintain their functional and structural integrity, to conserve associated biodiversity, and to ensure economic and social benefits for future generations. This will be achieved through restoration of deteriorated coastal areas and habitats with an emphasis on critical coastal habitats; development of mangrove monitoring methods; and development of cost-effective strategies to mitigate impacts such as erosion due to extreme meteorological events and inappropriate coastal infrastructure.

Pilot Project 2: Enhancing Shrimp Production through Ecosystem Based Management

In the Gulf’s fisheries, some of the most productive in the world, shrimp are one of the most highly valued species for both countries. Currently, over-exploitation is a common problem in Mexico due to the great demand for food and jobs, the use of modern technologies that make fishing more efficient, and the use of non-selective fishing gear resulting in excessive by-catch of non-target species, discards, and habitat damage. Coastal and marine habitat modifications also contribute to the depletion of fish stocks. The object of this pilot project is to contribute to the recovery of depleted species through an ecosystem based management approach, focusing mainly on the shrimp fishery. The overall outcomes of the pilot

project will be: strengthened capacities for stock assessments and data collection for future ecosystem-level analysis; establishment of baseline information, including available environmental variability information, for tracking improvements in stock status and fisheries abundance as new regulatory and management practices are implemented; stakeholders representing all involved sectors and interests are fully-informed and fully-involved; coherent project planning and implementation is employed through an effective communication process; effective and coordinated surveillance and enforcement mechanisms are established, as are enhanced capacities for enforcing compliance of regulations; an enhanced understanding is achieved of the interactions of fishery species and protected species with higher and lower components of the food web, including human extractive activities, for assessing the potential impacts of fishing in non target species; and a contribution is made to the benefits represented by other commercially important species.

Pilot Project 3: Joint Assessment and Monitoring of Coastal Conditions in the Gulf of Mexico

Coastal degradation is one of the main transboundary problems identified for the Gulf of Mexico. Degradation, together with an absence of ecosystem-based management information relating to fisheries, environmental quality, and other aquatic resources, makes management of the GoM LME challenging. Without a consistent and comprehensive LME-wide regional monitoring system, informed management actions remain largely site specific.

The object of this pilot project is to strengthen capacities for joint monitoring, assessment and evaluation of the coastal environment in support of the GoM LME management goals and objectives through: development of a set of coastal ecosystem health indicators; strengthened capacity and enhanced integrated ecosystem based management; completed baseline sampling for the determination of the ecological condition of the estuarine and coastal environments adjoining Terminos Lagoon; active participation of regional and local management authorities, scientists, and other stakeholders; an evaluation of the potential for extending sampling protocols to adjacent states or systems in Mexico; and the preparation and dissemination of a *State of the Coast of the Gulf of Mexico*. The pilot project will build upon the substantial knowledge and track record of coastal conditions monitoring in the U.S. portion of the Gulf of Mexico, creating a complementary ecological monitoring system in Mexico's portion of the Gulf of Mexico and so providing the basis for enhanced bilateral cooperation. This joint monitoring and assessment survey will contribute to meeting the project objective by creating a consistent baseline of environmental information throughout the LME, which will be used to better define required regulatory and policy reforms as well as to target restoration areas.

Outputs:

- 3.1 Pilot Project on Natural Habitat and Ecosystem Conservation of Coastal and Marine Zones of the Gulf of Mexico: Wetlands, Mangroves, Sea Grass Beds and Sand Dunes effectively implemented
- 3.2 Pilot Project on Enhancing Shrimp Production through Ecosystem Based Management effectively implemented
- 3.3 Pilot Project on Joint Assessment and Monitoring of Coastal Conditions in the Gulf of Mexico effectively implemented

OUTCOME 4: Monitoring and Evaluation System for the Project and the GoM LME established
[Total Cost US\$19,869,000 Co-financing: US\$19,400,000; GEF Request: US\$469,000]

Rationale: Effective monitoring and evaluation (M&E) is recognized as an indispensable tool in project and program management. The GoM LME M&E plan and the process, stress reduction, and environmental status indicators developed as part of it in accordance with GEF guidance, will serve both as a corrective function during the project cycle, enabling timely adjustments, and as a guide to

structuring future projects more effectively. In order to ensure that the M&E mechanism and indicators are populated with high quality data, a regional Data and Information Management (DIM) system will be developed, building on existing systems within the region. In addition, standards and protocols for the collection, processing, analysis and compilation of data and GIS information will be created and mechanisms for sharing of data and information input into the DIM System will be initiated. A key output of this particular Outcome will be a regular biennial regional status report on large-scale ecosystem impacts in the GoM LME.

Outputs:

- 4.1 Monitoring & Evaluation mechanisms set up including an M & E system for the project
- 4.2 Suite of GEF M&E indicators developed (process, stress reduction, and environmental and socioeconomic status) to monitor SAP implementation.
- 4.3 GoM LME Environmental Information System developed
- 4.4 Bi-annual **SEE ABOVE** regional status reporting protocol developed on large scale ecosystem impacts in the GoM LME

OUTCOME 5: Effective project coordination defined [Total Cost US\$2,316,000 Co-financing: US\$2,000,000; GEF Request: US\$316,000]

Rationale: This component will develop a sustainable institutional network to address the GoM LME environmental problems and root causes, and help implement the transfer of institutional arrangements from the support of GEF to ownership by the region.

Outputs:

- 5.1 Regional Project Coordination Unit set up
- 5.2 Steering Committee and Regional Technical Advisory Group (R-TAG) established
- 5.3 Intersectoral coordination established through the development of Intersectoral committees (ISCs) or their equivalent in both countries, including private sector involvement
- 5.4 An appropriate regional coordination mechanism jointly defined
- 5.5 Information needs within the relevant sectors identified and addressed in order to ensure active and informed participation
- 5.6 Robust public awareness strategies developed that are targeted at the different stakeholder levels and groups

KEY INDICATORS, ASSUMPTIONS, AND RISKS (FROM THE LOGFRAME).

As reflected in the logical framework, given that the focus of this project is foundational capacity building through a SAP development process in accordance with GEF guidance, the majority of the indicators are process indicators. However, the demonstration projects, in particular that on *Joint Assessment and Monitoring of Coastal Conditions* will set the basis for the definition of Environmental Status indicators. Additionally, the Program will define stress reduction indicators during Phase 1, in the process of preparing the SAP.

Key indicators for the five outcomes detailed above are:

Outcome 1 Indicator: Revised TDA available and agreed upon by both countries Y2 (P)

Outcome 2 Indicator: SAP endorsed at ministerial level in both countries Y4 (P)

Outcome 3 Indicator: Pilot Projects all implemented and delivering on schedule Y4 (P, SR and ES)

Outcome 4 Indicator: Gulf of Mexico LME Data and Information Management System established Y4 (P)

Outcome 5 Indicator: The project team is effectively coordinating the project and meeting the objective.
All outputs completed within budget and according to the agreed work plan Y1 to Y4 (P)

Risks

The risks confronting the project were evaluated during the project preparation stage, and risk mitigation measures have been designed. Four main risks have been identified, and are summarized below:

Risk		Risk Mitigation Measure
Governments at all levels and key stakeholder groups do not remain committed to undertaking required sectoral, institutional, legal and economic reforms, and financially and politically committed to a regional management framework	L	Approval by the governments of this project reflects support from the different levels (federal, state and municipal). However, national commitment to needed sectoral, institutional, legal and economic reforms needs to be forthcoming and effective delivery of the project will only occur if there is country commitment and the project has effectively communicated its role and expected outputs. The reliance on the intersectoral committees as well as the clear requirement for national financial commitments through the NAPs shall be stressed throughout the project and will be key to overcoming this risk. Moreover, the project builds upon a strong suite of existing bi-national initiatives, and these will contribute to laying the bases for an effective development and implementation of the SAP and associated NAPs
Relevant government agencies not willing to share and provide data and information	L	It is important that scientific and technical groups providing inputs are committed to joint work and that there is reasonable access to national data and information. National data can often be sensitive to the countries involved, but to ensure the SAP process proceeds successfully, there is a need for countries and organisations to be committed to providing the necessary data and information. An understanding of the value of a regional Data and Information Management (DIM) system, and a growing appreciation of its benefits, should encourage stakeholders to be forthcoming with information and data.
LME-wide objectives may conflict with local/national interests	M	Infrastructure development for tourism, the commercial fishing industry, the oil industry, and agriculture are all important economic activities for the countries. Local and national resistance and objections to proposed changes to these sectors are likely to arise. Broad stakeholder participation and support, achieved through targeted awareness and information strategies, as well as stepwise consensus building, will be required and are built into the project as critical components. Routine and effective involvement of stakeholders in planning, management and decision-making can only be accomplished by on-going encouragement, strengthened capacities, and financial commitment by the project, donors and the countries themselves
Effective private sector involvement is difficult to achieve		For the long-term sustainability of the GoM LME Program, the project aims to demonstrate to productive sectors the long-term benefits to be derived from any jointly defined regional coordination mechanism that is established and that their own further investment in the project will be far less than the costs which would accrue to them if these mechanisms were not in place. Although there may be specific niches within the productive sectors that are non-responsive, current high levels of CSR and investment in environmental projects, such as by PEMEX, indicate that this risk is low.
[Rating: L = Low Risk; M = Medium Risk; H= High Risk]		

2. COUNTRY OWNERSHIP

COUNTRY ELIGIBILITY

Both countries are GEF members. Mexico is eligible for GEF financial support under paragraph 9(b) of the GEF Instrument.

COUNTRY DRIVENNESS

Over the last four decades the countries have demonstrated a willingness to co-operate in matters relating to the environment of the Gulf of Mexico both through bilateral programmes and active participation in regional programmes. These include: international agreements such as MEXUS-Gulf between the Instituto Nacional de la Pesca (INP) and the US Southeast Fisheries Science Centre (SEFSC) established in 1976; annual U.S. - Mexican Bilateral Fisheries Talks; attendance of Mexican officials at meetings of the U.S. Gulf of Mexico Fishery Management Council; the North American Free Trade Agreement Good Neighbor Environment Committee and Commission for Environmental Co-operation; the EPA-led Gulf of Mexico Programme; and the Northern Border Environmental Programme. Both countries belong to IOCARIBE, the UNESCO-IOC Sub-commission for the Wider Caribbean (which includes the Gulf of Mexico), the Western Central Atlantic Fishery Commission (WECAFC) of FAO and UNEP's Wider Caribbean Environment Program. Country drivenness of the project is also shown by the commitment of the countries in terms of significant financial resources in support of the project, including in-kind contributions. The governments have also indicated that they will provide necessary scientific expertise to the GoM LME Project from national organizations, and at-sea facilities for data collection, ship time, and meeting space as required.

3. PROGRAM AND POLICY CONFORMITY

FIT TO GEF OPERATIONAL PROGRAM AND STRATEGIC PRIORITY

In terms of Strategic Programs in the international waters focal area for GEF 4, the project conforms to both SP1 and SP2 as it will provide for strategies and actions for the sustainable management and use of exploited living marine resources, for the protection and restoration of critical coastal and marine habitats and to address reduction and control of nutrient over-enrichment and Harmful Algal Blooms. As called for in the International Waters Focal Area Strategy and Strategic Programming for GEF4, land-based sources of pollution that create anoxic "dead" zones are a priority and the Gulf of Mexico hypoxic zone is the largest in the world. The project addresses the cross-sectoral collaboration and synergies required in order to coordinate regional efforts to address the distribution, dynamics and causes of hypoxia. The project will also develop mechanisms and undertake reforms for maintaining fisheries resources to within safe biological limits, and encourage the sustainable use of all exploited living marine resources in the GoM LME. These efforts will complement activities and reforms geared at reducing ecosystem stress on critical coastal areas including bays, estuaries, and wetlands.

Through the international waters focal area, the GEF has helped establish management and policy frameworks in large marine ecosystems that provide the necessary foundation for marine protected areas to be successful. One of the pilots in the project specifically focuses on the rehabilitation and restoration of coastal areas and critical habitats. As an OP9 initiative, it emphasizes the multi-focal connections that characterize the system, and seeks to create a co-operative framework, together with the necessary capacities, thereby enabling riparian countries that share the ecosystem to address both imminent threats to the water body and develop joint ecosystem-based management approaches.

The Program addresses GEF eligibility criteria agreed under the International Waters focal area by:

- a) assisting groups of countries to better understand the environmental concerns of their international waters and work collaboratively to address them;
- b) building capacity of existing institutions, or through new institutional arrangements, to utilize a more comprehensive approach for addressing transboundary water-related environmental concerns; and
- c) implementing sustainable measures that address priority transboundary environmental concerns.

SUSTAINABILITY (INCLUDING FINANCIAL SUSTAINABILITY)

This project will be sustained through the far-reaching support mechanisms that are being incorporated into its development. It will bring together the private sector, civil society representatives (including members of the Regional Councils for Sustainable Development and NGOs), government agencies at all levels (SEMARNAT, the Secretary of the Navy, port authorities, riparian state and municipal governments), and donors interested in supporting work within the region. Once under implementation, both the project and the pilot projects will bring about evident economic and social benefits thus generating an incentive to replicate these efforts. Within the pilot projects, there are built-in mechanisms for sustaining the outcomes after project support is complete, as well as monitoring and evaluation that emphasizes acquiring improvements throughout the process and in subsequent implementation.

