DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK
NOT FOR PUBLIC USE

BELIZE, GUATEMALA, HONDURAS

ENVIRONMENTAL PROTECTION AND MARITIME TRANSPORT POLLUTION CONTROL IN THE GULF OF HONDURAS

RS-X1009

PROJECT DOCUMENT

NON-REIMBURSABLE OPERATION FINANCED WITH GEF RESOURCES

This document was prepared by the project team consisting of: Michèle Lemay (RE2/EN2) Project Team Leader; Henrik Franklin (RE2/EN2); Michael Collins (COF/CGU), Edwin Mateo Molina (COF/CHO); Alfonso Parra (COF/CBL); María Cristina Landázuri-Levey (LEG/OPR2); and Silvia Echeverría (RE2/EN2).

CONTENT

ANNEX

Logical Framework

APPENDIX

Proposed Resolution

Electronic Links and References	
Basic Socioeconomic Data	http://www.iadb.org/RES/index.cfm?fuseaction=externallinks.countrydata
Status of Loans in Execution & Loans Approved	http://opsws3.reg.iadb.org/idbdocswebservices/getDocument.aspx?DOCNUM=518491
Tentative Lending Program	http://opsws3.reg.iadb.org/idbdocswebservices/getDocument.aspx?DOCNUM=518495
Information available in the files of RE2	http://opsws3.reg.iadb.org/idbdocswebservices/getDocument.aspx?DOCNUM=461050
Procurement Table	http://opsws3.reg.iadb.org/idbdocswebservices/getDocument.aspx?DOCNUM=348910

ABBREVIATIONS

AIS	Automated Identification System
BOD	Biochemical Oxygen Demand
CCAD	Central American Commission on Environment and Development
CIDA	Canadian International Development Agency
COBIGUA	Guatemala Banana Company
COCATRAM	Central American Maritime Transport Commission
ECDIS	Electronic Chart Display and Information System
EIS	Environmental Information System
ENC	Electronic Navigational Charts
ENP	National Port Authority - Honduras
EQO	Environmental Quality Objective
FSP	Full-sized Project
GEF	Global Environment Facility
GIS	Geographic Information System
IMDS	Mesoamerican Sustainable Development Initiative
IMO	International Maritime Organization
ISPS	International Ship and Port Facility Security Code
IW	International Waters
IW:LEARN	International Waters (IW) Learning, Exchange and Resource Network Program
MACHC	Meso-American Commission for Hydrography and Charting
MARPOL	International Convention for the Prevention of Pollution from Ships
MBRS	Meso-American Barrier Reef System
MEH	Marine Electronic Highway
MOU	Memorandum of Understanding
NGO	Non-governmental Organization
PDF	Project Development Facility
PPP	Plan Puebla Panama
PROARCA	Regional Environmental Program for Central America
REA	Regional Executing Agency
RPCU	Regional Project Coordination Unit
SAP	Strategic Action Plan
SICA	Central American Integration System
SIECA	The Secretariat for the Economic Integration of Central America
TDA	Transboundary Diagnostic Analysis
TRIGOH	Trinational Alliance for the Gulf of Honduras
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
WSSD	World Summit on Sustainable Development
WWF	World Wildlife Fund

Project Summary

REGIONAL

ENVIRONMENTAL PROTECTION AND MARITIME TRANSPORT POLLUTION CONTROL IN THE GULF OF HONDURAS
(RS-X1009)

Financial Terms and Conditions		
Executing Agency: Central American Maritime Transport Commission (COCATRAM)		
Source	**Amount**	**%**
IDB (GEF[1] Grant)	4,800,000	67.0
Local	2,400,000	33.0
Total	7,200,000	100.0

Project at a Glance

Project objective:
The development objective of the project is to reverse the degradation of coastal and marine ecosystems within the Gulf of Honduras through prevention of maritime transport-related pollution in the major ports and navigation lanes, improved navigational safety and reduced land-based sources of pollution draining into the Gulf. The global objective is the implementation of a regionally coordinated strategic action plan for the Gulf of Honduras that will result in enhanced protection of international waters.

Special conditions prior to first disbursement: *See paragraph 4.3 and 4.7*
(a) Establishment of the Regional Project Coordination Unit (RPCU), with, as a minimum, selection of the Project Director.
(b) Entry into effect of the operating regulations.

Special contractual clauses: *See paragraph 4.6*
Entry in effect of the agreements for cooperation and coordination with each of the countries participating in the execution of activities in the respective country will be a condition prior to disbursement of the resources destined to that country.

Previously complied condition: *See paragraph 4.4*
COCATRAM and the RPCU have entered into an agreement for housing the operations of the RCPU in the facilities of the Empresa Nacional Portuaria in Puerto Cortés.

Exceptions to Bank policies: None

Project consistent with Country Strategy: Yes [X] No [ ]

Project qualifies for: SEQ[ ] PTI [ ] Sector [ ] Geographic[ ] Headcount [ ]

Verified by CESI on: August 6, 2004

Procurement: *See paragraph(s) 4.9*

---

[1] Global Environment Facility.

I. FRAME OF REFERENCE

A. Overall context of the Gulf of Honduras

1.1 The Gulf of Honduras encompasses a tri-national body of coastal and marine waters, including portions of the exclusive economic zones of Belize, Guatemala and Honduras. The Project Area for the proposed GEF operation includes the Gulf of Honduras as well the watersheds in Belize, Guatemala and Honduras with rivers flowing into the Gulf. As such, the Project Area extends from Punta Isopo, in Honduras, northwest towards the Port of Belize and inwards along the northern border of the Maya Mountains watershed, the Sarstoon, Dulce and Motagua watersheds of Guatemala and the Ulua, Lean, Cuyamel and Chamelecon watersheds in Honduras. In total, the Gulf of Honduras covers approximately 10,000 km^2, and the watersheds make up some 53,700 km^2, with roughly 5,800 km^2 in Belize, 18,300 km^2 in Guatemala, and 29,600 km^2 in Honduras.

1.2 The Gulf of Honduras is part of the Cayman basin of the western Caribbean Sea. It includes Bahía de Amatique, the entire Caribbean coast of Guatemala, the eastern part of the coast of Honduras, and the southern part of the Belize Barrier Reef Lagoon. The western part of the gulf, about 60 km off shore, is rather shallow (0 – 30 m). Several coral reefs, which form the southern portion of the Mesoamerican Barrier Reef System (MBRS), are located at the northwest border of the Gulf. Large freshwater inputs from the Motagua, Sarstoon and Dulce Rivers limit reef development in the central part of the Gulf to a few isolated corals and small patch reefs. The northeastern part of the Gulf includes a portion of the deep Cayman Trench. The continental slope is rather steep and the water depth drops abruptly from about 30 m at the shelf break to 2000 m depth in the northeast. Both coastal and open ocean processes play a role in driving circulation dynamics and determine variability of seawater properties in the Gulf of Honduras.

1.3 Environmental problems in the Gulf of Honduras are highly transboundary due to the oceanography of the waterbody. The predominant direction of currents varies with seasons, contributing to the interconnection of waters in Belize, Guatemala and Honduras. There is a persistent counter-clockwise long-shore flow over the shelf, particularly off the coast of Belize. This counter-clockwise coastal flow is most pronounced during the summer months when it combines with wind-driven currents. During winter months, trade winds can induce coastal upwelling off the coast of Honduras with its associated westward long-shore flow[1].

1.4 As a result of these prevailing oceanographic currents, the Gulf region is highly susceptible to pollution originating in one location and spreading over long distances in all three countries. As maritime traffic and port operations within and beyond the Gulf continue to rise, the potential for catastrophic accidents, as well as chronic marine pollution, increases. In addition, increasing loads of sediments and pollutants are carried by rivers draining into the Gulf and transported by currents across maritime boundaries. As a consequence, environmental protection of the Gulf, particularly pollution control and prevention require a strategic approach where actions are aimed at addressing priority sources, monitoring trends and building long-term sustainable arrangements for regional cooperation in the management of the Gulf.

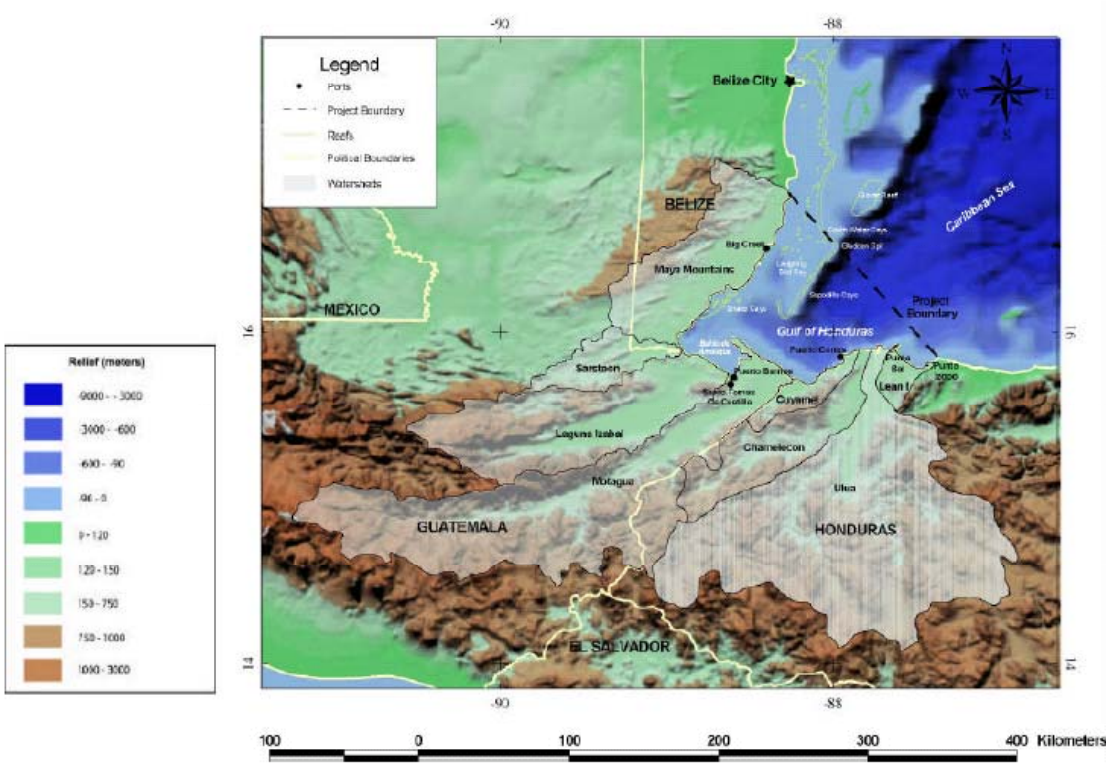
---

[1] See Preliminary Transboundary Diagnostic Analysis (TDA) for a detailed description of oceanographic conditions of the Gulf.