The improved coordination of institutions (SEMARNAT, INP, riparian state governments, municipalities) with mandates that impact on the GoM LME, at both national and bi-national levels, is a keystone of this project. Key examples are the MEXUS-Gulf initiative and the Gulf Governors Alliance. Moreover, this project builds upon existing mechanisms such as the permanent Inter-ministerial Commission for the Integrated Management of Oceans and Coasts (CIMIOC) of Mexico that represents a paradigm shift from a short-term, sectoral perspective to a long-term integrated management regime that recognizes the interconnections between biological systems and economic and social systems. Inter-sectoral linkages promoted by the project will provide for greater coordination and communication between economic sectors and spheres of government, in order to develop integrated management actions based on the ecosystem approach. Similarly, the project feeds into existing policy frameworks such as the Land Use Planning Programme for the Coast and Marine Areas of the Atlantic littoral currently being developed in Mexico. In addition, the project will catalyze the already dynamic relationship between the U.S. and Mexico in the GoM LME and build upon a strong baseline as reflected in the fact that the pilot demonstration projects seek to strengthen opportunities, expertise and know-how so that Mexican counterparts can better participate in, and contribute to, ongoing efforts by the U.S. in the region.

Finally, the development of the SAP and the NAPs includes devising mechanisms for regional and national support commitments to the project activities and to reach the objectives of the SAP. The creation of institutional mechanisms through the GoM LME as well as a country-driven regional coordination mechanism will also ensure that the efforts initiated under this project are national and regionally supported and will be on going after the conclusion of project activities.

REPLICABILITY

This project will draw on lessons from other GEF LME projects both regionally and globally, while the results and lessons learned from this project will benefit subsequent efforts to manage LMEs and coastal and enclosed seas. In this context, efforts will be made to cooperate and share information with other transboundary water management projects in the region. In particular, this initiative will be developed in close coordination with the GEF LME project “Sustainable Management of the Living Marine Resources of the Caribbean Large Marine Ecosystem and Adjacent Regions”, which is currently under preparation.

These two projects share key outcomes. Additionally, these initiatives share the support of important partners in the region including U.S.-NOAA and U.S.-EPA, as well as platforms for leveraging other partnerships and resources such as Blue Water to White Water.

STAKEHOLDER INVOLVEMENT

Stakeholder involvement has been recognized as an integral part of the development phase of the GoM LME project, and will continue to be emphasized during the implementation of this project. The large number and great diversity of stakeholders identified in the GoM LME, at all levels, present a challenge for this project and for a holistic approach to the governance of the LME in general. However, this situation also presents valuable opportunities for enriching and enhancing the project by engaging the key stakeholders in the project, as well as for ensuring the sustainability of project outcomes in the post-project period.

The project will work with the several fora that already exist at both national and bi-national levels for bringing diverse groups of stakeholders and resource users together including, at the bi-national level, the MEXUS-Gulf Fisheries Cooperation Program and ongoing bilateral fisheries talks. At national levels, Mexico has already established the Inter-ministerial Commission for the Integrated Management of Oceans and Coasts (CIMIOC), and the US has established the Gulf of Mexico Alliance, a partnership of Gulf States and 13 Federal agencies, and to which Mexican representatives are invited. In Mexico there is a network of Regional Consultative Councils for Sustainable Development, with representatives from NGOs, academia, the private sector and federal and state governments from each state. The representatives from the riparian states of the Gulf of Mexico are actively engaged in the development of the Land Use Planning Program for Coasts and Oceans, and it is foreseen that they will be also actively participating in this project. The project will build upon these initiatives and develop mechanisms to achieve a highly participatory approach that targets a wide array of stakeholder groups ranging from the private sector to community resource users. Project sustainability is understood to be closely associated with full engagement by key stakeholder groups. Therefore the project has a specific output related to identification of targeted information needs within relevant sectors, and the development of robust public awareness and participation strategies tailored to different stakeholder levels and groups.

MONITORING AND EVALUATION

Project monitoring and evaluation will be conducted in accordance with established UNIDO and GEF procedures and will be provided by the project team, with added support from the UNIDO GEF coordinator and Evaluation Unit and the UNIDO regional office in Mexico. The Logical Framework provides *performance* and *impact* indicators for project implementation along with their corresponding *means of verification*. The Logical Framework Matrix in Annex B also identifies the indicators in GEF Process (P), Stress Reduction (SR) and Environmental Status (ES) framework for reporting in Annual APR/PIRs. These will form the basis on which the project's Monitoring and Evaluation system will be built. The project's Monitoring and Evaluation Plan will be presented and finalized as part of the Project's Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of the project staff's M&E responsibilities. The Project Coordination Unit will be responsible for day-to-day monitoring of project activities and for taking measures to strengthen performance. Monitoring will include regular feedback to the Steering Committee. Annual Project Performance Review (PIR/APR) will be completed yearly followed by a Steering Committee meeting.

Approximately US\$236,000 will be allocated for the monitoring and evaluation (M&E) activities that will be undertaken by the project team, independent experts and UNIDO.

4. FINANCIAL MODALITY AND COST EFFECTIVENESS

Costs of the GEF Alternative represent baseline and incremental costs totalling US\$430,499,780. New and additional incremental resources required to achieve project objectives are US\$102,499,780. Of this, a request is made from GEF for US\$ 5.0 million while US\$97,954,780 has been raised as co-funding. This results in a 1:19.6 GEF to co-funding ratio.

PROJECT COSTS

Project Components/Outcomes	Co-financing (\$)	GEF (\$)	Total (\$)
1. Transboundary issues analysed and priorities defined	24,700,000	427,500	25,127,500
2. Country agreement on and commitment to regional and national policy, legal and institutional reforms to address agreed priority transboundary issues	9,000,000	1,130,000	10,130,000
3. LME-wide ecosystem-based management approaches encouraged and strengthened through the successful implementation of Pilot Projects	41,674,780	2,160,000	43,834,780
4. Monitoring and Evaluation System for the Project and the GoM LME established	19,400,000	469,000	19,869,000
5. Effective project coordination	2,000,000	316,000	2,316,000
	96,774,780	4,502,500	101,277,280

PROJECT MANAGEMENT UNIT BUDGET:

LOCALLY RECRUITED CONSULTANTS. It is estimated that 1,020 weeks of consultants are needed for the project. This is equivalent to 5 people over the 4 years of the project, including the Chief Technical Advisor for the project, one technical assistant, an administrator, one specialist in database management and geographic information systems, and a specialist on socio-economics and stakeholder analysis. Salaries for locally recruited consultants were estimated at USD \$ 1,000 per week.

INTERNATIONALLY RECRUITED CONSULTANTS. No international consultants will be hired for project management.

OFFICE FACILITIES, EQUIPMENT, VEHICLES, ETC. This includes \$250,000 for office space (at \$5,000 per month over four years), \$100,000 for office equipment and supplies etc., \$50,000 for adaptation of office space, \$280,000 for vehicles, which includes two vehicles for the use of the project coordinating unit (\$35,000 each – only one of these vehicles will be purchased with GEF funds, and with appropriate justification), one vehicle for field work (mainly for the pilots, \$60,000), a small boat for field work (\$50,000), and the use of ships of opportunity for coastal work and collections of offshore samples (\$100,000). It is calculated that \$100,000 will be spent for communications (internet, fax, telephone, etc.) over the four years of the project, and \$30,000 per year on office maintenance for a total of \$120,000.

TRAVEL. Since the project involves two countries and three pilot projects, travel to Mexico City (4 trips per year x 4 years at \$2,000 each totals \$32,000) and Miami (2 travels per year x 4 years at \$2,000 each totals \$16,000) to coordinate with the national focal points for the project are expected. Also travel to Corpus Christi (Texas) (2 trips per year x 4 years at \$2,000 each totals \$16,000) to coordinate with the Harte Research Institute and the Texas A&M University campus there. Visits to the pilot projects in the field (4 trips per year x 4 years at \$4,000 each totals \$64,000), attendance to workshops (4 trips per year x 4 years at \$3,500 each totals \$56,000) and training courses (4 trips per year x 4 years at \$4,000 each totals \$64,000) etc., have also been considered.

MISCELLANEOUS. Expenses other than those mentioned above are considered here, particularly funds for unexpected expenditures.

Component	Estimated consultant weeks	GEF (\$)	Other sources (\$)	Project total (\$)
Locally recruited consultants	1,020	316,000	700,000	1,016,000
Internationally recruited consultants*	0	0	0	0
Office facilities, equipment, vehicles and communications		0	900,000	900,000
Travel		0	250,000	250,000
Miscellaneous		0	150,000	150,000
Total		316,000	2,000,000	2,316,000

CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

838 weeks of national consultants will be hired for the technical assistance components, and 212 weeks of international consultants. A relatively small amount funds have been allocated to international consultants, since the United States has offered technical assistance and technology transfer in the cofinancing letter. Additionally, national consultants will be hired to coordinate the three pilot projects. Since these will be part time consultants, half the number of weeks is given. The duration of the conservation and fisheries pilots is four years (216 weeks), so 108 weeks are allocated, and the monitoring pilot is for three years (162 weeks), so 81 weeks are allocated. Salaries for locally recruited consultants were estimated at USD \$ 1,000 per week, and for internationally recruited consultants the salary was USD \$ 2,500 per week.

Component	Estimated consultant weeks	GEF (\$)	Other sources (\$)	Project total (\$)
Local consultants	2,135	1,092,500	1,042,500	2,135,000
International consultants	812	330,000	1,700,000	2,030,000
Total	2,947	1,422,500	2,742,500	4,165,000

CO-FINANCING SOURCES

Co-financing Sources				
Name of co-financier (source)	Classification	Type	Amount (\$)	Status
SEMARNAT	National Government	In kind	15,574,780	Confirmed
	National Government	Cash		Confirmed
PEMEX	National Government	In kind	1,200,000	Confirmed
	National Government	Cash		Confirmed
NOAA	National Government	In kind	78,400,000	Confirmed
	National Government	Cash		Confirmed
EPA	National Government	In kind	1,600,000	Confirmed
	National Government	Cash		Confirmed
Sub-total co-financing			96,774,780	

COST-EFFECTIVENESS

The project has been designed to ensure that outcomes are achieved in a cost-effective manner. The design includes three pilot projects that are all sited in the same area, Terminos Lagoon, in order to achieve greater cost-effectiveness, maximize synergies, and set the foundations for integrated, ecosystem-based approaches to natural resource management. Setting the pilot projects in the same location ensures that they will generate practical experiences to address a complex baseline of overlapping policies and competencies for protected area conservation, social and economic development and threats to terrestrial, coastal and marine biodiversity. Thus, the pilot projects will contribute to testing cost-efficiency models from a variety of different angles including ones focused on fisheries management and productive uses, habitat restoration and management, and robust M&E tools. Overall, efforts to establish functional and effective ecosystem-based management approaches are themselves cost-effective as the complex linkages and feedback mechanisms between natural systems, productive uses, governance frameworks, impacts on the LME from associated land-use activities are addressed in an integrated and comprehensive manner.

5. INSTITUTIONAL COORDINATION AND SUPPORT

CORE COMMITMENTS AND LINKAGES

UNIDO provides support activities to Latin America that complement activities scheduled under this project. In line with GEF's IW priorities, UNIDO is focusing attention on broadening the use of the LME approach in IW, and extending its geographical coverage in Latin America. UNIDO provides expertise in support of foundational capacity building projects such as this one. UNIDO has been the Executing Agency for two LME projects that use the TDA-SAP methodology. The UNIDO-executed GCLME project has led to the establishment of a multi-country LME Commission. Therefore, UNIDO can provide strong support for the application of TDA/SAP to Large Marine Ecosystem projects like the Gulf of Mexico. According to the document (para. 126) on comparative advantages presented to Council in the June 2007 Council Meeting, UNIDO has comparative advantage in water management, use of water resources, sustainable use of integrated transboundary river basins, wetlands, coastal zones and LME and recovery and sustainable management of industrial fisheries. Priority will be given to establishing strong linkages with other GEF funded projects in the region including IWCAM.

CONSULTATION AND COORDINATION

UNIDO brings experience in GEF IW projects, with the advantage of having a country office in the region. UNIDO will seek to ensure that the Gulf of Mexico countries work with other GEF projects and bilateral and multilateral donor agencies in the region in order to address the transboundary priority environmental problems of the GoM LME in a coherent and synergistic manner. Similarly, efforts will be made to ensure complementarity between, and to leverage necessary inputs from, pertinent ongoing bilateral and multilateral regional and national projects within the GoM LME, including those being executed by NGOs and the private sector.

PROJECT IMPLEMENTATION / EXECUTION ARRANGEMENTS

The GEF Agency for the project will be the United Nations Industrial Development Organization (UNIDO). UNIDO will be responsible for both the implementation and the execution of the project. SEMARNAT will also participate in the execution of the project.