B. Ecological significance of the Gulf of Honduras

1.5 The complex interaction of open ocean waters, coastal processes, and river inflows occurring in the Gulf of Honduras supports diverse ecosystems that contribute to the region's ecological significance. The shoreline of the region is highly variable. The Belize coast includes estuaries and lagoons, barrier beaches with beach ridges and saline tidal swamps, cays, mangrove forests, seagrass beds, patch reefs, barrier reefs and cays. The Guatemalan coast is similarly diverse with vast mangrove areas leading to river mouths and estuaries (Rio Dulce), the large Bahía de Amatique with its vast shallow waters and sea grasses (Bahia Graciosas), the sandy Punta Manabique peninsula, and long beaches leading to the river mouths of Motagua, San Francisco, and Piteros. The Honduran coastal zone is characterized by extensive beaches, mangroves, lagoons and estuaries, and offshore cays.

FIGURE 1. MAP OF THE GULF OF HONDURAS WATERSHED



1.6 The shallow waters of the Gulf provide refuge for abundant and diverse marine species, including commercially exploited populations of shrimp, spiny lobster, conch and finfish, as well as the Caribbean's largest population of West Indian manatee. The productivity of the Gulf is in part due to rivers transporting land-based nutrients, combined with nutrients associated open upwellings, and the close proximity of mangroves, seagrass beds and coral reefs.

1.7 The western portion of the Gulf is bordered by the Mesoamerican Barrier Reef Complex (MBRS), the second longest barrier reef in the world. The MBRS extends for 250 km and covers 22,800 km^2 as an assemblage of lagoon patch reefs, fringing reefs, and offshore atolls. It is unique due to its size, the vast array of reef types, the richness of the corals and its relatively pristine condition. The southern part of this reef system borders the Gulf of Honduras. Large freshwater loads from the Motagua, Sarstoon and Dulce rivers limit reef development to a few

isolated corals and small patch reefs. Natural and human-induced sedimentation and nutrient flows in the Gulf play of major role in the functioning of the MBRS and add to the transboundary nature of the Project Area.

C. Socioeconomic context

1.8 An estimated 12.4 million people live in the watersheds flowing into Gulf of Honduras watershed, representing roughly 70 percent of the population in the three countries. Of this estimate, approximately 2 million people live in the large urban centers of Guatemala City, Guatemala and San Pedro Sula, Honduras, with several smaller population centers located in the Gulf of Honduras coastal zone, directly affecting the coastal and marine ecosystems. Roughly half a million people live along the coast of the Gulf of Honduras. The communities of the area are culturally diverse with a predominance of Garifuna, Mestizos and Creoles.

1.9 The economy of the coastal region of the Gulf is based largely on commercial and artisanal fisheries and agricultural production, with bananas serving as the region's most significant exports. Intensive methods are used for production, including fertilizers and other chemicals that runoff and flow into waterbodies and cause increasing algae formation and the potential for dissolved oxygen depletion. Tourism, coastal aquaculture and industrial activities are also on the increase[2]. The extension of road networks into previously isolated parts of all three countries combined with major infrastructure investments are resulting in the accelerated migration of workers into rural areas along the coast of the Gulf of Honduras.

1.10 Maritime transport plays a critical role in the region's economy. The major port facilities on the Gulf of Honduras are Puerto Cortés in Honduras, Puerto Barrios and Puerto Santo Tomás de Castilla in Bahía de Amatique in Guatemala, and Big Creek and Belize City Port in Belize. Although the Belize City Port is located to the north of the TDA study boundary, its port and maritime activities are considered part of the Project Area because a spill or grounding in the vicinity of the Belize City Port could negatively affect the Gulf of Honduras due to the prevailing oceanographic currents. Two of Honduras's main industrial areas are located in the Gulf of Honduras watershed: San Pedro Sula and Puerto Cortés. Forty-six percent of Honduras's industry is located in Cortés province, on the Gulf of Honduras.

1.11 The ports include infrastructure for unloading, storage and transport of hydrocarbons, bulk liquids and dangerous chemicals as well as containerized cargo and bulk goods. Puerto Cortés is Central America's only deep water port and one of the best equipped in the region. Annually it accommodates more than 1700 vessels with a diverse cargo handling both liquid, including refined oil products, and bulk. Puerto Santo Tomás de Castilla receives more than 1300 ships annually, including oil tankers. Puerto Barrios, which receives approximately 550 ships annually, services both container ships and tankers that transport hydrocarbons and chemical products. Although Big Creek is currently limited to banana export, future plans could include additional products. Belize City Port handles a wide variety of cargo of both liquid and bulk, but the majority of the cargo is now containerized. In 2003, the five major ports in the Gulf region accommodated nearly 4,000 ships and handled more than 12 million metric tons of cargo. As such, the Gulf of Honduras received approximately 28% of all ships accessing ports in Central America (Atlantic and Pacific coasts) and 20% of the volumes handled. Tables 1 and 2 summarize the most recent import and export statistics available for the ports in the Gulf region divided between hazardous and non-hazardous cargo.

---

[2] For a detailed description of economic sectors, see the Preliminary Transboundary Diagnostic Analysis.

TABLE 1. CARGO IMPORTED/EXPORTED THROUGH GULF OF HONDURAS PORTS ANNUALLY (METRIC TONS)

	1997	1998	1999	2000	2001	2002	2003
Belize City Port	487,099	504,450	578,407	610,505	704,837	n/a	n/a
Big Creek	57,774	57,683	64,157	134,621	90,232	n/a	n/a
Santo Tomas de Castilla	3,775,375	4,437,009	4,255,514	4,349,697	4,245,118	4,800,027	4,540,200
Puerto Barrios	n/a	n/a	n/a	n/a	1,679,700	1,353,113	1,956,000
Puerto Cortes	4,677,800	5,091,100	4,977,360	5,398,290	5,661,940	n/a	6,306,400

TABLE 2. ANNUAL AVERAGE IMPORTS AND EXPORTS FROM PORTS IN THE REGION (METRICS TONS)

Cargo	Sub-type	Belize	Guatemala	Honduras
Hazardous		**187,364**	**2,379,181**	**1,140,447**
	Petroleum	187,352	2,094,003	1,065,834
	Non-Petroleum	12	285,178	74,613
Non-Hazardous		**624,958**	**4,466,583**	**4,022,694**
	Banana	45,140	853,648	355,873
	Non-Banana	579,819	3,612,935	3,666,821
Total		**812,322**	**6,845,764**	**5,163,141**

1.12 Shipping has served as a main means of transport of economic goods into and out of the Gulf of Honduras and the volume of goods shipped is expected to continue to increase. From 1990-1999, the volume of goods handled at Puerto Santo Tomás de Castilla, Puerto Barrios and Puerto Cortés annually increased an average of 11.09% (1991-1998), 16.50% and 8.52%, respectively (SIECA, 2001). In 2001, Puerto Cortés almost reached the limits of its capacity. Santo Tomás de Castilla and Puerto Barrios are also projected to reach the limits of their capacity in the next few years (SIECA, 2001). The shipping of hazardous cargo in the region is also expected to increase. Accelerated growth in the traffic and handling of hydrocarbons is projected in the next decade as a result of increasing crude oil production in Guatemala, expanding hydrocarbon exploration, and an increased energy demand in the region. This is being accompanied by several projects for the expansion or construction of new port facilities at all five ports.

1.13 The economic activities taking place in the Gulf of Honduras and its watershed both depend upon and affect the Gulf environment. Aquaculture, fisheries and tourism require clean water to be sustainable. Ports operations such as dredging also depend on the volumes of sediments discharged from nearby rivers. At the same time, port operations, shipping and related upstream industries have the potential to negatively affect the region's environment through dispersal of harmful chemicals and sedimentation of waterways. Two complementary analyses conducted for PROARCA[3] indicate that a single 75,000 barrel spill in the Bay of Amatique could have long-term economic impacts on the growing tourism industry along the Atlantic coast of Guatemala and southern Belize. In a similar manner, the frequency of spills in port and at sea directly affect insurance costs of companies and dredging can represent a significant proportion of operating costs for ports.

[3] Nicolas Peltier. 1997. El transporte de productos peligrosos en el Golfo de Honduras. PROARCA; Raúl Robles Berclan. 1999. Condiciones de la seguridad ambiental en las operaciones portuarias y el tráfico marítimo derivado de las actividades de los puertos guatemaltecos en el litoral Atlántico. Fundaeco-PROARCA-WWF.

D. Overview of Applicable Institutional and Regulatory Frameworks

1.14 An institutional and regulatory analysis of all three countries was conducted during the preparation of the Project. The main conclusions are highlighted below. The countries all participate in various international maritime treaties, including the United Nations Convention on the Law of the Sea (UNCLOS), the International Convention for the Prevention of Pollution from Ships (MARPOL) and other IMO-facilitated treaties related to marine transport and pollution. However, the lack of implementing regulations has limited the effectiveness of inspections and enforcement as has limited inter-agency coordination and unclear lines of authority in each country. The national commitments to these treaties have not been reflected in targets or actions for the region, including the Gulf of Honduras. Cooperation and collaboration would strengthen the compliance with the treaties.

1.15 In addition to being signatories to international conventions, Honduras, Guatemala and Belize have promulgated a variety of national laws and other legal instruments for environmental protection, including pollution prevention and control. While a general framework exists to support program activities to address marine contamination and navigational security, implementation to date has been inconsistent in all three countries as national laws often remain without supporting regulations and adequate institutional support at the national and local levels.

1.16 The operation of the national port system varies among the three countries. Both Honduras and Belize have national maritime administrations and port authorities responsible for compliance with marine pollution control, port operations and concessions. Guatemala does not have a maritime administration and responsibilities are shared between a National Port Commission, the National Port Company and the National Defense Ministry. In addition, each country has ministries responsible for environmental monitoring, environmental impact assessment, coastal planning and control of land-based sources of pollution that form part of the network of entities with responsibilities for managing the Gulf of Honduras and its contributing watersheds. Problems common to all countries include often vague and conflicting legal requirements, fragmentation of responsibilities among national agencies, lack of participation of stakeholders (civil society, local governments, private sector) in the development and monitoring of regulations, lack of institutional capacity. In summary, the analysis conducted for the preparation of this Project makes it clear that the region lacks the capacity and the information base for the integrated environmental management of port and maritime transport activities in the Gulf of Honduras as well as the capacity to move the scale of operations from the national to the regional level.

1.17 COCATRAM is a regional subsecretariat of the Central American Integration System (SICA) working to strengthen maritime transport, port operation, navigation safety and related environmental issues. The commission serves in an advisory capacity to governments to promote effective and sustainable development in the maritime transport sector in Central America. COCATRAM has established itself as a small, but specialized institution with established working relations with the ports, and local and national government agencies. With its headquarters in Managua, Nicaragua, COCATRAM has a small staff and contracts specialized experts to execute its program activities. Honduras and Guatemala are full members of the Commission while Belize has observer status. COCATRAM is currently implementing several internationally-funded projects although it has not previously administered a GEF project. Most recently, COCATRAM has been working with the United Nations Environment Program (UNEP) in the formulation of the Cooperation Agreement for the Protection and Sustainable Development of the Marine and Coastal Zones of the Northeast Pacific approved by its members in February

2002[4]. It has also recently hosted a workshop of experts on the regional consolidation of contingency plans for accidental oil pollution in coastal and marine waters.

1.18 The Central American Commission for Environment and Development (CCAD) was created in 1989. Its mission is to promote regional integration in the area of environmental policy and move regional development along the path of economic, social and ecological sustainability. The member countries (Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama) are represented in CCAD through their environment Ministers. CCAD has a Protempore Presidency, which rotates every six months between the countries, as well as an Executive Secretariat in El Salvador and various technical committees. Coordination of regional environment and natural resources projects funded by the international community is also the responsibility of the CCAD and it acts as executing agency for various full-sized GEF projects, including the MBRS, the Mesoamerican Biological Corridor, and the Integrated Ecosystem Management in Indigenous Communities. CCAD is also responsible for providing technical guidance to the Mesoamerican Sustainable Development Initiative (IMDS) of the Plan Puebla Panama (PPP), and has in that context served as the executing agency for various technical cooperations funded by the IDB.

1.19 Another major regional player in the region is the Trinational Alliance for the Gulf of Honduras (TRIGOH), a coalition of nine conservation groups from Belize, Guatemala, and Honduras. Founded in 1995, TRIGOH has promoted ecoregional fisheries management, the reduction of hazardous spills, and expanded public awareness.

E. Threats and root causes

1.20 During workshops held for preparing this Project, the scientific and expert community of the region was asked to identify, provide information on, and rank major environmental problems and issues of the Gulf of Honduras. Data obtained at the workshops were complemented with preliminary assessments of port operations, a review of accidental spills, navigational safety, potential discharges of pollutants and land-based sources. The following primary causes of degradation of the Gulf were identified:

1.21 *Negative environmental effects arising from existing and future port operations and infrastructure development*: Environmental threats posed by port operations in the region include: sedimentation and other effects from port expansion and maintenance activities such as dredging; accidental spills during the loading, offloading and storage of cargo, particularly hazardous materials; the absence of contingency plans in case of an accident; and inadequate capacity to meet the standards established by the MARPOL Convention related to the operational discharge of solid wastes and oily ballasts and lack of treatment of ballast water. Expansion of the marine transport sector is seen as a major regional priority for all three countries and this is directly affecting port expansion and operations within the Gulf of Honduras. In 2001, almost 4,000 ships passed through the five ports included in the Gulf and the trends indicate that this number will continue to increase. Not only are there more ships entering the ports now, but they are also larger than before. As the volume of goods increases, shipping companies are moving towards using deeper draught ships. This is resulting in plans to expand current port operations and dredge deeper channels in order to accommodate the larger vessels. Increasing port traffic and transhipment of cargo pose a risk to nearby coastal ecosystems, particularly in the semi-enclosed Bay of Amatique. Guatemala registered 12 accidental spills between 1975 and 2002, for the most

[4] COCATRAM-UNEP. 2003. Mares limpios y seguros: Agenda ambiental del transporte marítimo en Centroamérica.

part at Santo Tomás de Castilla, with Puerto Barrios reporting a spill of fuel oil and sludge that occurred as a result of a collision of a vessel with a pier in 1993. In Puerto Cortés, some accidents have occurred, at the companies adjacent to the port's facilities. Currently, there are only limited environmental management systems implemented in some of the ports included in this study, thus compounding the potential impact of a spill. None of the ports in the Gulf of Honduras have adequate installations for the reception of solid wastes. In Belize, vessels are directed to not release any solid or liquid wastes in Belizean waters however some private operators have started accepting waste from cruise ships. Neither Puerto Barrios nor Puerto Santo Tomás de Castilla accepts wastes and they do not carry out any inspections, thereby increasing the risk that ships jettison their wastes at sea. In Puerto Cortes, the municipality receives 'domestic' wastes from ships that are disposed at the municipality's landfill site.

1.22 *Negative environmental effects arising from shipping and other marine activities*: In addition to activities at the ports, the threat of oil and chemical spills resulting from navigational risks is quite serious in the Gulf of Honduras. Due to the limited accessibility of Puerto Barrios and Puerto Santo Tomás de Castilla in Guatemala within the inner section of the Bay of Amatique, the risk of collisions and groundings is significant. This risk increases with the shallow depths and narrow width of the navigation channels (on the average only 90 m wide and 11 m deep, while many ships have drafts of up to 10.5 m). An analysis of the status of navigational charts and hydrographic data in the Gulf of Honduras undertaken by the Meso-American Commission for Hydrography and Charting (MACHC) confirmed that hydrographic survey data were discontinuous, often unreliable and outdated. Sedimentation and extreme weather events such as Hurricane Mitch have also brought about significant changes in bathymetry that render navigational charts obsolete and increase navigational risks. The age, type and maintenance of the ships entering the Gulf of Honduras ports also play a part, as does the training of the ship crewmembers. Heavy storms and hurricanes threaten safety at sea and increase the probability of accidents. The need for improved navigational safety is widely recognized, including better communication systems and infrastructure, navigational aids, as well as the capability to update bathymetric maps.

1.23 Spills occurring in the Gulf, particularly in the Bay of Amatique, have the potential to devastate nearby sensitive habitats. One oceanographic current analysis carried out in the Bay of Amatique concluded that within 48 hours a major oil spill could spread along the shores of the Bay and reach other areas of the Gulf including the Honduran National Park of Jeannette Kawas. The study also indicated that the MBRS could be threatened by a spill in the Bahia de Amatique if the predominant winds were blowing in the opposite direction of the currents.

1.24 *Other Land-Based Activities (other than shipping-related) causing degradation of the ecosystems of the Gulf of Honduras:* A review of land-based sources of pollution (both point and non-point sources) was undertaken as part of the preliminary TDA. The relative importance of agricultural activities, municipal sewage and solid wastes from urban areas, and industrial sites was analyzed based on available data, with estimates made of their effects in terms of Biochemical Oxygen Demand (BOD) and nutrients. The contaminant loads varied considerably for each watershed, with the most important contributors being the Ulua and Chamelecón in Honduras and the Motagua and Izabal-Rio Dulce in Guatemala. Wastewater discharges from urban areas represent the top source of pollution in all watersheds. In addition to municipal discharges, agro-processing, textile and chemical industries, such as the ones located in the urban concentrations of San Pedro Sula in Honduras and Guatemala City, are important point sources that contribute effluents that reach the Gulf through the rivers of the Chamelecón and Motagua watersheds, respectively. As the infrastructure does not exist to adequately handle industrial waste and wastewater, the Gulf has been contaminated with chemicals, heavy metals and petroleum products. These and other

activities, such as the exploitation of oil in Laguna Izabal in Guatemala, are projected to increase in the future.