Regional co-ordination and collaboration will be facilitated through a Regional Project Coordination Unit (PCU), which will be located in Mexico. A Chief Technical Advisor (CTA) will be hired to facilitate the

successful technical execution of project activities and will be housed in the PCU. The PCU will have other staff working part-time/full-time. A Regional Project Steering Committee, consisting of high-level official country representatives from the U.S. and Mexico and relevant stakeholders will oversee the implementation / execution of the project. It will meet at least once a year, A Regional Technical Advisory Group (R-TAG) will be established that will advise the Steering Committee and the PCU on GoM technical issues and ensure coordination in support of ecosystem-based management approaches. Finally, each country will have an Inter-Sectoral Committee (ISC) or its equivalent, to assure broad intersectoral coordination and broad government stakeholder participation.

ANNEX A: INCREMENTAL COST ANALYSIS

A. PROJECT BACKGROUND

Broad Development Objectives:

The long-term development/environmental goal of the project is to *promote a more sustainable development of the Gulf of Mexico LME through ecosystem-based management approaches*. The project objective is to *set the foundations for LME-wide ecosystem-based management approaches to rehabilitate marine and coastal ecosystems, recover depleted fish stocks, and reduce nutrient overloading*.

In order to achieve this objective, the purpose of this project will be to update the Transboundary Diagnostic Analysis (TDA) prepared during the PDF B phase, formulate a Strategic Action Programme (SAP) and associated National Action Programmes (NAPs) and undertake pilot projects that set the basis for SAP implementation. The SAP will consist of a series of actions to monitor and assess the changing conditions of the Gulf of Mexico Large Marine Ecosystem (GoM-LME) with a focus on restoring and sustaining fisheries and fish stocks, and reducing and controlling nutrient enrichment of the GoM-LME to safe ecosystem health levels. These actions will be supported by appropriate legal, policy and institutional reforms and investments to address the priority transboundary issues identified in the TDA formulation process. The project will also facilitate the initial implementation of the SAP to manage shared coastal and marine resources and achieve sustainable development for the GOM LME. This will involve the definition of an appropriate regional body and the implementation of three pilot demonstration projects. It is noted that although Cuba endorsed the PDF-B project document their experts did not subsequently participate in PDF-B activities, and the relevant government authorities indicated in a letter dated 27 February 2007 that they would not participate in the Full-Size Project.

A key principle of the project is to build upon, coordinate, and enhance existing approaches. For example, considerable work has been undertaken in the Mississippi river basin by different universities and state agencies, and in the Yucatán Peninsula under the GPA, as well as by various agencies in the Gulf of Mexico LME such as EPA and NOAA. Such activities are at a national level and one of the outputs of the project will be to provide a framework for coordination and harmonization at the bi-national level and to replicate or scale up such activities to encompass the whole LME.

B. INCREMENTAL COST ASSESSMENT

Baseline

Approximately 55 million people live in the coastal states of the GOM, 40 million in the USA and 15 million in Mexico. The Gulf of Mexico LME is a major asset to these countries, in terms of fisheries, tourism, agriculture, oil, infrastructure, trade and shipping. Commercial fishing and seafood processing are an important component of the LME's economy, with the most important species being brown, white and pink shrimp, and red grouper. The infrastructure for oil and gas production in the Gulf of Mexico (including oil refineries, petrochemical and gas processing plants, supply and service bases for offshore oil and gas production, platform construction yards and pipeline yards) is concentrated in the coastal regions of both the USA and Mexico. The Gulf of Mexico LME contains major shipping lanes, and the volume and value of shipping and port activities has increased in the region.

The five states that make up the Gulf Region in Mexico contribute approximately 10% of the gross domestic product for the agriculture and livestock, forestry and fisheries sector. The environmental cost of this production, based on national averages is equivalent to 11.8% of the regional GDP, without taking

into account the aspects of global relevance in the Gulf of Mexico ecosystem. It is also likely that the national average of environmental costs is lower than in the Gulf States given the intensity of agricultural and livestock related activities in Veracruz, Tamaulipas and especially Tabasco.

Habitat conservation and restoration

CONANP will continue to declare protected areas, mostly terrestrial, aside from special reserves such as the soon-to-be announced expansion of the Yum Balam (largely land-based) reserve to include a marine sanctuary for an emblematic species in Holbox Island, the whale shark, or the manatee sanctuary established in Chetumal Bay on the southern border with Belize. However, it is unlikely that productive marine systems outside of landscape, biodiversity (coral reefs) or keystone species considerations would be established. PEMEX will continue to support the implementation of management plans for the protected areas in the company's operational zone such as Pantanos de Centla and Laguna de Términos. CONAFOR will also continue to support mangrove restoration efforts under its competitive subsidy program, without taking into consideration strategic nature of factors such as primary productivity, climate change adaptation, etc. Ramsar resolution on marine protected areas is consistent with national policies but in the absence of GEF support would not be considered as a priority nor would synergies between coastal and marine ecosystems be actively sought. This baseline is estimated at US\$ **21 million**.

Pollution

CNA will continue to monitor simple parameters to report on beach water conditions, harmful algal blooms will be reported and monitored, although with no systematic information sharing protocols with the USA. Water sanitation and treatment facilities will be built and operated by CNA and the municipal governments. The US action plan on hypoxia will continue to be implemented in the Mississippi Delta, however in the absence of GEF support, Mexico will have no systematic way assimilate relevant knowledge generated in the US and replicate in relevant programs such as RPA-YUCATAN (see below). In the absence of the ecosystem approach, agricultural run-off and nutrient loading will continue to be viewed as a result of seasonal fluctuations in the Gulf. The oil industry is the single most important economic sector in Mexico. Oil extraction is particularly important in the states of Tabasco and Campeche, the reserves of which are considered to be amongst the most important in the Western Hemisphere. PEMEX will continue to operate its environmental management and industrial security program, including pollution mitigation practices, emergency protocols and restoration. Mexico – through SEMARNAT- will continue to prepare its National Implementation Plan for the Stockholm Convention on POPs, including abatement measures for unintentional releases. This region has been selected for a pilot project for the Global Program of Action (Regional Plan of Action for the Yucatan Peninsula RPA-YUCATAN), and close cooperation with the Gulf of Mexico project is foreseen. This baseline is estimated at US\$ **100 million**.

Policy Framework

Mexico has made important advances in consolidating its environmental policy, and the past and current administrations have placed importance on mainstreaming of the environment through cross-sector planning and budgeting. In 2006, SEMARNAT adopted a National Environmental Policy for the Sustainable Development of Oceans and Coasts, which establishes public policy guidelines and strategies in an effort to reinforce integrated environmental management of the coastal zone through structural reform, effective inter-institutional coordination and wide ranging public participation. Mexico published a National Fisheries Chart at the end of the 1994-2000 administration and although new versions were published in 2004 and 2006, it that was not taken on board by subsequent administrations as a result of which several fishing stocks were depleted. Most recently, fundamental modifications have been made to several official standards and it is expected that further fine-tuning of the legal and policy framework would continue to take place. However in the absence of GEF support, it is unlikely that a harmonized policy framework for the LME between Mexico and the USA, as well as between the Mexican Federal

Government and the State and Municipal governments, would be achieved. This component of the baseline is estimated at US\$ **8 million**.

Regional coordination efforts

Bilateral activities will continue to be carried in the Gulf of Mexico out on a wide-ranging number of issues including wildlife, habitat, shipping, petroleum industry-related emergency contingency plans, shared watersheds, etc. Nevertheless, these efforts are predominately sectoral in nature, and do not contemplate a shared approach, nor do they provide an enabling environment for synergies through the ecosystem approach. The baseline is estimated at US\$ **20 million**.

Sustainable Livelihoods

SAGARPA currently provides limited support to riparian communities in the form of extension programs, some rural aquaculture initiatives, and subsidized seeds, fertilizers and other inputs for subsistence farming. In spite of the limited support for aquaculture, there is no real institutional effort made to provide alternative income to rural coastal fisher communities. CONAFOR operates several subsidy programs principally for reforestation and commercial plantations, and is the main financial source for restoration of ecosystems (see above in habitat). PEMEX through the National Indigenous Commission and other institutions provides some support for productive alternatives in agriculture. CONANP allows for productive activities in the influence and buffer zones of the region’s protected areas but does not provide any financial support, and the management plans are not also linked to potential financiers. Also, full stakeholder participation in the identification of these productive alternatives is still somewhat limited in spite of important efforts in public outreach and awareness-raising. The baseline is estimated at US\$ **15 million**.

Summary of Baseline Investment

Issue	Detail	Cost US\$
1	Habitat conservation and restoration	21,000,000
2	Pollution	100,000,000
3	Policy Framework	8,000,000
4	Regional coordination efforts	20,000,000
5	Sustainable livelihoods	15,000,000
Total	Total Baseline Expenditures (4 years)	164,000,000

Global Environmental Objective

The principal global benefit of the project is an enhanced understanding of LME functions, to serve as input into LME management strategies through the TDA and SAP processes, and to establish an enabling environment and ecosystem-based management practices that will contribute to the protection and maintenance of ecosystem functions and services. The Gulf of Mexico LME’s primary productivity supports an important global reservoir of biodiversity and biomass of fish, sea birds and marine mammals. The LME supplies a diverse range of goods and services to the global community but these stand threatened by human-induced pressures, including overfishing. These threats are transboundary in nature, and cannot be effectively abated through stand-alone national initiatives. Global benefits can be secured through the institution of an LME ecosystem-based management framework, allowing the countries to strengthen the management of LME living resources, and address land-based and marine pollution including the reduction of nutrient loads that contribute to hypoxic zones in the LME.

The expected result of the set of interventions will be to reduce coastal pollution, restore damaged habitats, and restore depleted stocks. The Project will make an important contribution by providing the needed building blocks such as information systems and exchange, reinforced capacity and mechanisms for stakeholder participation. An enhanced knowledge of the oceanography of the Gulf of Mexico LME will assist the countries in addressing uncertainty regarding ocean-atmosphere links.

Alternative

The proposed GEF Alternative is directed at removing identified constraints and barriers to the use of the ecosystem approach in the management of the GOM LME, including discrete capacity-building activities, pilot projects in three critical aspects of the ecosystem approach: productive, conservation and adaptive management, as well as cross-sectoral engagement. The transition towards the ecosystem-based management of the GOM LME will depend on a greater convergence of policy tools including long-term, joint programs and actions, a clearer distribution of competencies at all three levels of government, and a robust monitoring and evaluation program. Five outcomes have been mutually identified, to be supported through a mix of GEF financing and co-financing including reoriented baseline.

Outcome 1: transboundary issues analysed and priorities defined

An objective, scientific and technical Transboundary Diagnostic Analysis (TDA) defining the transboundary environmental problems affecting the goods and services of the LME from an ecosystems perspective will be revised and disseminated. The TDA will respond to the priority issues identified by both countries including transboundary pollution mitigation, reduction and control; weak transboundary fisheries stock management; coastal resource degradation; incomplete knowledge on the LME's biodiversity, a non-comprehensive legal and policy framework; and the lack of a coordinated approach for the LME management and conflict resolution issues for the Gulf of Mexico. Under the alternative, GEF resources and co-financing will be used to finalize the development of the TDA through a capacity needs and information gap assessment on the priority issues, as well as targeted training, as needed. This will include the identification of biodiversity hotspots, ecosystem-wide sources of contaminants, and preliminary economic valuation of the LME goods and services.

(US\$ 427,500 GEF, US\$ 24,700,000 Co-finance)

Outcome 2: The SAP and associated NAPS are formulated and adopted at ministerial level

Nationally endorsed SAP and NAPs with accompanying sustainable financing plans will pave the way towards continued incremental improvement in the GOM LME based on a solid foundation of regional commitment and consensus. GEF resources will leverage considerable co-financing to identify and promote strategic partnerships within the SAP to address underlying socio-economic and governance failures for the sustainable management of the LME. Domestic and global co-benefits will be generated through LME-wide agreements on improved legal and policy frameworks; the incorporation of additional globally relevant protected areas, including marine protected areas; targeted capacity building and institutional strengthening activities and concerted action on ecosystem priorities and targets. The SAP and NAPs will also include the creation or strengthening of existing institutional mechanisms for the regional coordination of LME-implemented activities.

(US\$ 1,130,000 GEF - US\$ 9,000,000 Co-finance)

Outcome 3: demonstration projects successfully implemented

Three priority pilot projects were jointly identified by participating countries to advance SAP implementation, and to set the basis for its long-term sustainability. The pilot projects are fully incremental, will leverage significant co-financing and will contribute to the adoption of ecosystem-based management of the LME by assisting Mexico and the US to coordinate conservation, fisheries and monitoring activities. The pilot strategies will generate practical experiences to address a complex

baseline of overlapping policies and competencies for protected area conservation, social and economic development, and threats to terrestrial, coastal and marine biodiversity. The harmonized development of the three pilots will contribute to defining a stronger baseline, and help enable the development of validated integrated approaches that will facilitate upscaling and replication to other States and at a national level. Successful implementation of the pilots will also provide concrete steps forward towards achieving the ecosystem goals to be established in the SAP.