1.25 As part of the preliminary TDA, a model was used to estimate potential loads from both point and non-point sources of land-based pollution, including agricultural and urban runoff. The analysis indicated that agricultural runoff and animal waste were either the first or second major contributors of BOD, Nitrogen and Phosphorus potential loads in the Ulua, Sarstoon (a watershed shared by Belize and Guatemala) and Chamelecon watersheds. While very indicative, this analysis confirms that environmental protection of the Gulf calls for close cooperation among all three countries to address pollution in an integrated manner.

F. Program strategy

1.26 The project is essentially regional and transboundary in nature. It will enable the coastal states responsible for managing the Gulf of Honduras and its basin to build new and improve on existing regional cooperative frameworks, ensure adherence to international conventions, as well as strengthen national laws, regulations, and management regimes to prevent and reduce existing and potential degradation from pollution which, by its nature, crosses national boundaries and threatens a globally significant ecosystem. To this end, the project's strategy has two important features: (i) it aims at an integrated tri-national approach to the prevention and control of pollution, addressing priorities both in terms of land-based and maritime sources, through the preparation of a Strategic Action Plan (SAP); and (ii) it is intended to complement the World Bank/GEF/CCAD Project for the Conservation and Sustainable Use of the Mesoamerican Barrier Reef System (MBRS). The project also will contribute to the objectives of the Mesoamerican Sustainable Development Initiative (IMDS) of the Plan Puebla Panama (PPP), which aims at promoting natural resources/sustainable development projects in multinational areas in Mesoamerica and fosters the application of Strategic Environmental Assessments to determine and mitigate both direct and indirect impacts of regional/transboundary projects.

1.27 Recognizing the need to address priority transboundary concerns in the Gulf, Belize, Honduras and Guatemala worked with the Bank to propose an initiative for environmental protection and maritime transport pollution control in the Gulf of Honduras focusing on demonstrations of innovative technology mixes. This proposal resulted in a Global Environment Project Development Facility Block-B (GEF PDF-B) grant, which facilitated the development of the TDA, the development of this project proposal and the various analyses required by the GEF including incremental costs. The TDA identified the supra-national threats and responses. Risk assessment criteria were applied to identify priority regional threats, responses, and targets. The selection and design of activities was undertaken with the participation of key stakeholders in all three countries (see Section V.D) and in close coordination with the MBRS team.

1.28 Implementation of this project, and ultimately the SAP, will result in regional, and by extension global, environmental benefits through protection of international waters, their resources, and sustainable use of resources in conformity with the objectives of GEF Operational Program 10, "*to develop and implement International Waters projects that demonstrate ways of overcoming barriers to the use of best practices for limiting releases of contaminants causing priority concerns in the International Waters focal area, and to involve the private sector in utilizing technological advances for resolving these transboundary priority concern*s".

1.29 The present project also is consistent with the GEF International Waters Focal Area- Strategic Priorities in Support of the World Summit on Sustainable Development (WSSD) Outcomes for FY 2003-2006. ***Priority D*** calls for t*esting the viability of technologies and innovative*

approaches for preventing the releases of contaminants from land-based and ship-based sources and for addressing competing uses of water resources under conditions of fluctuating climate in support of various intergovernmental processes. The present project will directly assist in addressing two of the key International Waters gaps: addressing ship-based sources of pollution and land-based pollution sources (ports).

G. Coordination with other IDB programs and development finance institutions

1.30 As mentioned above, this project is intended to complement the World Bank/GEF/CCAD Project for the MBRS as well as the on-going UNDP/GEF Conservation and Sustainable Use of the Barrier Reef Complex in Belize. Both projects fall within the GEF Operational Program for Biodiversity for Coastal, Marine and Freshwater Ecosystems (OP-2). Of note, the Threat and Root Cause Analysis conducted for the MBRS project identified the tri-national area of the Gulf of Honduras as a critical area. Port and ship-based pollution were recognized as significant threats to the health of the reef ecosystem to be addressed by this complementary project. Activities for the Gulf of Honduras have been designed to ensure close coordination in areas such as environmental monitoring, communications and public awareness.

1.31 The IDB and other multilateral and international organizations are supporting various maritime-related projects in the area. For example, the Canadian International Development Agency (CIDA) has financed a first phase of an environmental action plan for port operations in Puerto Cortés. The United States Agency for International Development (USAID) is funding a second phase of its PROARCA program with the objective to improve environmental management in the Mesoamerican Biological Corridor, with the Gulf of Honduras being one of four target sites. The specific objectives of the PROARCA project include: (i) improving the management of protected areas, (ii) expand access to markets for environmentally friendly products and services, (iii) harmonizing environmental laws, and iv) increasing the use of less polluting technologies and practices.

1.32 The proposed project will also build these on other regional initiatives, such as the UNDP/GEF project "Wider Caribbean Initiative on Ship-Generated Wastes", the UNEP/GEF project "Development of Comprehensive Management Programme to Reduce Pesticide Releases from the Agricultural Sector to the Marine Environment of the Caribbean Sea" and COCATRAM's Regional Maritime Navigation Assistance System. During the design stage of this project, efforts were made to coordinate with the existing projects by inviting representatives to participate in the regional stakeholders advisory committee.

1.33 The Bank is funding a number of projects in the region that complement the objectives of the proposed GEF project and mechanisms will be established to ensure coordination through the Bank country. Specifically, the following approved IDB projects include activities that link directly with the components of the proposed GEF project and have incidence in the Gulf of Honduras and the broader Project area: (i) Natural Resources Management in Priority Watersheds (HO-0179), (ii) Improvement of the Plan Puebla Panamá (PPP) Atlantic Road Corridor (HO-0207), (iii) Sustainable Forest Development Program (HO-0218), (iv) Puerto Cortés Sewerage Program (HO-0128) and (v) the San Pedro Sula Municipal Development Program Phase II (HO-0175). These projects will finance activities relating to environmental monitoring in the tributary watersheds and coastal waters of the Gulf, as well as initiatives relating to the payment of environmental services, watershed management and erosion control.

II. PROJECT DESCRIPTION

A. Project goal and purpose

2.1 The **development objective** of this project is to reverse the degradation of the coastal and marine ecosystems within the Gulf of Honduras, by enhancing the control and prevention of maritime transport-related pollution in the major ports and navigation lanes, improving navigational safety to avoid groundings and spills, and reducing land-based sources of pollution draining into the Gulf. The Progam's **global objective** is the implementation of a regionally coordinated Strategic Action Plan that will result in regional, and by extension global, environmental benefits through protection of international waters, their resources and sustainable use of resources in conformity with the objectives of GEF Operational Program 10 while simultaneously reducing threats to the globally significant Mesoamerican Barrier Reef System.

2.2 Specific objectives of the GEF operation are to: (i) create and consolidate a regional network for land-based and maritime pollution control within the Gulf of Honduras, including the formulation of institutional and economic arrangements that will assure the sustainability of the action program; (ii) develop the long-term capacity for gathering, organizing, analyzing and disseminating marine environmental information, as a complement to the MBRS Regional Environmental Information System (EIS); (iii) enhance navigational safety in key ports and approaches with the goal of reducing marine environmental pollution associated with both operational and accidental discharges at sea; (iv) improve environmental management in the regional network of five ports within the Gulf of Honduras through preparation and implementation of environmental management investment and action programs, including demonstration pilot activities and involvement of the private sector.

B. Components

2.3 The Project consists of four components as follows:

Component 1:	Building the regional capacity for maritime and land-based pollution prevention and control
Component 2:	Building the information base for the Strategic Action Program
Component 3:	Enhancing navigational safety in shipping lanes
Component 4:	Improving environmental management and hazard reduction measures in the regional network of five ports within the Gulf of Honduras.

2.4 This project has a strong orientation towards demonstrations as a mechanism to encourage and facilitate concrete changes in national and regional performance in pollution prevention and control. These demonstration activities have been outlined in broad form during this project preparation phase. However, the actual demonstrations to be conducted will be selected during a competitive, participatory process during the full project implementation. Selection criteria for the demonstrations include: replicability; likelihood of successful execution; cost-sharing; and likelihood to contribute to achievement of project goals.

1. Building the regional capacity for maritime and land-based pollution prevention and control

2.5 The activities under this component concentrate on creation of the enabling environment and the institutions that are required for the effective management of the Gulf. The component includes stakeholder activities and public-private sector partnerships, both of which are essential for the project to succeed. This component also includes project management and coordination,

including support for the participation of the various committees and networks to be involved in the project. A key to the long-term sustainability of project activities is the formulation of arrangements for financing regional maritime pollution control and prevention. Close coordination with MBRS, other projects in the Gulf region as well as GEF International Waters (IW) projects with similar objectives is essential in carrying out these activities.