(US\$ 2,160,000 GEF - US\$ 41,674,780 Co-finance)

Outcome 4: Monitoring and Evaluation System for the Project and the GOM LME established

Effective monitoring and evaluation (M&E) is recognized as an indispensable tool in project and program management. The Gulf of Mexico M&E plan and the process, stress reduction, and environmental status indicators developed as part of it in accordance with GEF guidance, will serve both as a corrective function during the project cycle, enabling timely adjustments, and as a guide to structuring future projects more effectively. GEF resources will mobilize co-financing to harmonize the currently disparate monitoring efforts in the LME, with agreed bi-national standards and protocols for the collection, processing, analysis and compilation of data and GIS information including the preparation of a regular bi-annual regional status report on large-scale ecosystem impacts in the GOM LME.

(US\$ 469,000 GEF - US\$ 19,400,000 Co-finance)

Outcome 5: Effective project coordination

The GEF alternative proposes improved regional mechanisms to meet and address the coordination needs and gaps that currently inhibit the carrying out of system-wide interventions in the LME. By the end of the project, it is expected that an appropriate long-term regional coordination mechanism will be defined by both countries. This will include joint definition of a long-term regional coordination mechanism building upon existing bi-national initiatives and the establishment of a Regional Technical Advisory Group (R-TAG). Incremental support will help promote the transfer of institutional arrangements from the support of GEF and other donors to ownership by the region. GEF funding will also identify and apply best practices for public awareness and involvement in order to mobilize regional political and stakeholder commitments to the broader development goals of the LME

(US\$ 316,000 GEF - US\$ 2,000,000 Co-finance)

Systems Boundary

Incremental costs have been assessed temporally, over the planned four-year implementation of GEF-supported activities, and geographically, through the marine and coastal waters of 5 Mexican Gulf States as well as the target sites of the pilot projects. In this particular project only Mexico is eligible for GEF financing, however some baseline information has been included for the United States of America. The analysis also covers the suite of thematic issues identified in the TDA process, some building on past and present bilateral efforts.

Summary of Costs

The baseline, comprising activities that would be pursued irrespective of project investment, has been estimated at US\$ 164,000,000. Incremental Costs amount to US\$ 101,277,280, of which the GEF would fund US\$ 4,502,500. The total Alternative is US\$ 265,277,280. The GEF contribution amounts to 4.6 % of the cost of the total Incremental Cost and 1.7 % of the cost of the Alternative. The GEF will provide funding for activities that generate clear global benefits, and could not be justified solely on domestic benefits.

Summary of GEF and other donors Investment – The Overall Incremental Cost

	Outcome	Total	GEF	Co-finance
1	TDA finalized	25,127,500	427,500	24,700,000
2	SAP finalization and implementation	10,130,000	1,130,000	9,000,000
3	Pilot projects	43,834,780	2,160,000	41,674,780
4	Monitoring and evaluation	19,869,000	469,000	19,400,000
5	Coordination	2,316,000	316,000	2,000,000
Total		101,277,280	4,502,500	96,774,780

Incremental Cost Analysis per Outcome

Outcome	Baseline	GEF	Co-Funding	Increment	Alternative
1. Transboundary issues analysed and priorities defined	\$48,000,000	\$427,500	\$24,700,000	\$25,127,500	\$73,127,500
2. Country agreement / commitment to reforms x priority tb issues defined	\$41,000,000	\$1,130,000	\$9,000,000	\$10,130,000	\$51,130,000
3. LME-wide EBM approaches encouraged x Pilot Projects defined	\$33,000,000	\$2,160,000	\$41,674,780	\$43,834,780	\$76,834,780
4. M&E System for the Project and the GOM LME established	\$34,000,000	\$469,000	\$19,400,000	\$19,869,000	\$53,869,000
5. Effective project coordination	\$8,000,000	\$316,000	\$2,000,000	\$2,316,000	\$10,316,000
Total	\$164,000,000	\$4,502,500	\$96,774,780	\$101,277,780	\$265,277,280

Outcome 3 - Pilot Projects

Outcome	Baseline	GEF	Total Co-finance	Increment	Alternative
1. Natural Habitat and Ecosystem Conservation	\$ 9,000,000	670,000	\$12,408,448	\$13,078,448	\$22,078,448
2. Enhancing Shrimp Production through EBM	\$ 5,000,000	720,000	\$17,866,332	\$18,586,332	\$23,586,332
3. Joint Assessment & Monitoring	\$ 19,000,000	770,000	\$11,400,000	\$12,170,000	\$31,170,000
TOTAL	\$33,000,000	\$2,160,000	\$41,674,780	\$43,834,780	\$76,834,780

Incremental Cost Matrix

Component	Baseline	Increment	Alternative
<p>Overall Objective: To set the foundations for LME-wide ecosystem-based management approaches to rehabilitate marine and coastal ecosystems, recover depleted fish stocks and reduce nutrient overloading</p>	<p>\$ 164,000,000</p>	<p>GEF: \$ 4,502,500 NOAA/EPA: 80,000,000 SEMARNAT/PEMEX:: 16,774,780</p> <p>Total: \$ 101,277,280</p>	<p>Total Alternative: \$265,277,280</p>
<p>Explanatory note: A financial baseline for the project has been set at \$ 164 million, over 4 years, established using a ‘business as usual’ scenario where, despite existing bi-national agreements on fisheries such as MEX-US Gulf, the shared resources of the GOM are unsustainably exploited. In the absence of the GEF intervention, fragmented management approaches not consistent with ecosystem-based management will continue within the two countries and in particular Mexico. Currently there are no agreed bi-national programmes for managing the GOM resources from an ecosystem-based perspective and although the two countries have institutional frameworks for coastal and marine resources protection, no effective regional intersectoral project coordination mechanism exists.</p> <p>The proposed GEF alternative is required in order to remove identified constraints and barriers to the use of the ecosystem approach in the management of the GOM LME, through discrete capacity-building activities and pilot projects in three critical aspects of the ecosystem approach: productivity, conservation and adaptive management, as well as cross-sectoral engagement. The transition towards the ecosystem-based management of the GOM LME will depend on a greater convergence of policy tools including long-term joint programs and actions, a clearer distribution of competencies at all three levels of government, and a robust monitoring and evaluation program. This will require a truly regional GOM initiative supported through a combination of GEF financing and co-financing including a reoriented baseline.</p> <p>Within this integrated approach, the project will address specific IW Priorities, in particular land-based pollution and depletion of coastal/marine fisheries. In particular, the “dead zone” that forms every year in the Gulf of Mexico in critical areas for commercial and recreational fisheries will require cross-sectoral, integrated suites of measures and reforms to address this issue as detailed in the IW Strategy. The project will also develop mechanisms and undertake reforms for maintaining fisheries resources to within safe biological limits, and encourage the sustainable use of all exploited living marine resources in the GOM LME. As called for in the IW Strategy, this LME suffers from fisheries depletion but the stocks and associated biodiversity are not yet too degraded.</p> <p>The alternative scenario includes financing from GEF, SEMARNAT and NOAA.</p>			

Outcome 1: Transboundary issues analyzed and priorities defined	\$ 48,000,000	GEF: \$ 427,500 NOAA/EPA: \$24,000,000 SEMARNAT: \$700,000 Total: \$ 25,127,500	Total Alternative: \$ 73,127,500
<p>Explanatory note: A financial baseline for this Outcome has been set at \$ 48 million, over 4 years, established using a ‘business as usual’ scenario where bi-lateral activities will continue to be carried in the Gulf of Mexico out on a wide-ranging number of issues including wildlife, habitat, shipping, petroleum industry-related emergency contingency plans, shared watersheds, etc. However, current initiatives are predominantly country driven and are regionally fragmented with limited global benefits. Both countries at present have their own approach to monitoring; standards are not uniform throughout the region and there are many gaps in environmental monitoring in Mexico. In addition, there is currently little integration of results on ecosystem health between the countries again resulting in limited global benefits. Existing benefits include common work on some listed species (CITES) and the North American Biodiversity Network.</p> <p>Under the alternative, GEF resources and co-financing will be used to finalize the development of the TDA through a capacity needs and information gap assessment on the priority issues, as well as targeted training as needed. This will include the identification of biodiversity hotspots, ecosystem-wide sources of contaminants, and preliminary economic valuation of the LME goods and services. This will result in: increased strategic focus of the bilateral programs in the Gulf of Mexico; greater convergence of policy tools including long-term joint programs and actions; enhanced national and regional capacity for monitoring, data and information storage, and dissemination of information to support decision-making; and improved legal/management/planning structures for addressing the priority transboundary problems within the framework of the ecosystem approach, including sustainable fisheries management, protection of coastal habitats, and land- and sea-based pollution.</p>			
Outcome 2: Country agreement on and commitment to regional and national policy, legal and institutional reforms to address the agreed priority transboundary issues	\$ 41,000,000	GEF: \$ 1,130,000 NOAA/EPA: \$6,000,000 SEMARNAT: \$3,000,000 Total: \$ 10,130,000	Total Alternative: \$ 51,130,000
<p>Explanatory note: The financial baseline for Outcome 2 has been set at \$ 41 million, over 4 years, and has been established using a ‘business as usual’ scenario. It is expected that the Regional Plan of Action for the Yucatan Peninsula RPA-YUCATAN will still be developed by Mexico as a major contribution to reduce land based sources of pollution into the GOM LME. However, agricultural subsidies will continue to favor the intensive use of agro-chemicals and continue to load the Gulf ecosystem with nutrients in its drainage system. Recovery plans for depleted priority non-commercial species and associated marine flora and fauna are unlikely to be addressed. State-level and federal protected areas will continue to be declared in the absence of any shared assessment of biodiversity hotspots and transboundary and migratory species habitats. Habitat restoration programs will continue as reforestation or commercial plantation initiatives in the absence of broader</p>			

biodiversity goals and ecosystem criteria. Some action plans currently under preparation for climate change adaptation will be developed, as will piecemeal mangrove programs. Mexico's Protected Area System will continue to incorporate new PA (mostly territorial) based on ecosystem representativity. Ultimately, the lack of a comprehensive ecosystem approach will fail to generate significant global benefits.

Under the alternative, GEF resources and co-financing will be used to develop a programmatic approach for action plans with inter-agency agreements and processes, including the development of a Strategic Action Programme (SAP) and associated National Action Programmes (NAPs). This will result in harmonized approaches for policy, legal and institutional reforms for addressing priority transboundary issues including consensus on ecosystem priorities, targets, governance reforms, programmes and projects to protect, manage, restore and sustain the shared resources of the GOM LME. Other incremental benefits will include: the development of strategies for harmonizing legislative, policy and regulatory frameworks on agricultural practices at LME wide levels, thus building upon the Gulf of Mexico Governors Alliance; the formulation of strategies and actions for the sustainable management and use of exploited living marine resources, and for the recovery of depleted fish stocks to within safe biological limits; the development of Strategic Partnerships between GOM LME program and institutions responsible for integrated management of the major GOM river basins, as well as the main coastal cities. Additional global benefits will be generated by addressing the balance of the protected areas at the systemic level, while advancing the implementation of resolution IX.4 of the Ramsar convention as well as strengthening Mexico's globally relevant Protected Area System (SINAP) through the addition of MPAs.

Outcome 3: LME-wide ecosystem-based management approaches encouraged and strengthened through the successful implementation of the Pilot Projects	\$ 33,000,000	GEF: \$ 2,160,000 NOAA/EPA: 33,600,000 SEMARNAT: 6,874,780 PEMEX: 1,200,000 Total: \$ 43,834,780	Total Alternative: \$ 76,834,780
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Explanatory note:

The financial baseline for Outcome 2 has been set at \$ 33 million, over 4 years, and has been established using a 'business as usual' scenario. Currently, there are a number of national efforts to conserve natural habitats in the coastal and marine areas of the GOM but they are generally uncoordinated. Fisheries management practices are used by Mexico but do not use the ecosystem approach. There is currently no 'joined up' coastal assessment monitoring programme in Mexican waters, similar in scope that undertaken by the U.S. It is expected that a number of activities similar in ambit to the proposed pilot projects would be undertaken under the baseline to try to rectify this situation. However, many are likely to be promoted without considering the ecosystem perspective and without scoping and prioritization.

Under the alternative, GEF resources and co-financing will be used to develop pilot projects that will deliver tangible global benefits within the participating countries through the selection and implementation of 'on-the-ground' activities. The three pilot projects are fully incremental and will assist Mexico to participate more robustly in ongoing programmes undertaken by the United States, and both countries to strengthen regional approaches to ecosystem-based management of the LME. The pilots are all sited in the same area, Terminos Lagoon, in order to achieve greater cost-effectiveness, maximize synergies and set the foundations for integrated, ecosystem-based approaches to natural resource management. By setting the pilots in the same location, the pilot strategies will generate practical experiences to address a complex baseline of overlapping policies and competencies for protected area conservation, social and economic development and threats to terrestrial, coastal and marine biodiversity. The harmonized development of the three pilots will moreover contribute to defining a stronger baseline, and help

enable the development of validated integrated approaches that will facilitate upscaling to other States and at a national level. Successfully completed demonstration projects will also serve as a basis for replication in the region and outside the region and will provide concrete steps towards achieving agreed ecosystem quality objectives (or EcoQOs) as set out in the SAP.			
Outcome 4: Monitoring and Evaluation System for the Project and the GOM LME established	\$ 34,000,000	GEF: \$ 469,000 NOAA/EPA: 16,400,000 SEMARNAT: 3,000,000 Total: \$ 19,869,000	Total Alternative: \$ 53,869,000
Explanatory note:			
<p>The financial baseline for Outcome 2 has been set at \$ 34 million, over 4 years, and has been established using a ‘business as usual’ scenario. Under the present situation, monitoring activities are carried out by diverse government actors at principle locations on the Mexican Gulf Coast, with additional monitoring and evaluation of diverse sites by academic and NGO actors, according to institutional interests. Both countries have national environmental data centres, but there is no regional information system and only limited sharing of data. There are unequal capacities amongst the government agencies and civil society to accurately monitor and evaluate the state of the Gulf ecosystem and there is an absence of a programmatic approach to monitoring and evaluation, which results in a limited capacity to understand the LME dynamics.</p> <p>Under the alternative, GEF resources and co-financing will be used to develop a comprehensive monitoring and evaluation system that supports the ecosystem-based approach for managing the GOM LME and which is relevant and readily available for all stakeholders. In order to ensure that the M&E mechanism and indicators are populated with high quality data, a regional Data and Information Management (DIM) system will be developed, building on existing systems within the region. This will increase the understanding of the LME and aid in quantifiably valuing the goods and services it provides. Additional global benefits will be generated through monitoring ecosystem health to protect globally relevant coastal and marine biodiversity.</p>			
Outcome 5: Effective project coordination	\$ 8,000,000	GEF: \$316,000 SEMARNAT: \$ 2,000,000 Total: \$ 2,316,000	Total Alternative: \$ 10,316,000

Explanatory note:

The financial baseline for Outcome 2 has been set at \$ 8 million, over 4 years, and has been established using a ‘business as usual’ scenario. Under the baseline situation, there are currently no regional coordination mechanisms in existence so there are only limited opportunities to address transboundary and biodiversity issues using an ecosystem approach. Intersectoral coordination exists to a lesser or greater degree in the GOM and principally occurs only at the national level. Active and informed participation of the relevant sectors in Mexico is patchy. Some sectors are highly engaged whilst others are not. Furthermore, existing stakeholders at the national level are not well identified or organized for addressing priority GOM LME issues. This lack of uniformity of stakeholder participation in environmental decision-making generates disparate public buy-in for environmental actions.

Under the alternative, GEF resources and co-financing will be used to develop a regional coordination mechanism to help countries harmonize policies and legislation and to share experiences and best practices in protecting their coastal and marine resources. An intersectoral coordination mechanism will help to ensure an effective multisectoral approach to developing and implementing the project at both the national level and throughout the GOM LME and will help ensure sustainable multi-country ecosystem based management and implementation. Stakeholder strengthening will increase both the national impact of stakeholder inputs to national environmental issues and will help stakeholders better understand the transboundary context of their actions throughout the entire LME. Ultimately, improved capacity within relevant sectors regarding the transboundary problems affecting the LME will help ensure active and informed participation in the project and will have global benefits by helping reduce or minimize the transboundary environmental problems affecting the for the GOM LME.

ANNEX B: PROJECT LOGICAL FRAMEWORK

	<u>Objectively verifiable indicators</u>				
Goal	Sustainable development of the Gulf of Mexico LME enhanced through ecosystem-based management approaches				
Objectives/Outcomes	Indicator P: Process Indicator SR: Environmental Stress Reduction Indicator E: Environmental Status Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
Objective: To set the foundations for LME-wide ecosystem-based management approaches to rehabilitate marine and coastal ecosystems, recover depleted fish stocks and reduce nutrient overloading	Improved national and regional capacities for monitoring, rehabilitation and sustainable management of the GoM LME. Y4 Strategic partnerships established with key stakeholder groups in the main watersheds draining into the GoM, as well as with coastal cities, to support initiatives to reduce land-based sources of pollution. Y4	Despite existing bi-national agreements on fisheries such as MEX-US Gulf the shared resources of the GoM are unsustainably exploited Existing management approaches are not consistent with ecosystem-based management (EBM)	Ecosystem based management approach is widely implemented and linked to conservation, rehabilitation, and resources management programs along the Gulf of Mexico	Project Management Unit (PMU) Project files and documents Steering Committees (SC) annual reports Working group and technical reports Interministry Committee reports Annual project review	Countries remain supportive of regional management framework National commitment to needed sectoral, institutional, legal and economic reforms remains forthcoming Broad stakeholder participation is achieved, including the private sector Assume continued national commitment to the regional programme at each sector level, including the provision of national resources
Outcome 1 Transboundary issues analyzed and priorities defined (P).	Revised TDA available and agreed upon by both countries Y2	Fragmented and sectoral analysis of selected regional parameters	TDA, published and broadly disseminated, provides basis for informed management decisions at a regional level	TDA document	Close, joint working relationship among scientific and technical groups providing input is forthcoming
Outcome 2 Country agreement on and commitment to regional and	SAP endorsed at ministerial level in both countries. Y4	No agreed bi-national programme for managing the GoM	SAP agreed and endorsed	SAP document	Countries continued commitment to regional approach

national policy, legal and institutional reforms to address the agreed priority transboundary issues (P)		resources from an ecosystem-based perspective			Continued cooperation among key regional institutions and national governments
Outcome 3 LME-wide ecosystem-based management approaches encouraged and strengthened through the successful implementation of the Pilot Projects (P, SR and E)	Pilot Projects all implemented and delivered on schedule. Y4	Not part of the baseline program	All three demonstration projects fully and satisfactorily implemented and all objectives completed	Demonstration project reports	Failure or delays in Parties' involvement to integrate on-ground actions
Outcome 4 Monitoring and Evaluation System for the Project and the GoM LME established (P)	GoM LME Data and Information Management System established. Y4	Not part of the baseline program	GoM LME data and information system fully operational Stakeholders have full access to the system	Existence of DIM system and DIM standards and protocol document	Lack of METADATA to support the Monitoring System Failure of participant parties to provide updated, high quality information to the System
Outcome 5 Effective project coordination (P) .	The project team is effectively coordinating the project and meeting the objective. All outputs completed within budget and according to the agreed work plan. Y1 to Y4	Countries in the region have institutional frameworks for coastal and marine resources protection, but no effective regional intersectoral project coordination mechanism currently exists.	Project implemented in an effective manner in accordance with agreed work plans and budgets	Project monitoring reports and files Steering committee minutes Intersectoral committee minutes Regional coordination mechanism meeting minutes	Effective delivery of the project will only occur if there is country commitment and the project has effectively communicated its role and expected outputs.

Outcome 1 Transboundary issues analyzed and priorities defined					
Outcomes/Outputs/Activities	Indicator P: Process Indicator SR: Environmental Stress Reduction Indicator E: Environmental Status Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
1.1 Capacities and gaps in regional monitoring methods/standards identified	Detailed gap analysis undertaken based on extensive review of literature, information and data. Y1	Each country at present has its own approach to monitoring and indicators are not uniform throughout the region. There are many gaps in environmental monitoring.	A regional assessment of monitoring capacity gaps completed	Working group reports, project monitoring reports and files Gap analysis report	Scientific and technical groups providing inputs are committed to joint work
1.2 Key ecosystem assessment and management gaps identified	Detailed ecosystem assessment and management gap analysis concluded based on extensive review of literature, information and data by Y2	Ecosystem-based management is not being used for stock management in the Gulf of Mexico	A regional assessment of ecosystem and management capacity gaps completed	Working group reports, project monitoring reports and files Ecosystem assessment and management gap analysis report	Countries and organisations are willing to provide data and information on key ecosystems and management gaps
1.2.1 Biodiversity hot spots in GoM LME assessed and key knowledge gaps identified	Regional working group approves assessment of biodiversity hot spots and key knowledge gaps by Y2 Q2	Biodiversity hot spots assessed but national efforts are not regionally coordinated	A regional assessment of biodiversity hot spots completed	Biodiversity hot spots report	

1.2.2 Existing information and data on status and trends in fisheries assessed	Assessment of status and trends in GoM fisheries, particularly commercial aspects of shrimp, reef fish, blue crab, red snapper, mackerel and anchovies fisheries finalized by Y2 Q2	Current initiatives are country driven and are regionally fragmented	Assessment of status and trends in GoM fisheries, particularly commercial aspects of shrimp, reef fish, blue crab, red snapper, mackerel and anchovies fisheries finalized	Status and trends as defined in fisheries report	Countries and organisations are willing to provide data and information on key ecosystems and management gaps
1.2.3 Ecosystem-wide nutrient over-enrichment and contaminant sources, flows and levels assessed	Contaminant sources, in particular LBS point and non point, identified and assessed by Y2 Q2	Nutrient over-enrichment and contaminant sources, flows and levels are assessed but national efforts are not regionally coordinated	A regional assessment of nutrient and contaminant sources completed	Report on assessment of ecosystem-wide nutrient over-enrichment and contaminant sources, flows and levels	Relevant regional organizations and river basin management authorities are committed to supporting project objective Watershed and coastal management available tools will be harmonized and a shared vision established towards a healthy regional ecosystem.
1.2.4 Environmental impacts of transboundary pollution on the GoM ecosystem assessed	Integrated analysis, including of previous assessments, agreed by regional working group, describing transboundary pollution impacts by Y2 Q2	Current assessment of the environmental impacts of transboundary pollution are predominantly country driven and are regionally fragmented	A regional report on the Status of the Gulf of Mexico completed	Report on the environmental impacts of transboundary pollution	
1.2.5 Information on nutrient over-enrichment and related HABs collected and integrated	Integrated analysis of nutrient over-enrichment and related HABs undertaken by Y2 Q2	Current initiatives are country driven and are regionally fragmented	Integrated analysis of nutrient over-enrichment and related HABs undertaken	Report on nutrient over-enrichment related HABs	

1.3 Governance analysis of relevant policy and regulatory frameworks completed [as a basis for 2.1.4]	Detailed document completed outlining current status and shortfalls of relevant national policies, legislation and institutional arrangements related to natural resource management and use in project area as a basis for harmonizing policy frameworks at a regional level by Y3	Current analysis of relevant policy and regulatory frameworks relating to the GoM LME are predominantly country driven	Detailed regional and national level governance analysis completed	Governance Analysis report	Relevant government agencies at national and federal levels are supportive of efforts to harmonize regional approaches.
1.4 Analysis of the socioeconomic impacts of priority transboundary issues, including a preliminary LME wide economic valuation of near shore and marine goods and services, undertaken	Integrated analysis describing socioeconomic impacts finalized by Y2 Preliminary valuation of near shore and marine goods and services assessed by Y3	Current initiatives are either non-existent or country driven	Preliminary assessment of value of environmental goods and services completed.	Socioeconomic impacts report Economic Valuation report	Quality information will be available to the project. Institutional cooperation and support will be forthcoming
1.5 TDA revised, finalized, published and disseminated	Revised TDA available and agreed upon by both countries by Y3	Fragmented analysis of selected regional parameters	TDA, published and broadly disseminated, provides basis for informed management decisions at a regional level	TDA document	Additional data and information will be available to fill the gaps from the initial TDA SC and national agreement attained with regards to TDA findings

Outcome 2 COUNTRY agreement on and commitment to regional and national policy, legal and institutional reforms to address the agreed priority transboundary issues					
Outcomes/Outputs/Activities	Indicator P: Process Indicator SR: Environmental Stress Reduction Indicator E: Environmental Status Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
2.1 Strategies and actions for the reduction and control of nutrient over-enrichment, HABs and for the elimination of dead zones developed	Joint agreement on coordinated strategies to work with relevant institutions in coastal areas, and river basin management authorities for establishment of defined targets by Y3	Inadequate reduction and control of nutrient over-enrichment, HABs have increased and extensive dead zones have developed in the GoM	Coordinated strategies and institutional networking will help to reduce HABs zones in GoM	Report on joint agreement for the establishment of defined targets to reduce and control nutrient over-enrichment	<p>Countries continued financial and political commitment to regional approach</p> <p>Continued cooperation among key regional institutions and national governments</p> <p>Relevant government agencies at national and federal levels are supportive of efforts to harmonize regional approaches</p> <p>Private sector, in particular in agriculture, are supportive of project objective</p>