2.6 To build and reinforce the regional network for pollution prevention and control, this component will support activities such as: (i) the establishment of regional institutional arrangements for carrying out project activities and to strengthen regional coordination In addition to a small Regional Project Coordination Unit (RPCU) to be based in Puerto Cortes (see paragraph 4.3), the project will support the work of project committees, including the commission of policy-oriented assessments and workshops, joint planning and review meetings to coordinate activities with linked projects such as PROARCA and MBRS, the creation of special purpose regional networks (e.g., ports, local governments, industry) to promote pollution prevention, and the formulation of tri-national agreements to strengthen coordination; (ii) implementation of a regional communication strategy, that would include, among other objectives, the dissemination of information on pollution prevention in the Gulf of Honduras and its benefits; (iii) and a regional information network and information exchange mechanism, including the establishment of a regional website; (iv) regional training workshops for stakeholders in priority areas identified through needs assessments (Coastal and Marine Environmental Management, effective enforcement activities, investigation of environmental violations and legal prosecution, citizen monitoring/surveillance, and strategic planning for port personnel); and (v) coordination and fostering of exchanges with other GEF projects in the Gulf of Honduras and IW projects in Latin America (e.g. Frente Maritimo in Uruguay/Argentina) and worldwide including the Global Ballast Water Project (Phase II), the Caribbean Land Marine Ecosystem Project and the IW: Learn (Phase II) the latter to provide protocols for information sharing with other IW projects.[5]

2.7 This component includes expert services to help refine and formally establish mechanisms for sustainable financing of activities required over the long-term. These activities include, for example, regional marine pollution monitoring, control and prevention; promotion of compliance to environmental standards and regulations; operation and maintenance of regional networks and systems; information management, reporting and dissemination. Building on the results of a financial sustainability study conducted for the preparation of this project, these arrangements could include a financing scheme in cooperation with the private sector (including industries located in the watersheds draining into the Gulf) and port authorities, conservation easements, land-use zoning, payments for environmental services such as erosion control and other types of incentives to control land-based sources of pollution and encourage the adoption of less polluting technologies; and incentives for private sector participation in monitoring and prevention of pollution. This will be complemented by a study aimed at quantifying the economic benefits of marine pollution prevention, including, for example, reduced insurance costs, avoided damages, protection of tourism assets and fisheries resources. The study will encompass an assessment of competitiveness considerations and an evaluation of the economic impacts of designating the Gulf as a Special Area under MARPOL, an initiative that has received interest in the region. The component will also include technical assistance support the implementation of these instruments and incentives in at least one location in all three countries.

2.8 Finally, Component 1 will support the design and implementation of a monitoring and modeling strategic framework to assess the effectiveness of the project in achieving the two Environmental Quality Objectives (EQOs) selected for the project. These EQOs are: (i) stabilized marine and

[5] Resources have been allocated in the budget to this end.

coastal water quality in the Gulf of Honduras; and (ii) prevention of degradation of sensitive coastal and marine habitats. The project would finance a detailed regional inventory of landbased/coastal sources of pollution aimed to complement the baseline developed for the MBRS. In addition, the analysis of potential contaminant loads undertaken for the preliminary TDA will be refined through data collection to establish a baseline of upstream erosion rates, water and sediment quality in rivers and coastal waters of the Gulf (particularly at the entrance of ports) as a basis for identifying environmental and stress indicators for the project.

2.9 In support of these activities, the GEF project will finance personnel, equipment and operating costs of the RCPU, costs for organizing and holding workshops, consulting services for the communication strategy and networks, the development of sustainable financing mechanisms, the study of economic incentives and the establishment of the baseline.

2.10 In summary, the expected results of this component include: (i) Improved national and regional capacities for effective environmental management of maritime transport; (ii) Stakeholders fully involved in project; (iii) Increased knowledge and awareness by local stakeholders of maritime and land-based transport pollution issues; (iv) Sustainable regional financial mechanism for financing SAP activities developed; and (v) Monitoring and evaluation process developed and implemented.

2. Building the information base for the Strategic Action Program

2.11 The project will finance the following incremental activities needed for the formulation and implementation of a Strategic Action Program for pollution prevention and control of the Gulf of Honduras:

a. Building on the existing MBRS Environmental Information System, develop an Information Management Module for the Gulf of Honduras to be used for updating of the TDA with the monitoring data collected through the program, sharing data with other projects, including the MBRS and the Central American Information System developed by CCAD as well as for modeling pollutant transport in the Gulf. This will encompass the development of technical capacity for the transfer and incorporation of hydrographical and oceanographic data into the regional Geographic Information System (GIS)-based information system and publication of an annual report of the state of the Gulf for general public distribution.

b. Update and complete the TDA, including an updated assessment of the relative importance and transboundary impact of land-based and marine-based sources of pollution and filling the gaps identified in the Preliminary TDA. This will be complemented by a thorough evaluation of the national and regional legal and institutional frameworks addressing environmental management of the maritime transport industry and land-based activities, with a view to identifying priorities for harmonizing laws, standards, regulations and enforcement protocols. An analysis of the socio-economic conditions of the Gulf of Honduras region that would affect efforts to improve environmental management of the maritime transport industry will also be conducted.

c. Contribute to, negotiate, and endorse at the national level a regional Strategic Action Program (SAP) for port and navigational pollution reduction measures as well as reduction of other adverse land-based activities, and improvement of navigation safety. The SAP will define the legal, institutional and regulatory reforms needed as well as the investments required to address the priority transboundary issues raised in the TDA. It will include an agenda for action at the regional, national and local levels as well as financing framework.

The preparation of the SAP will be used as an opportunity to explore the creation of a permanent regional institutional structure for marine environmental management and regional interest in establishing marine electronic highways (see paragraph 2.17). Preparation of the SAP will culminate in a regional donor conference (including the private sector) to develop partnerships for financing and implementation. Technical assistance will be provided to prepare the application to the International Maritime Organization (IMO) for designating the Gulf of Honduras as a Special Area under MARPOL 73/78 and as a Particularly Sensitive Area.

2.12 In support of these activities, the GEF project will finance consulting services for the Data and Information management Module and baseline, the preparation of the TDA and SAP, workshops and publications.

2.13 The results of Component 2 are wide-ranging and include: the TDA updated, agreed upon and widely disseminated; the regional SAP, which supports improved safety of navigation and protection of the marine environment, completed and endorsed at the national level, with contaminant reduction goals by watershed and parameters identified from the monitoring and modeling; and partnerships in place to implement the SAP.

3. Enhancing navigational safety in shipping lanes

2.14 The activities in Component 3 focus on preventing accidental groundings and discharges from maritime transport operations at sea, and developing the infrastructure and capacity to address such spills if they occur. Activities under this component focus on improving the hydrographic and oceanographic cooperation in the region in order to both prevent and prepare for potential groundings and spills in the Gulf related to maritime transport operations. Policy and legislative interventions will be defined, on national and regional bases. New technologies will be demonstrated in order to aid in the prevention of accidents and contingency plans will be developed for addressing accidents. These two demonstration projects will be developed and agreed during the full project, with a focus on replicability and incorporation into the SAP.

2.15 Based on the results of navigational risk assessments to be completed in the first year, the project will finance specialized training, technical assistance and the acquisition of installation of equipment as risk reduction measures in the main shipping routes of the Gulf. These measures will include, for example: (i) the expansion of signaling equipment (buoys, beacons, lighthouses, etc.); (ii) strengthening of regional navigational safety communications capability by helping to establish common regional communications protocols, and assisting in starting national communications centers, to improve the overall security of maritime transport in order to avoid ship collisions in busy corridors, as well as to enable monitoring, surveillance and control of fishing and other commercial vessels, navigational routes and sea lanes, and incidences of coastal pollution. Assistance in the areas of VHF/HF radio, radar, Automated Identification System (AIS), and Electronic Navigational Charts (ENCs) will help establish this regional communications capability and assist compliance with the IMO/International Ship and Port Facility Security Code (ISPS) standards in effect since July 2004.

2.16 The above will be complemented by the formulation and promotion of draft reforms for the institutional, legal, policy, regulatory and enforcement framework for navigational safety and pollution prevention throughout the Gulf of Honduras. These reforms will include, for example, the prevention of oil and chemical spills, vessel standards, provision of hydrographic services, certification, a framework for the definition of liabilities; and facilitating the process of ratification of international agreements. Technical assistance will also be provided for

developing national regulations and standards for implementing the provisions of international and regional conventions and agreements for land-based sources of pollution and the prevention of marine pollution.

2.17 Cooperating closely with MACHC and MBRS, the project will finance training and other activities aimed at building capacity for regional hydrographic and oceanographic data processing, inspection, pilotage, and other operations at sea related to navigational safety and spills. Access will be provided to technical assistance and equipment (both hardware and software) required for hydrographic product and service needs, hydrographic data collection, processing, analysis, paper and Electronic Navigational Chart (ENC) production and distribution. Practical 'hands-on' training will be carried out in a regional setting to illustrate the application of this capacity for improved environmental management. This will be undertaken with a view towards promoting interest in establishing a 'marine electronic highway' to enhance navigational safety and environmental protection.[6] Priority areas have already been identified in a preliminary manner in a review of the status of hydrographic information in the Gulf of Honduras undertaken by MACHC.

2.18 With the aim of preparing a regional/transboundary oil and chemical spill prevention and contingency plan, the project will finance the planning and performance of emergency spill response exercises, with national and regional authorities, to demonstrate and evaluate capabilities of the regional response**.** Equipment and technical assistance will be provided to improve the regional capacity for oil and chemical spill containment and clean-up by identifying existing equipment and facilities (including using the oil spill brigade in Guatemala as a regional model) and gaps in available facilities.

2.19 The project will also finance two demonstration pilot activities related to improved navigational safety and marine environmental protection. Areas that have been identified to date for demonstration pilot activities include the following: (i) improved navigational products and services such as the production of an Electronic Navigational Charts (ENC) for a priority navigational lane into a port and integration of data on environmentally sensitive areas; (ii) regional vessel tracking capabilities; and (iii) improved processes for removal, transport, and treatment of chemical wastes (including oil, solid waste and water). There is interest on the part of local governments and private sector to participate and contribute to the demonstration projects.

2.20 The costs included in this component are consultancies for the risk assessment and harmonization of regulations, training and coordination workshops, navigational safety and hydrographic charting equipment and other goods for the demonstration projects.

2.21 In summary, results from Component 3 include the following:

- Steps for reducing pollution from navigational risks identified

---

[6] A Marine Electronic Highway builds upon a network of electronic nautical charts (ENCs) using Electronic Chart Display and Information Systems (ECDIS) and environmental management systems into an integrated system, allowing the maximum of information to be made available to ships and shipmasters as well as shore-based users such as vessel traffic control systems. The integrated system - which includes electronic nautical charts, positioning systems, automatic ship identification (AIS) transponders as well as provision of meteorological, oceanographic and navigational information - provides an essential tool for marine pollution prevention and control, marine environmental planning and management, as well as safety of navigation. The GEF is funding pilot projects on Marine Electronic Highway (MEH) both in the Straits of Malacca and Singapore, as well as in the Western Indian Ocean.

- Legal/policy/regulatory framework for improved navigational safety, including addressing oil and chemical spills and improved hydrographic products and services, developed
- Regional capacity for addressing transboundary spills enhanced
- Two technologies for reducing navigational risks successfully demonstrated
- Regional capacity for hydrography and oceanography enhanced
- National and regional capacity for addressing oil and chemical spills improved
- Electronic charting linked to environmental management needs

4. Improving environmental management and hazard reduction measures in the regional network of five ports within the Gulf of Honduras

2.22 The activities of Component 4 focus on improving the environmental management of port operations in the Gulf of Honduras, specifically in the five selected ports (Puerto Cortés in Honduras, Puerto Barrios and Puerto Santo Tomás de Castilla in Bahía de Amatique in Guatemala, and Big Creek and Belize City Port in Belize). The Component includes financing for three demonstration projects designed to substantiate the regional as well as national benefits of innovative technology and measures for pollution prevention with a view to harmonizing port operations across the Gulf.

2.23 Risk assessments of operations in four of the ports (Puerto Barrios and Puerto Santo Tomás de Castilla, Big Creek and Belize City Port)[7] will be conducted using a common methodology and will examine:

- Dredging needs and environmental impacts of dredging and dredge disposal methods.
- Impacts of illegal discharge of ballast and oily ballast water and identify infrastructure needs for treating ballast water.
- Impacts of oil and chemical spills occurring during loading and off-loading of ships and introduce new technologies to avoid spills.

2.24 The project will finance technical assistance and regional workshops aimed at developing harmonized regional guidelines, standards and policies for port environmental management and security. To promote the timely implementation of these guidelines, the project will help identify sources of investment and develop investment plan for providing equipment and facilities for minimizing environmental impacts of port operations, including solid waste and oily ballast water disposal. This will include the establishment of port users' forum, to meet twice per year, to discuss environmental investment needs. Private sector, potential investors and donor would be invited to the port forums.

2.25 As a complement to the above, demonstration pilot projects related to environmental improvements will be carried out in three of the five ports focusing where possible on private-public partnerships, including demonstrations of port-specific hydrographic survey and electronic/paper nautical chart production activities, and environmentally effective ways of disposing of contaminated dredge spoil. Specific criteria and guidelines for the selection of demonstration projects (including their replicability, financial sustainability, private sector involvement) have been established in the project's Operating Regulations and will be confirmed early during the project execution phase, followed by regional agreement on the priority demonstration projects, and implementation, monitoring, and reporting.

2.26 The results expected from Component 4 are as follows:

[7] A risk assessment has been completed for Puerto Cortes and will be validated during the course of the project.

- Steps for reducing environmental threats from port operations identified and supported at three sites using Demonstration Projects
- Guidelines for reducing environmental threats from port operations agreed upon at the regional level
- Legal/policy/regulatory framework for environmental management of ports developed
- Sustainable economic mechanism for improving port operations identified, including strong private sector participation.

III. COSTS AND FINANCING

3.1 The estimated cost of the incremental activities described above is US$7.2 million, of which US$4.8 million will be financed through a grant from the GEF through the IDB and US$2.4 million will be the counterpart contribution of COCATRAM and can be provided by the three participating countries. The local counterpart contribution will be in kind and described in agreements between COCATRAM and each participating country for the cooperation and coordination of project execution. Table 3 provides a breakdown of funds by component.

TABLE 3. INDICATIVE BUDGET (IN US$)

Component	GEF-IDB	GOVs	Total
Component 1: Building regional capacity for maritime and land-based pollution control in the Gulf of Honduras Region	**2,375,000**	**665,000**	**3,040,000**
Administration (PCU, Regional Steering Committee)	950,000	400,000	1,350,000
Workshops and working groups	150,000	150,000	300,000
Consultancies and studies	600,000	0	600,000
Courses and practical training	160,000	70,000	230,000
Coordination with other IW projects and exchanges	185,000	10,000	195,000
Publications	80,000	11,000	91,000
Equipment	100,000	24,000	124,000
Pilot Studies	150,000	0	150,000
Component 2: Creating, analyzing and distributing marine environmental information and developing a strategic action plan for the Gulf of Honduras	**900,000**	**350,000**	**1,250,000**
Workshops and working groups	145,000	194,000	339,000
Consultancies and studies	480,000	40,000	520,000
Courses and practical training	77,000	73,000	150,000
Publications	38,000	33,000	71,000
Equipment	160,000	10,000	170,000
Component 3: Enhancing navigational safety in shipping lanes	**900,000**	**930,000**	**1,830,000**
Workshops and working groups	110,000	130,000	240,000
Consultancies and studies	290,000	50,000	340,000
Courses and practical training	50,000	56,000	106,000
Publications	0	9,000	9,000
Equipment	150,000	160,000	310,000
Demonstration projects	300,000	525,000	825,000
Component 4: Improving environmental management in the regional network of five ports within the Gulf of Honduras	**230,000**	**355,000**	**585,000**
Workshops and working groups	80,000	160,000	240,000
Consultancies	100,000	60,000	160,000
Courses and practical training	30,000	50,000	80,000
Publications	0	5,000	5,000
Demonstration projects	20,000	80,000	100,000
Other Costs:	**395,000**	**100,000**	**495,000**
Independent annual review (25K/yr) and evaluation	155,000	0	155,000
Audit	75,000	0	75,000
Contingencies	165,000	100,000	265,000
TOTAL	**4,800,000**	**2,400,000**	**7,200,000**

3.2 Total financing of the Full Sized Project as presented in the GEF Project Executive Summary is estimated at US$11,300,000 of which US$2,600,000 represents financing of complementary incremental activities from other collaborating institutions (in addition to the contribution of national governments) and US$1,500,000 represents financing from IDB projects already approved which support objectives in line with the Full Sized Project. Table 4 provides a breakdown of the additional financing of incremental activities by component and institution. The GEF Executive Summary and incremental cost analysis that accompany this project document include a description of the specific activities to be co-financed with other sources.

TABLE 4. OTHER CO-FINANCING (US$ THOUSANDS)							
PROJECT COMPONENTS	**PROARCA/ USAID**	**IMO**	**IDB**	**COCA-TRAM**	**MACHC**	**Private Sector**	**TOTAL**
1: Building regional capacity for maritime and land-based pollution control in the Gulf of Honduras Region.	-	-	1,000	-	-	50	1,050
2: Creating, analyzing and distributing marine environmental information and developing a strategic action plan for the Gulf of Honduras.	15	-	500		-	88	603
3: Enhancing navigational safety in shipping lanes.	670	125		432	335	150	1,712
4: Improving environmental manage-ment in the regional network of five ports within the Gulf of Honduras.	535	-		-	-	200	735
TOTALS	**1,220**	**125**	**1,500**	**432**	**335**	**488**	**4,100**

IV. PROJECT EXECUTION

A. Project Execution and Administration

4.1 The Regional Executing Agency (REA) for the Project will be COCATRAM in coordination with CCAD. The Regional Executing Agency (COCATRAM) will be responsible to the IDB for: (i) maintaining adequate financial, accounting, and internal control systems that allow the identification of the sources and uses of project funds, documentation of eligible transactions, and the timely preparation of financial statements and other financial reports; (ii) submitting disbursement requests to the Bank and the corresponding justification of expenditures; (iii) maintaining an adequate disbursements supporting documentation filing system; (iv) maintaining separate commercial bank accounts for the IDB/GEF funding and the counterpart and other donor resources; and (v) preparing and submitting to the Bank the required semi-annual Revolving Fund reports and annual financial statements of the project.

4.2 The details of coordination between COCATRAM and CCAD are the subject of a Memorandum of Understanding (MOU) that was signed 27 July 2004 for the specific purposes of coordination in the implementation of the project. It serves as a framework agreement and stipulates that the assignment of specific responsibilities will be detailed in the project's Operating Regulations. Both institutions bring strengths to the execution of the project. COCATRAM provides the project with the technical background in the areas of maritime transport and port operation and also has extensive regional experience and established relationships with government and industry. CCAD brings to the project complementary programmatic experience, GEF project administration experience, and political relationships in the environmental field, established outreach programs to Non-governmental Organization (NGOs) and civil society, and membership by all three countries. CCAD would strengthen the project through a collaborative project execution.

4.3 COCATRAM will establish a Regional Project Coordination Unit (RPCU) responsible for project execution over a 5-year duration. COCATRAM will hire a Project Director to head the RPCU and to report to the REA. The establishment of the RPCU with, as a minimum, the selection of

the Project Director, will be a condition prior to first disbursement. The project will finance as part of the RPCU the maritime expert and the environmental specialist mentioned above, an administrative officer and assistant. The structure and responsibilities of the RPCU are described in the project's Operating Regulations.