<p>2.1.1 Regional Plan of Action for the Yucatan Peninsula (RPA-YUCATAN) developed by Mexico as a major contribution to reduce land based sources of pollution into the GoM LME, implemented.</p>	<p>RPA-Yucatan activities fully coordinated and harmonized with GoM project programme by Y3</p>	<p>RPA Yucatan is currently being developed in a joint effort between Mexico (SEMARNAT) and the US (NOAA). It was presented at the GPA meeting in Beijing in October 2006 and is currently being adopted and its implementation initiated by Mexican water authorities</p>	<p>Implemented RAP-Yucatan will act as a catalyser to replicate this approach to reduce LBS in other areas of concern in the GoM LME region</p>	<p>RPA-YUCATAN meeting minutes; workshop reports; RPA-YUCATAN document RPA-specific actions reports</p>	
<p>2.1.2 Strategic Partnerships between GoM LME programme and institutions responsible for integrated management of the major GoM river basins, as well as the main coastal cities, developed</p>	<p>Number of agreements defined between GoM programme and relevant river basin counterparts to coordinate and harmonize nutrient reduction strategies by Y3</p>	<p>There are currently no strategic partnerships. White Water to Blue Water (WW2BW) US initiative, adopted by Mexican authorities is currently being implemented in Mexico's driven initiatives, on-ground actions, policy and regulatory framework.</p>	<p>Linkages and agreements between watershed and coastal management authorities enhances reduction of LBS of pollution into the GoM</p>	<p>Strategic Partnership Planning documents; project monitoring reports and files</p>	<p>Relevant regional organizations and river basin management authorities are committed to supporting project objective</p>
<p>2.1.3 Stocktaking of the Papaloapan watershed Commission to define opportunities for replication in the Grijalva-Usumacinta and Panuco river basins in order to provide for strong inter-linkages between watershed management authorities and coastal managers.</p>	<p>Gap analysis carried out. Y1 Relevant experiences to be replicated and documented. Y3</p>	<p>Previous work of the Papaloapan watershed commission can be used to identify opportunities for replication.</p>	<p>Application of relevant experiences in the Grijalva-Usumacinta and Panuco river basins</p>	<p>Gap analysis findings. Relevant experiences documented.</p>	<p>Lack of commitment from watershed management authorities.</p>

<p>2.1.4 Strategies for harmonizing legislative, policy and regulatory frameworks on agricultural practices at LME wide levels developed, building upon the Gulf of Mexico Governors Alliance.</p>	<p>By the end of year 3, both countries have developed and encouraged the adoption of Best Management Practices that provide for harmonized nutrient control and reduction in agricultural practices.</p>	<p>The development and implementation of strategies to harmonize legislative, policy and regulatory frameworks at the national level is carried out in a ‘piecemeal’ manner with little regional scope or application of the ecosystem approach</p>	<p>Harmonized legislative, policy and regulatory frameworks enhanced to improve overall environmental performance and strengthen informed decision making in GoM</p>	<p>Draft legal modifications; project monitoring reports and files</p>	<p>Relevant government agencies at national and federal levels are supportive of efforts to harmonize regional approaches</p>
<p>2.2 Strategies and actions formulated for sustainable management and use of exploited living marine resources, and for the recovery of depleted fish stocks to within safe biological limits formulated</p>	<p>Targets defined and agreed for main commercial stocks by end of Y4</p>	<p>National strategies for the sustainable management and use of exploited living marine resources are currently poorly enforced and do not take into account the ecosystem approach</p>	<p>Joint actions and strategies set to manage fisheries will enhance the recovery of depleted fisheries stocks</p>	<p>Project monitoring reports and files</p>	<p>Private sector is supportive of ecosystem based management approaches and of set targets</p>
<p>2.2.1 Bi-lateral initiatives for regional surveying of productivity and oceanography, stock assessment and population assessments encouraged and strengthened</p>	<p>Surveys of productivity, oceanography, stock assessment and population assessments will be coordinated and undertaken through cooperative studies by Y4</p>	<p>Current knowledge of regional stocks, and in particular of transboundary stocks, is incomplete and has been predominantly carried out by each nation state and not regionally.</p>	<p>Joint regional surveys will help recover depleted fishery stocks.</p>	<p>Project monitoring reports and files Joint survey reports</p>	

<p>2.2.2 Review effectiveness of compliance measures with existing fisheries legal and regulatory frameworks in both countries, especially with regards to Illegal, Unregulated and Unreported (IUU) fishing, excessive fishing capacity, and enforcement and surveillance, and propose appropriate reforms and measures.</p>	<p>Best management practices and code of conduct for responsible fisheries implemented. Y4</p> <p>IUU levels will be reduced, excess fishing capacity identified and addressed, and enforcement and surveillance activities enhanced Y4</p>	<p>No baseline focused on ecosystem-based fisheries management</p>	<p>Fishing activities will be managed under the scheme of FAO Code of Conduct for Responsible Fisheries leading to reduction of IUU</p>	<p>Fishing Management Plans based on Ecosystem Based Management (EBM)</p> <p>Records of IUU</p> <p>CONAPESCA records.</p>	<p>Weak institutional commitment</p>
<p>2.2.3 Develop fisheries management plans for selected key commercial fisheries</p>	<p>Fisheries management plans for selected key commercial fisheries developed. Y4</p>	<p>Currently recovery plans are either non-existent or localised and weak</p>	<p>Management plans implemented that will improve processes to recover depleted key commercial fishery resources</p>	<p>Agreed recovery plans; Project monitoring reports and files</p>	<p>Relevant government authorities as well as private sector, are supportive of the measures developed</p>

2.3 Establishment of representative marine protected areas (MPA)	Establishment of a representative suite of MPAs that take into account EBM, and provide for sharing of best practices at a regional level by Y4	Currently MPAs are country driven and are regionally fragmented	Establishment of MPAs based on the Ecosystem Based Approach (EBA) will generate greater consensus in the Region and prevent degradation of ecosystem and marine resources, strengthening and enriching the distinct national protected areas system.	Agreed MPA plan; Project monitoring reports and files	Countries/local government are willing to develop, implement and endorse MPAs
2.3.1 Recovery plans for depleted priority non-commercial species and associated marine flora and fauna developed for additional species not currently addressed	Detailed regional guidelines developed, agreed and disseminated for implementation of recovery plans for priority non-commercial species by Y4	Currently recovery plans for depleted priority species and associated marine flora and fauna are either non-existent or localised and weak	Bi-national agreement at federal and state level on recovery plans for defined priority marine and coastal non-commercial species.	Regional guideline documents; Project monitoring reports and files	

<p>2.3.2 Management and capacity building requirements to restore degraded marine coastal wetlands defined</p>	<p>Training provided to promote best practice in managing marine coastal resources and restoration of degraded marine coastal wetlands, sea grass beds and sand dunes by Y4</p>	<p>On-ground rehabilitation and restoration projects of degraded marine coastal areas are carried out in a 'piecemeal' manner with little regional scope or application of the ecosystem approach</p>	<p>Action plans and on-ground rehabilitation and restoration projects will be conducted in an integrated manner using EBA and under strong institutional coordination</p>	<p>Evidence of delivery of training in project monitoring reports and files</p>	<p>Institutional commitment will ensure that training will build capacity at the systemic and not only individual level.</p>
<p>2.3.3 Marine and coastal spatial zoning processes in individual countries strengthened and implemented thus enhancing sectoral links among sectoral users in marine and coastal zones</p>	<p>By the end of year 4, both countries have developed concrete approaches (legal, regulatory, and/or BMP specifications) that promote strengthened and harmonized land and sea use planning</p>	<p>The development and implementation of plans and regulations for protecting coastal habitats at the national level is carried out in a 'piecemeal' manner with little regional scope or application of the ecosystem approach</p>	<p>Policy changes at federal and state level reflect bi-national agreement on establishment of integrated coastal zone management</p>	<p>Project monitoring reports and files; Draft legal, policy and regulatory modifications</p>	<p>Relevant government agencies at national and federal levels are supportive of efforts to harmonize regional approaches</p>
<p>2.3.4 LME-wide strategies for conserving biodiversity and habitats in the coastal zones of GoM LME supported and harmonized at a regional level</p>	<p>Agreed conservation strategies and management plans elaborated and strengthened, and national endorsement promoted by Y4</p>	<p>Current marine & coastal zone management initiatives are country driven and are regionally fragmented</p>	<p>Conservation strategies, supported by stakeholder groups in both countries will be strengthened and implemented</p>	<p>Final report on results of the conservation pilot project (3.1); Project monitoring reports and files</p>	<p>Relevant government agencies at national and federal levels are supportive of efforts to harmonize regional approaches</p>

<p>2.4 The Strategic Action Programme (SAP) and National Action Programmes (NAPs) formulated and endorsed</p>	<p>SAP and NAPs formulated and endorsed at ministerial level in both countries by Y4</p>	<p>A regional SAP will not be completed and endorsed under baseline conditions.</p>	<p>SAP and respective NAPs completed and endorsed at appropriate levels (federal, state)</p>	<p>SAP and NAP documents; Endorsement letters</p>	<p>Long-term financial and political national commitment to the project</p>
<p>2.5 Commitments to SAP implementation obtained and sustainable financing arrangements formulated</p>	<p>Evidence of private sector commitment to supporting specific SAP activities Y4</p>	<p>National budgets are stressed and adequate budget is not provided for environmental matters. Minimal application of economic instruments in addressing priority water-related issues in the GoM LME</p>	<p>Investment plan developed that defines SAP co-financing commitments</p>	<p>Letters of intent/commitment by relevant institutions and authorities</p>	<p>Countries, at both national and federal levels, may be unable or unwilling to commit the necessary resources for effective SAP implementation.</p> <p>Both countries have long-term financial and political commitment to the project, at both national and federal levels.</p>

Outcome 3 LME-wide ecosystem-based management approaches encouraged and strengthened through the successful implementation of the Pilot Projects

Outcomes/Outputs/Activities	Indicator P: Process Indicator SR: Environmental Stress Reduction Indicator E: Environmental Status Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
3.1 Pilot Project on Natural Habitat and Ecosystem Conservation of Coastal and Marine Zones of the Gulf of Mexico: Wetlands, Mangroves, Sea Grass Beds and Sand Dunes	Specific project sites with emphasis on critical habitats such as mangrove ecosystems, wetlands, sea grass beds and sand dunes rehabilitation actions implemented and coastal ecosystems health improved Y4 Strategies and actions for conservation in selected sites using ecosystem approach. Y4 Cost effective strategies to mitigate impacts from erosion, meteorological events developed, Y4	There are national efforts to conserve natural habitats in the coastal and marine areas of the GoM but they are currently uncoordinated	Natural habitat conservation demonstration project successfully completed	Project monitoring reports and files R-TAG technical review reports Project progress reports; Project monitoring reports and files	Country support to facilitate the LME-wide dissemination of results of the pilot project, with participation of all sectors and stakeholders. LME-wide objectives may conflict with local interests

<p>3.2 Pilot Project on Enhancing Shrimp Production through Ecosystem Based Management</p>	<p>Recovered depleted species through an ecosystem based management approach, focusing mainly on the shrimp fisheries. Y4</p> <p>Strengthened capacities for improved stock assessments and data collection. Y4</p> <p>Established effective and coordinated surveillance and enforcement mechanisms. Y4</p> <p>Improved knowledge of current socioeconomic conditions derived from shrimp fisheries. Y4</p>	<p>Fisheries management using the ecosystem approach is not undertaken by Mexico</p>	<p>Fisheries management demonstration project successfully completed</p>	<p>Project monitoring reports and files</p> <p>R-TAG technical review reports</p> <p>Project progress reports; Project monitoring reports and files</p>	<p>Country support to facilitate the LME-wide dissemination of results of the pilot project, with participation of all sectors and stakeholders.</p> <p>LME-wide objectives may conflict with local interests</p>
<p>3.3 Pilot Project on Joint Assessment and Monitoring of Coastal Conditions in the Gulf of Mexico</p>	<p>Joint monitoring, assessment and evaluation of the coastal environment of the Gulf of Mexico Large Marine Ecosystem capacity developed. Y3</p>	<p>There is currently no regional coastal assessment monitoring programme</p>	<p>Regional coastal assessment monitoring programme demonstration project successfully completed</p>	<p>Project monitoring reports and files</p> <p>R-TAG technical review reports</p> <p>Project progress reports; Project monitoring reports and files</p>	<p>Country support to facilitate the LME-wide dissemination of results of the pilot project, with participation of all sectors and stakeholders.</p> <p>LME-wide objectives may conflict with local interests</p>

Outcome 4 Monitoring and Evaluation System for the Project and the GoM LME established					
Outcomes/Outputs/Activities	Indicator P: Process Indicator SR: Environmental Stress Reduction Indicator E: Environmental Status Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
4.1 M&E mechanisms set up including an M & E system for the project	Monitoring and evaluation support provides timely assistance to keep project on track and recommend strategies to ease bottlenecks. Y4	Not a part of the baseline program.	Effective M&E mechanisms in place	Annual reviews and mid-term/final evaluations	Project Management structure is operational very early in project implementation
4.2 Suite of GEF M&E indicators developed (process, stress, environmental status) to monitor SAP implementation.	GEF M&E indicators are successfully monitoring the progress of the project. Y1	Not a part of the baseline program.	GEF M&E indicators will set the basis for harmonized environmental status indicators for the Bi-annual regional status report (4.4)	Project progress reports; Project monitoring reports and files	Relevant institutions are ready to make available and distribute data broadly.
4.3 GoM LME Environmental Information System developed	Operational GoM LME Data and Information Management System established by Y2	Countries in the region have national environmental data centres, but there is no regional information system and only limited sharing of data.	GoM LME Data System established and functional	Existence of DIM system; DIM standards and protocol document	Relevant institutions are ready to make available and distribute data broadly.