4.4 The offices of the RPCU will be housed in the facilities of the Empresa Nacional Portuaria (ENP) in Puerto Cortés. COCATRAM and the Empresa Nacional Portuaria (ENP) have entered into an agreement for housing the operations of the RCPU in the facilities of the ENP in Puerto Cortés.

4.5 The project will be governed by a Regional Steering Committee to be established in the first semester of execution and comprised of senior officials from the national counterpart institutions (either maritime administrations or national port authorities) of each country, the Project Director, COCATRAM, CCAD, a representative of the IDB and representatives of other related regional projects. The Steering Committee will be responsible for the review and clearance of annual work plans and budgets as well as promoting coordination with other regional initiatives.

4.6 A Management Committee will be formed in the first year of execution and comprised of mid-level decision makers in port operations, industry, national and local governments (e.g., the towns of Puerto Cortes, Livingstone, Punta Gorda), environmental groups including TRIGOH, maritime organizations, academic institutions or other professional organizations involved or having an effect on environmental protection. Maintaining a balance between in representation of the countries and the sectors will be critical. The Management Committee will be responsible to build consensus among its diverse stakeholder membership for project activities, participating directly in demonstration projects and contribute to the annual planning and review cycles. The work of the Management Committee will be supported by national coordination working groups (including interests representing environment, agriculture, industry and transport) that could function as part of the existing network created for the MBRS) to assure cross-sectoral participation and coordination in all three countries. Entry into effect of the agreement for the cooperation and coordination with each country participating in the execution of the activities planned in that country, including specifications on the counterpart co-financing, will be a condition prior to disbursement of the resources destined to that country.

4.7 Execution will be guided by Program Operating Regulations that include, among other items: (i) requirements for the preparation of project financial reports/statements; (ii) eligibility criteria for the selection of project activities, including demonstration projects; (iii) guidelines for coordination with local government and environmental review procedures required for program investments; (iv) amounts and limits with respect to the procurement of goods, works and services; (v) terms of reference for the Project Director and other RPCU positions; (vi) procedural rules and operating regulations for the participation of the Steering Committee and other committees in the project; and (vii) guidelines for community consultation and participation, conflict resolution and management. Program Operating Regulations have been finalized and agreed upon by COCATRAM, CCAD and the Bank with specific aspects consulted with participating countries. Entry into effect the operating regulations will be a condition prior to first disbursement.

4.8 In relation to the Bank's external audit requirements, COCATRAM shall submit to the Bank annual and a final financial statement of expenditures regarding the use of the Bank's contribution and the counterpart funds, within 90 days after the end of each fiscal year and the date of the last disbursement for the project. These statements shall be audited by a firm of independent public accountants acceptable to the Bank, based on the terms of reference previously approved by the Bank. The audit firm will be contracted for a period of at least three

years, subject to a contractual termination clause in case of inadequate performance. The audit firm will be selected in accordance with the Bank's audit bidding procedures and the audit costs will be covered by the GEF financing.

B. Procurement of goods and services

4.9 The procurement of goods, works and consulting services to be financed with program resources will be carried out following Bank procurement policies and procedures established in Annex B of the Contract as well as in document GN-2220-10. The RPCU will use international public bidding for the procurement of consulting services that exceed US$200,000, the procurement of goods that exceed US$350,000 and civil works that exceed US$1.0 million. These threshold amounts are justified considering that in similar projects in Central America, the participation of international firms is attracted when the cost of the procurements exceed these threshold amounts. All bidding for the acquisition of goods and works below these threshold amounts will be carried out following the policies and procedures specified under national legislation, provided they are not in conflict with the procurement policies and procedures of the Bank. Procurement of consulting services will also be carried out in accordance with Bank procurement policies and procedures and following the Procurement Plan described in the Program Operating Regulations

C. Execution and disbursement schedule

4.10 The execution and disbursement periods will be five years and five and a half years respectively. The rotating fund will be 10% of the financing amount. The disbursement schedule for the program, by source of funds, is presented in Table 5 below:

TABLE 5. DISBURSEMENT SCHEDULE (IN US$ THOUSANDS)

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total
GEF IDB	690	1,120	1,150	1,150	690	4,800
Governments	360	480	600	600	360	2,400
Total	**1,050**	**1,600**	**1,750**	**1,750**	**1,050**	**7,200**
Percentage	**15%**	**20%**	**25%**	**25%**	**15%**	**100%**

D. Monitoring and evaluation

4.11 Monitoring and evaluation for the project encompass a series of linked activities that include participatory monitoring through the Project Management Committee, annual and Quarterly Project Reports prepared by the RPCU, a mid-term tri-partite evaluation, and a final project evaluation. Monitoring and evaluation will rely on the Logical Framework developed in consultation with stakeholders, including clear indicators of performance, results and impact.

4.12 *Management Performance indicators* will be used for tracking progress and controlling quality in the implementation of the Program activities. These refer to quantitative targets set relative to the execution of each activity and focus primarily on the outputs and products expected under each activity. On the administrative side, performance indicators and tools used to assess monthly and annual progress include amounts expended as compared to amounts budgeted (monthly and annual budget conciliations), targets for procurement of goods and services, and annual personnel reviews. The RPCU will incorporate these management performance indicators as part of its administrative and project management systems and will use them for quarterly reporting and the annual financial report. The IDB will refer to these indicators to prepare its required monitoring

documentation (Project Performance Monitoring Report) and as a basis for the Bank's programmed administrative missions. Independent annual reviews to be contracted by the Bank have been incorporated as a complementary oversight activity and included in the budget.

4.13 *Project monitoring and evaluation indicators* have been selected in a preliminary manner in conformance with the guidance for IW projects.[8] Establishment of the baseline and selection of the definitive set of indicators through consensus are activities that will be supported under Components 1 and 2 with the completion of the TDA. Several categories of indicators have been selected. Regional process indicators include the establishment and documented work of the Management Committee and other committees involved in the program; the endorsement of the TDA and SAP; the entry into effect and application of regional agreements, regional harmonization of regulatory instruments for marine pollution prevention and control; application submitted for the designation of the Gulf of Honduras as a Special Area under MARPOL; and other indicators of improved regional coordination such as the creation of special purpose regional networks for pollution prevention (i.e., port forums). To be defined during the formulation of the SAP, stress reduction indicators are expected to include investments in ship waste receiving and recycling facilities completed; investments in navigational safety measures completed; reduced incidence of marine accidents; slope stabilization and erosion control measures in critical watersheds in place. Environment status indicators consist of a combination of parameters related to the stabilization of coastal and marine water quality (reduced pollutant loads) and the status of coastal and marine habitats (reduced rates of decline in mangrove, seagrass and coral reef sites). Baseline and monitoring data for these indicators will be collected in all three countries and consolidated in the Data and Information Management System Module included in Component 2.

4.14 ***Mid-term evaluation***. The IDB Project Team, together with COCATRAM and CCAD will conduct a mid-term evaluation of the Program's execution, as part of its normal monitoring activities, no later than two years after the first disbursement. Following Bank procedures, the Bank Country Office in Honduras (in consultation with the Country Offices in Guatemala and Belize) will request the mid-term administrative mission. The key objectives of the mid-term evaluation will be to: (i) assess the degree of advance towards the Program's objectives and expected results; (ii) assess the degree of effective participation in the Program and coordination among regional stakeholders; (iii) review the data being collected on performance key indicators of results; and (iv) review and reach agreement on any modifications required to expedite execution. The mid-term evaluation will culminate in a tri-partite, policy-level meeting of the parties directly involved in the implementation of a project. The tripartite review will provide an opportunity for representatives from central and local governments, the direct beneficiaries, and other stakeholders to discuss and endorse the recommendations of the mid-term evaluation. The main results of the mid-term evaluation will be made available to the various committees and on the project web site.

4.15 ***Final evaluation***. The data collected to monitor process, stress-reduction and environment status indicators will be used to contract an independent final evaluation in the last semester of execution, using as a reference point the 2005 baseline acquired during the first stage. In addition to progress made on the indicators, this evaluation will address key questions as follows: (i) to what extent has the accuracy, availability and use of data for environmental protection and pollution prevention of the Gulf of Honduras in its entirety improved? (ii) what has been the degree of replicability of the demonstration projects in the Gulf region and elsewhere in Central America? (iii) have the regional institutional arrangements for coordinating action for

[8] A. Duda. Monitoring and Evaluation Indicators for GEF International Waters Projects. GEF. 2002.

environmental protection and pollution prevention in the Gulf been effective? (iv) does consensus exist on the next steps for formalizing these institutional arrangements and ensuring their financial sustainability? (v) what is the level of commitment of resources for implementation of the SAP relative to priorities? The information would also be available for an ex-post evaluation should the decision be made to conduct one.

V. BENEFITS AND RISKS

A. Benefits and target population

5.1 The Project is designed to build new and improve on existing regional cooperative frameworks for preventing the release of contaminants causing priority concerns in international waters. As such, **global benefits** of the project include: (i) strengthened tri-national coordination of national laws, regulations and management regimes for preventing the release of land-based and ship-based contaminants into the Gulf of Honduras; (ii) improved adherence to international conventions for the prevention of marine pollution; (iii) replication and regional adoption of innovative technologies for pollution prevention and control by the private and public sectors (including local governments); (iv) leveraging of financing for environmental protection of the Gulf of Honduras through a regionally endorsed Strategic Action Plan; and (v) addressing threats and corresponding root causes for the protection of the MBRS, a globally significant are of marine and coastal biodiversity.