4.4 Bi-annual regional status report developed on large scale ecosystem impacts in the GoM LME	First bi-annual report published by end of Y2 and second report in Y4	Uncoordinated national and international efforts to monitor environmental impacts in the GoM LME are carried out.	Completed Reports widely disseminated and used by decision-makers and resource managers	Bi-annual regional status report	Timely delivery of data and information from the participating countries
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Outcome 5 Effective project coordination					
Outcomes/Outputs/Activities	Indicator P: Process Indicator SR: Environmental Stress Reduction Indicator E: Environmental Status Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
5.1 Regional Project Coordination Unit (PCU) set up	Project coordination is properly staffed and executing the project according to the agreed work plan and budget. Y4	Not part of the baseline.	Project executed under a well staffed coordination unit according to the agreed work plan and budget	SC meeting minutes; Project reports	Efficiency of start up of the project. Timely appointment of CTA and Country Focal Points
5.2 Steering Committee and Regional Technical Advisory Group (R-TAG) established	Steering Committee meetings are held to provide annual project oversight. Y4	Not part of the baseline.	Steering Committee established and meeting according to established timeframe	SC meeting minutes; project monitoring reports and files	High-level national input will only occur if there is country commitment and the project has effectively communicated its role and expected outputs.
5.3 Intersectoral coordination established through the development of Intersectoral committees (ISCs) or their equivalent in both countries, including with private sector involvement	ISCs or their equivalent are established and meetings scheduled by Y1	Intersectoral coordination exists to a lesser or greater degree in the GoM states.	National intersectoral mechanism developed to improved wider cross-sectoral public participation	ISC meeting minutes; project monitoring reports and files	High-level national input will only occur if there is country commitment and the project has effectively communicated its role and expected outputs. Transfer of benefits is embraced as a concept in private sector

5.4 An appropriate regional coordination mechanism jointly defined	Regional coordination mechanism formally established by Y4	No regional mechanism in place for government, donor and other stakeholder coordination, consultation, strategic planning in promoting multi-country integrated sustainable management of the GoM LME.	Regional coordination mechanism established that builds upon existing bi-national frameworks and agreements	Regional agreement signed; meeting minutes; project monitoring reports and files	Country commitment to regional approach and to built upon existing joint agreements
5.5 Information needs within the relevant sectors identified and addressed in order to ensure active and informed participation	Information needs within the relevant sectors identified and training provided to build capacity in order to ensure active and informed participation. Y3 Q2	Active and informed participation of the relevant sectors associated with the GoM LME is patchy. Some sectors are highly engaged whilst others are not.	Good understanding of information needs within the relevant sectors providing the basis for developing targeted awareness and outreach programs	Project monitoring reports and files; Evidence of delivery of training	Country support to the Stakeholder Involvement Plan
5.6 Robust public awareness strategies targeted at the different stakeholder levels and groups developed	Public Participation and Awareness (PPA) strategies involving national experts, private sector, civil society, NGOs and other interested parties are ongoing. Y4	Existing stakeholders at national level are not well identified or organized for addressing priority GoM LME issues.	Stakeholders at all levels are informed about the project and therefore actively participating in its implementation	PPA committee meeting reports; National PPA meeting reports; Project monitoring reports and files	Routine and effective involvement of stakeholders in planning, management and decision-making can only be accomplished by on-going encouragement, strengthened capacities, and financial commitment by donors and countries. The project assumes the support and involvement of the private sector

ANNEX C: RESPONSE TO PROJECT REVIEWS

A) CONVENTION SECRETARIAT COMMENTS AND IA/ExA RESPONSE

B) STAP EXPERT REVIEW AND IA/EXA RESPONSE

STAP ROSTER TECHNICAL REVIEW OF THE PROPOSED GEF-IW PROJECT: “INTEGRATED ASSESSMENT AND MANAGEMENT OF THE GULF OF MEXICO LARGE MARINE ECOSYSTEM”

(MEXICO AND UNITED STATES OF AMERICA)

By J.A. Thornton PhD PH CLM
Managing Director

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Introduction

This review responds to a request from the United Nations Development Programme (UNDP) and the United Nations Industrial Development Organization (UNIDO) to provide a technical review of the proposed International Waters project seeking to develop a Strategic Action Program (SAP) for the Gulf of Mexico Large Marine Ecosystem (LME).

I note that I am a designated expert on the STAP Roster of Experts with particular experience and knowledge concerning watershed management and land-ocean interactions. I have served as Government Hydrobiologist with the Zimbabwe Government, Chief Limnologist with the South African National Institute for Water Research, Head of Environmental Planning for the City of Cape Town (South Africa), and, most recently, as Principal Environmental Planner with the Southeastern Wisconsin Regional Planning Commission (USA), a position that I hold concurrent with my position as Managing Director of International Environmental Management Services Ltd, a not-for-profit corporation providing environmental education and planning services to governments worldwide. In each of these positions, I have had oversight of projects and programs designed to assess contaminant loads to aquatic ecosystems from land-based activities, and to develop appropriate and affordable mitigation measures to reduce such loads and minimize their impacts on the aquatic environment, both freshwater and marine.

This review is based upon a thorough review of the UNDP Project Document (74 pages inclusive of the Logical Framework Analysis and Incremental Cost Reasoning), and the three Pilot Project narratives (“Restoring Depleted Shrimp Stocks through Ecosystem-based Management Practices in the Gulf of Mexico Large Marine Ecosystem,” 15 pages; “Joint Assessment and Monitoring of Coastal Conditions in the Gulf of Mexico,” 16 pages; and, “Habitat and Ecosystem Conservation of Coastal and Marine Zones of the Gulf of Mexico: Wetlands, Mangroves, Sea Grass Beds and Sand Dunes,” 34 pages) of the GEF-UNDP/UNIDO International Waters project, entitled: “Integrated Assessment and Management of the Gulf of Mexico Large Marine Ecosystem.” Other, relevant documents served as reference sources, including the GEF *Operational Strategy, Agenda 21*, and related materials establishing the necessity and priority of land-based activities to control marine pollution as set forth in the Global Program of Action for the Protection of the Marine Environment from Land-Based Activities (GPA).

Scope of the Review

This review addresses, *seriatim*, the issues identified in the Terms of Reference for Technical Review of Project Proposals.

Key Issues

Key issue 1. Scientific and technical soundness of the project. Overall, the project appears to be scientifically and technically sound. The approach proposed, which includes a further development of the preliminary Transboundary Diagnostic Analysis (TDA), conduct of targeted demonstration projects, formulation of an agreed Strategic Action Program (SAP), and implementation of project management

arrangements—including project monitoring and evaluation, designed to contribute to the creation of a formal intergovernmental cooperation mechanism for the transboundary waters of the Gulf of Mexico LME, adequately addresses the needs to initiate multilateral actions to reduce land-based impacts on the Gulf of Mexico LME.

The Gulf of Mexico is a major international waterway. As such, it has been extensively studied by the adjacent countries, at least insofar as their economic interests extend into its waters. Beyond that coastal economic zone, the oceanography of the Gulf has been studied since the Gulf of Mexico forms the point of origin of the Gulf Stream, a major contributor to the global circulation of the North Atlantic Ocean. However, all of these investigations, as is noted in the Project Document have been relatively uncoordinated or sectorally driven. This has resulted in a fragmented knowledge base, focused primarily on the nearshore waters of the Gulf of Mexico LME. Consolidation of this knowledge base would have significant scientific value to the oceanographic community, helping researchers to highlight gaps in knowledge, identify specific areas of research requiring attention, and develop greater insights into this globally important marine resource.

It also should be noted that the coastal countries have differing capacities to conduct oceanic research and monitoring and differing abilities to respond to threats facing the Gulf of Mexico. Through the conduct of joint research and scientific activities within the framework of this project, it is anticipated that capacities will be strengthened. It is equally likely that the institutional relationships developed as a result of this project will contribute to the development of ongoing relationships between Gulf organizations that will extend beyond the project period. Indeed, it is a stated objective of the project to create not only the framework of an institutional mechanism for the joint management of the Gulf of Mexico but also contribute to a shared understanding the Gulf of Mexico LME.

As one of the first major transboundary ocean basins to evidence anthropogenic hypoxia, the Gulf of Mexico is potentially the forerunner of the future state of many enclosed oceanic basins in proximity to terrestrial nutrient sources, and receiving nutrient-rich runoff from major river systems. In the case of the Gulf of Mexico, the Mississippi River, draining the central portions of the United States of America (US) is the single largest source of nutrient input to the Gulf, but several major rivers draining the US southwest and Mexico also contribute to the development of hypoxia in the Gulf. As a result, this project can also serve as a demonstration project for actions to limit marine pollution from land-based activities, the goal of the Protocol to the United Nations Convention on the Law of the Sea (UNCLOS) of the same name. Lessons learned from this project, when shared through the scientific literature, technical symposia and the IW-LEARN best practices database, amongst others, could contribute to the prevention or management of similar conditions elsewhere in the world.

To this end, the inclusion of three demonstration projects within the proposed Gulf of Mexico project, and focused on the three priority concerns identified during the framework TDA preparation, seek to address specific issues of concern; namely, depleted shrimp stocks through ecosystem-based management practices, joint assessment and monitoring of coastal conditions, and habitat and ecosystem conservation of coastal and marine wetlands, mangroves, sea grasses and sand dunes. Experiences gained through these activities will contribute to the global knowledge base relating to LMEs and their associated drainage areas. The joint assessment and monitoring project will form the basis for ongoing collaboration between the coastal countries, while the shrimp production project will prepare a methodology, embodied in an ecosystem model, which could form the foundation for the development of similar approaches to managing other high value, over-harvested marine organisms within the Gulf (and elsewhere). The siting of all three demonstration projects within the area of the Terminos Lagoon takes advantage of the substantial body of knowledge already acquired on this embayment, in addition to contributing to the synthesis and integration of this knowledge the necessary policy instruments for the efficient and rapid implementation of a fully integrated near shore ocean management program within the project period.

In the end, the marriage of these scientific findings with the institutional, legal and policy instruments that currently exist or that will be developed during the project period will aid in the creation of an appropriate regulatory framework, and creation of the necessary infrastructure to support and sustain the environmentally-sound management of the Gulf of Mexico.

Key issue 2. Identification of global environmental benefits and/or drawbacks of the project, and consistency with the goals of the GEF. The proposed project establishes a framework within which to address the three major causes of environmental stress within the aquatic environment of the Gulf of Mexico; namely, eutrophication, habitat modification, and over-harvest of commercially important species. The activities associated with the development of a Strategic Action Program to address these three principle environmental concerns, identified during project preparation, will have relevance to the human response to these issues in other areas. Based upon the evaluation completed as part of the GEF IW-supported Global International Waters Assessment (GIWA), these three threats represent some of the most commonly occurring threats to the marine environment on a worldwide basis. Consequently, development of mechanisms to mitigate, moderate or manage these impacts is wholly consistent with the GEF IW focal area. Operational Program 9 (OP 9) of the GEF seeks to encourage a broadly-based, multisectoral approach to resolving conflicts in the area of international and transboundary waters. Further elaborated as Strategic Objective 1 (SO-1) of the IW portfolio under GEF-4, OP 9 builds multi-state cooperation mechanisms to address priority concerns through an ecosystem-based management strategy.

To this end, the proposed project further addresses two strategic priorities within the GEF IW portfolio; namely, the management of fish stocks and associated biodiversity (SP-1), and the reduction of eutrophication or enrichment of coastal waters caused by anthropogenic nutrient inputs (SP-2). In terms of the former priority, this project would have crosscutting linkages to the protection of marine biodiversity, immediately relative to shrimp and ultimately relative to other species, especially those of economic value.

The participation of the relevant governmental organizations with responsibility for the marine environment, including environmental protection and marine fisheries agencies, would be an important element in ensuring the implementation of the project outcomes. This participation is provided through the relevant national, state, and local government agencies. Establishment of a functional operational agency, as proposed in the project document, also will contribute to achieving this objective.

Finally, true global benefit is presumed as a result of the connection of the Gulf of Mexico with the Atlantic Ocean by means of the Gulf Stream Current. This part of the Atlantic Ocean circulation has significant implications for the European climate, among other benefits.

Key issue 3. Regional context. The Gulf of Mexico is bounded by the landmass of North America. Within this landmass, the nations of Mexico and the United States of America comprise the southern/western and northern extremes of the Gulf, respectively, while the island state of Cuba is located at the eastern extreme of the Gulf. While Cuba was a participant in the project development activities, the country has opted not to participate in the SAP formulation. From a socio-political perspective, this posture does not detract from the conduct of the proposed project, and the emphasis of the GEF IW program on information sharing and dissemination would mean that the results of the project will be available to the government of Cuba for their consideration. That said, the dominant geographic positions of Mexico and the US are such that the project area encompasses virtually all of the land mass draining to the Gulf.

Both Mexico and the United States are members, *inter alia*, of the North American Free Trade Agreement (NAFTA) area, which entity provides the regional context for this project. Amongst its other provisions,

the NAFTA includes environmental provisions that are recognized and supported by this project. In addition, there are numerous other binational and international agreements to which the participating countries are party that contribute to the regional context for this project. One of the binational initiatives that merits noting is the Gulf of Mexico Alliance, comprised of the six Mexican and five US states that border the Gulf and supported by the federal agencies and other stakeholders from both countries. As noted in the project document, this Alliance could provide “a model for regional and international collaboration.”

The proposal clearly indicates an intention to disseminate information and results on a regional basis, both within the Gulf of Mexico Basin and elsewhere. In part, this dissemination process will utilize the offices of the national and state governments in both countries. The project also proposes inclusion of other stakeholders, particularly from commerce and industry, nongovernmental organizations (NGOs), and academia, who will also contribute to the regional context within which the project is to be executed.

Key issue 4. Replicability. The implementation of the three demonstration projects is a key feature of this project, and clearly contributes to the potential for replication of beneficial practices and techniques. Further, the inclusion of mechanisms for disseminating information and results achieved fosters replication of effective and successful measures. To this end, the project explicitly includes a variety of stakeholders outside of the governmental bodies noted as participating in the project. As noted above, these stakeholders include the private sector, NGOs, and academia. The inclusion of the latter will promote the use of the project findings within classrooms and in the community. Participation of NGOs and academic institutions will help to disseminate knowledge of the Gulf, share information on best management practices (BMPs), and facilitate public “buy in” with respect to the project outcomes. Similarly, inclusion of the private sector participants will encourage their participation in the implementation of the strategies identified under the SAP.

Outside of the project area, the documentation of project results and dissemination of the outputs through websites, scientific publications, and other media will facilitate replication of the techniques and approaches in other LMEs bounded by significant landmasses. As noted elsewhere, potential areas for replication can be identified in the GIWA inventories; many of the world’s enclosed gulfs and seas would benefit from the integrated land and water resource management approach being proposed for the Gulf of Mexico. To this end, the participation in the project of global and regional NGOs, scientific institutions, corporations and other stakeholders provides a mechanism for targeted dissemination of information leading to possible replication of BMPs in appropriate situations elsewhere in the world.

Key issue 5. Sustainability of the project. A significant element of the sustainability of the project rests upon the participation of the local, state and national governments, their operational agencies, and other civil institutions. This participation is indicated in the project document through tasks to be performed by these (largely unspecified) entities, through the governmental financial commitments to the project (Section III), and through agency participation in project management (Section I, Part III). While there is always a risk that agency budgets may limit participation—this risk being identified in the project document—the likelihood is that these agencies and organizations will continue to maintain an interest in the project outcomes. In the case of this project, the level of risk has been determined to be low to moderate, which seems a reasonable representation of the prevailing situation in the region. Consequently, there is a high likelihood that the project will be sustainable beyond the period of GEF intervention. This likelihood is increased through participation in the project by civil society stakeholders, identified as NGOs, corporations, and local governments. These stakeholders, yet to be identified under most Outcomes except as external consultants in the organigram presented in Part II of Section IV of the proposal (with the exception of Outcome 3 as elaborated in the pilot projects as annexed to the project document as Annexes 1 through 3), have a more immediate and direct link to a sustainable strategy for the management of the marine resources of the Gulf and its riparian lands. Based upon the stakeholder

identified in Annexes 1 through 3, there is a high likelihood of the project securing sustainable participation in other aspects of the project.

Beyond this factual basis, the target of the project, embodied in at least one of the pilot projects, is sustainable management of high value marine resources; namely, shrimp. Development of resource management plans, a stated output of the project, and the inferred desire of the economic stakeholders for continuation of their livelihoods, would also suggest a strong potential for sustainability of the strategies developed within the framework of the SAP. Dissemination of the outputs of the project as a whole, and not only of the pilot projects, will encourage “buy in” by civil society in a more general sense, leading to sustainable outcomes.

Finally, the project proposes the creation of a bi- or multi-lateral body that would coordinate actions among the Gulf countries that will build from and continue the momentum of the project coordination unit (PCU) and its professional staff. The evolution of the PCU into a coordination mechanism bodes well for the sustainability of the project outcomes.

Key issue 6. Targeted Research Projects. Targeted technical demonstration and capacity building projects are key features envisioned within the GEF International Waters Operational Program. These activities are clearly included as major elements of this proposed project. The interventions proposed under the pilot projects, funded in part by the GEF, strive for sustainability and the continuation of successful interventions beyond the project period. Consequently, it is important that the demonstration projects continue to be monitored, and the results reported using the information dissemination mechanisms previously identified, beyond the project period. Such an approach is totally consistent with the catalytic nature of the GEF, and an essential element to the sustainability of the project.

Capacity building and institutional strengthening, envisioned in the project document, become the basic building blocks upon which this project will succeed or fail, both from the point of view of its sustainability and from its scientific and technical integrity. Inclusion in this aspect of the project of not only governmental entities but also corporate and community stakeholders should form a broad base from which targeted research can be translated to practical experience and hence into replicable BMPs.

Secondary Issues

Secondary issue 1. Linkage to other focal areas. This project is formulated as an International Waters project under OP 9 of the GEF *Operational Strategy*. While no specific crosscutting areas are identified, the project clearly has linkages to the crosscutting area of protection of aquatic biodiversity in terms of its potential beneficial impact on fisheries, as embodied under Strategic Priority 1 of GEF-4.

Secondary issue 2. Linkages to other proposals. The project constitutes the first LME project in the Latin America and Caribbean (LAC) Region. Consequently, no specific linkages exist between this project and other GEF IW initiatives in the LAC Region. However, the project does propose to make explicit use of the GEF IW-LEARN network as a means of disseminating the results and outputs of the project.

Additionally, the project identifies specific linkages with ongoing initiatives of the United Nations, including: the United Nations Environment Programme (UNEP) Wider Caribbean Regional Seas Programme, the Food and Agriculture Organization of the United Nations (FAO) Western Central Atlantic Fisheries Commission (WECAFC), and the United Nations Education, Scientific and Cultural Organization (UNESCO)-Intergovernmental Oceanographic Commission (IOC) Sub-commission for the Wider Caribbean (IOCARIBE).

The project also recognizes the complementarities between the management of transboundary waters of the Gulf of Mexico and the management of the national coastal waters, linking with national- and state-level programs within each of the participating countries. In addition, the project has complementarities

with other (global) projects utilizing land-based actions to minimize degradation of the marine environment as a result of land-based activities under the GPA.

These linkages contribute to a high degree of connectivity within this project, and contribute to the likelihood that the actions undertaken will be sustainable, and that the lessons learned can and will be transferred beyond the project boundaries to other, similar situations and locations.

Secondary issue 3. Other beneficial or damaging environmental effects. The project has no known or obvious damaging environmental impacts associated with the activities proposed to be executed. The beneficial impacts of the project have been fully articulated above, and include the implementation of targeted interventions that address both chronic land-based sources and potential, catastrophic ocean-based events that contribute to the degradation of the Gulf of Mexico and its resources.

The provision of trained staff and institutional capacities needed to enforce and enhance existing environmental protection regulations, and the dissemination of successful management measures further contribute to the benefit of the Gulf and its drainage basin in both coastal countries. All of these benefits accrue not only within the project area, but also, as a result of their wider dissemination using the electronic and other media provided, also to the wider Caribbean basin and beyond.

In this latter regard, the explicit connections between the project and ongoing national initiatives are noteworthy. Specifically, these connections are embodied in large part within the elements of Outcome 2 that are fully cofinanced.

Secondary issue 4. Degree of involvement of stakeholders in the project. The involvement of stakeholders is extensive, although limited to national-, regional-, and international-level governmental bodies, functional bodies including academia and NGOs, and resource users. Involvement of the wider public is catered for through informational programming inherent in the project dissemination proposals, and through the involvement of NGOs. It should be noted that the proposal states that identification of local level stakeholders was not undertaken. Given the scale of the Gulf and its drainage area, and the potential numbers of such organizations, both governmental and nongovernmental, this decision is not unreasonable. Nevertheless, it is to be hoped that the involvement of national institutions will provide opportunities for these entities to liaise with their counterpart state and local governmental bodies during the course of the project. The exception to this generalization is the pilot projects, which make explicit linkages with such local institutions and organizations. In this regard, the participation of the relevant national regulatory agencies and ministries, NGOs and academic institutions in the execution and implementation of the project activities, including the project's explicit support for capacity building and institutional strengthening with respect to these organizations, is critical to the sustainability of the project and its expansion into areas not specifically involved in the pilot projects.

Secondary issue 5. Capacity building aspects. Capacity building is a critical element of the proposed project. Creation and strengthening of appropriate institutions, conduct of the pilot projects, and recognition of the need for regional level coordination within the Gulf of Mexico form the core of the GEF-financed elements of the project as noted under Outcomes 2, 3 and 5. Dissemination of lessons learned with respect to coastal development policy, fisheries management practices, and environmental information dissemination are essential elements of the GEF-financed pilot project activities (Outcome 3) and the information management system (Outcome 4). These latter elements also should be implemented in conjunction with the IW-LEARN initiative being executed by the UNDP and the UNEP best practices database. These efforts will enable wider dissemination of knowledge of practices that have positive effects. Such knowledge is an essential element in building capacity and strengthening institutions in the region. Institutional "twinning" between agencies of Mexico and the United States could also be considered in this vein.

Secondary issue 6. Innovativeness. Development of appropriate management practices for the management of hypoxia in enclosed and semi-enclosed LMEs, such as the Gulf of Mexico, is a critical element for the protection of the marine environment, within the context of an integrated land- and water-based management program. By creating and strengthening the appropriate human resources, institutions, data acquisition and dissemination systems, and shared management mechanisms, the proposed management program will complement other pollution abatement and “blue water” management measures being implemented by the basin governments and stakeholders. The proposed actions and approaches reflect state-of-the-art practices, and their application in the Gulf of Mexico will significantly advance current practice in this Basin as well as in the wider Caribbean region as a whole. In this manner, the project promotes innovation and development of regionally applicable remedial practices and experiences.

General Conclusion and Recommendations

Overall, it is the conclusion of this reviewer that the proposed project is wholly consistent with the GEF International Waters operational program, its broader philosophy, and funding criteria. Consequently, this project is recommended for funding.

RESPONSE TO STAP REVIEW

We would like to thank the Reviewer for his very positive STAP Review. This includes his remarks that the proposed Gulf of Mexico LME project is: scientifically and technically sound; the proposed actions and approaches reflect state-of-the-art practices; the approach is strongly participatory in ambit and provides a mechanism for targeted dissemination of information; its BMPs are potentially replicable globally; it is sustainable beyond the period of GEF intervention; and it is consistent with the GEF International Waters Operational Program, its broader philosophy, and funding criteria.

We appreciate the Reviewer’s comments that support the aim of the project: namely, to marry its scientific findings with the institutional, legal and policy instruments that currently exist or that will be developed during the project period to assist in the formation of an appropriate regulatory framework, and to develop the necessary infrastructure to support and sustain the environmentally-sound management of the Gulf of Mexico through the LME approach.

The Reviewer further supports the five Outcomes of the project and stresses that the approach proposed adequately addresses the needs to initiate multilateral actions to reduce land-based impacts on the Gulf of Mexico LME. The reviewer is also supportive of the three pilot demonstration projects within the proposed Gulf of Mexico project which focus on the three priority concerns identified during the framework TDA preparation and indicates that experiences gained through these activities will contribute to the global knowledge base relating to LMEs and their associated drainage areas.

The only real criticism levelled at the project by the reviewer relates to the identification of stakeholder groups. Reference is made in the project document that a significant element of the sustainability of the project rests upon the participation of the local, state and national governments, their operational agencies, and other civil institutions. However, the reviewer states that the tasks to be performed under each Outcome will be undertaken by largely unspecified entities.

In response to this, we agree that stakeholder groups have not as yet been identified for specific Outcomes/Outputs (apart from Outcome 3). This is largely because the scale of the GoM LME will

require the involvement of diverse stakeholder groups and although key groups have already been identified during the preparatory stage, the project itself will continue to enhance robust and informed stakeholder involvement. In order to ensure full stakeholder participation, the project will aim to identify the specific key stakeholders for each outcome and ensure active and informed participation from the relevant sectors (Output 5.5). It will also ensure that different stakeholder levels and groups are targeted through the development of a robust public awareness strategy (Output 5.6). Key groups will probably participate in more than one Outcome. Additionally, the engagement of other stakeholder groups, such as those working in specific watersheds including the Mississippi river to address land-based sources, will itself be a major undertaking within the project.

It is also noted that the reviewer has indicated that as capacity building is a critical element of the proposed project, the dissemination of lessons learned with respect to coastal development policy, fisheries management practices, and environmental information dissemination are all essential elements of GEF-financed pilot project activities (Outcome 3) and the information management system (Outcome 4). He indicates that they should also be implemented in conjunction with the IW-LEARN initiative being executed by the UNDP and the UNEP best practices database. We acknowledge that these efforts will enable wider dissemination of best practice and consequently have reflected this in the project document.

C) GEF SECRETARIAT AND OTHER AGENCIES' COMMENTS AND IA/ExA RESPONSE