5.2 **National benefits** accrue primarily from improved sustainable livelihoods in coastal portions of the Project Area and include, for example: (i) conservation of critical ecosystems and the resource base for sustainable tourism and fisheries in all three countries; (ii) reduced damages and threats to safety from port-related and navigational accidents; (iii) reduced costs for operational maintenance of ports and navigational lanes, particularly related to dredging; and (iv) enhanced participation of stakeholders in environmental management of marine-related activities and improved management of conflicts between industrial and other marine uses in the Gulf of Honduras. The primary beneficiaries and target population will be residents in the coastal towns and communities bordering the Gulf, local governments, maritime and port administrations and organizations active in the region and throughout Central America such as TRIGOH, COCATRAM and CCAD.

B. Sustainability

5.3 Belize, Guatemala and Honduras have shown, through their efforts and commitment, their determination to solve joint problems right throughout the project preparation process. The proposed activities were in part selected based on the ability of governments to sustain them and the degree to which strong incentives existed for long-term private sector participation. The degree to which the private sector and public continue to have ownership of the project represents a basis for sustainability. This sustainability will be enhanced by the deliberate inclusion of the major stakeholders in all aspects of project implementation and the success of the planned public awareness interventions.

5.4 One key intervention contributing to sustainability will be the demonstration projects and their replicability throughout the basin and Central America, through the involvement of regional maritime organizations such as COCATRAM. As such, one of the key criteria for demonstration project funding is a clear definition within the proposal of the potential for replicability of the lessons learned and the best practices developed from the demonstration project.

5.5 The project will also participate in the UNDP/UNEP/WB-GEF International Waters (IW) Learning, Exchange and Resource Network Program (IW:LEARN) now entering its second phase. The Pilot Phase of IW:LEARN initiated procedures for incorporating lessons learned into formulation and implementation of GEF IW projects by fostering a knowledge-sharing community of GEF IW projects and partners through face-to-face interactions and distance learning. The Gulf of Honduras project will join the network of GEF IW projects that will build the capacity of GEF IW projects through the on-going exchange of experiences active learning in the recently approved Full-Sized Project (FSP) for IW:LEARN. In particular, through its information management system, the Gulf of Honduras project will contribute to facilitate the integration, exchange and accessibility of data and information across GEF IW projects and it participate in the structured staff exchange programs and learning activities developed through the IW:LEARN, including the Biannual IW Conferences.

C. Financial sustainability

5.6 Another important intervention, one that addresses the critical issue of financial sustainability of the project, will be the establishment of a financing scheme in cooperation with the private sector and port authorities. During project preparation, potential approaches that the countries in the region should consider to provide financing for SAP activities over the longer term were identified and discussed. Some of these include:

a. Fees for port services, such as treatment of oily bilge water and garbage disposal.

b. Port fees directly levied to support SAP activities. This could be based on a per boat basis or on cargo tonnage, with the fee depending upon the potential toxicity of the cargo.

c. Fees collected from cruise ship tourists.

d. Reimbursements in the event of accidents. Money not used in the spill cleanup could be used for SAP activities, such as those related to spill prevention.

e. Partnerships with in-kind and monetary contributions from private, non-governmental and international entities.

5.7 During the implementation of the full project, these financing arrangements will be further analyzed in order to support regional maritime pollution monitoring, control and prevention, to contribute to the financial sustainability of the program. It is likely that each country will want to choose their own mix of financing mechanisms, because of differences in cargo and cargo volume, as well as existing differences in tariff structures between countries. More generally, regardless of the types of funding mechanisms actually implemented, it is critical that all aspects of financing are transparent. The project will provide technical assistance and capacity building to overcome specific concerns such as intra-regional competition and promote implementation. The amount of money required by SAP activities is likely to be well within the capability of the region to finance on a long-term sustainable basis.

D. Stakeholder involvement

5.8 Stakeholders have been actively involved in the development of this proposal for a GEF Full-sized Project. To seek input throughout the development of this project, a Regional Stakeholders Advisory Committee was created. This advisory committee was made up of a variety of governmental, non-governmental and private sector stakeholders who participated in a series of

public and individual meetings and provided significant input in the development of the Preliminary TDA and the project proposal. Stakeholder participation included representatives from government agencies such as the merchant marines, national port authorities, ministry of environment, ministry of finance and tourism institute; non-governmental organizations such as TRIGOH and its individual member organizations; representatives from the private sector such as the Guatemala Banana Company (COBIGUA); and representatives from other projects in the region such as the MBRS and COCATRAM. More than 60 representatives attended four regional public meetings held in each of the three countries participating in the project. Information was also disseminated broadly through a project website currently administered by COCATRAM.

5.9 A summary of the stakeholder analysis, the results of the regional workshops and a stakeholder participation plan are presented in Annex F. It indicates how the various stakeholders will be involved throughout project implementation through mechanisms such as the Ad Hoc Advisory Committee and participatory monitoring and evaluation, and at what stages. In order to attain sustainability, the activities are designed to address interests of large groups of stakeholders, and a significant portion of the budget is allocated for this aspect under Component 1.

E. Environmental and social viability

5.10 Overall, the operation will have a positive environmental impact associated with measurable results in terms of: (i) increased regional capacity for environmental management, including marine pollution prevention and control within the Gulf of Honduras; (ii) consistent reporting on environmental trends and maritime uses; (iii) protection of globally significant coastal and marine ecosystems; and (iv) reduced risks of environmental damages and losses from coastal and marine pollution. Positive social impact is also expected in terms of enhanced participation of stakeholders not traditionally included in processes pertaining to maritime industries. Local residents will also benefit from improved communications at sea for safety and response purposes.

5.11 The project will not result in significant or foreseeable adverse environmental or social impact due to the nature, scale and location of the activities to be financed by the GEF grant and complementary financing of incremental activities.

F. Risks

5.12 Risks are associated with the willingness of the three governments and the private sector operating in the Gulf of Honduras to address in a coordinated manner complex, inter-sectoral environmental issues such as marine pollution prevention and control from both land-based and maritime sources. Non-point land-based sources of pollution from activities such as agriculture present a significant challenge. To address this risk, the project includes the preparation of an updated Transboundary Diagnostic Analysis (TDA) whereby priority sources will be ascertained (including the contributions of contaminants from watersheds draining into the Gulf), their relative significance analyzed and solutions incorporated in a Strategic Action Program (SAP) to be endorsed by all three countries. Reluctance may also exist in terms of increased operating costs affecting the competitiveness of ports within the Gulf and their position in global shipping markets. The political underpinnings of some initiatives such as the designation of the Gulf of Honduras as a Special Area under MARPOL 73/78 are also complex. An effective regional coordination framework that includes both public and private sectors combined with demonstration projects and a proactive educational campaign that links marine environmental quality and economic benefits from improved access to markets due to compliance with international standards will reduce many of these risks.

Environmental Protection and Maritime Transport Pollution Control in the Gulf of Honduras
PROJECT LOGICAL FRAMEWORK
RS-X1009

NARRATIVE SUMMARY	VERIFIABLE INDICATORS	MEANS OF MEASUREMENT	ASSUMPTIONS
Goal of Program: Contribute to the stabilization of water quality in the Gulf of Honduras and prevent the degradation of vulnerable coastal and marine ecosystems threatened by pollution	• Levels of contaminants (nutrients, sediment, BOD, toxics) stabilized by 2010 relative to 2005 • Rate of decline in the quality of selected coral reef sites, mangroves and seagrass beds (sites to be determined by TDA) halved by 2010 relative to 2005	• Baseline to be established in the Transboundary Diagnostic Analysis (TDA) and monitoring data from Environmental Information System (both MBRS and Gulf of Honduras project) • PCU Progress reports	• National political commitment to engage in regional collaboration on pollution control • Non-occurrence of major natural disaster (hurricane, coral bleaching event)
Objective of Program: Enhance the control and prevention of maritime transport-related pollution in the major ports and navigation lanes in the Gulf of Honduras, improve the navigational safety to avoid groundings and spills, and reduce land-based sources of pollution draining into the Gulf.	• Sustainable regional institutional mechanism for environmental protection and pollution prevention of the Gulf of Honduras is formally established by Year 4 • Contaminant loads from port and other land-based activities reduced by 25% by 2010 relative to 2005 • Operational discharges from shipping in the Gulf reduced by 25% by 2010 relative to 2005 • Incidence of maritime accidental spills reduced by 50% by 2010 relative to 2005	• Baseline to be established in the final TDA and monitoring data from Environmental Information System (both MBRS and Gulf of Honduras project) • Port environmental monitoring records • Navigational safety records • PCU Progress reports	• National political commitment to engage in regional collaboration on pollution prevention • Additional funding sources identified and secured to finance the SAP • Projections for shipping traffic and cargo in the Gulf of Honduras increase at a steady rate
COMPONENT 1: BUILDING THE REGIONAL NETWORK FOR MARITIME AND LAND-BASED POLLUTION PREVENTION AND CONTROL			
Sub-component 1.a *Build and reinforce regional network for pollution control and prevention*	• Regional arrangements for project execution and monitoring established by Year 1, including the Regional Steering Committee and Project Management Committee • Number of stakeholder organizations from all 3 countries involved in project implementation increases by 25% by Year 5 • Informed media coverage of pollution issues in the Gulf increases relative to 2005 baseline • Enhanced knowledge and capacity for environmental protection and maritime transport pollution control through the training of at least 100 people by Year 5 through training courses and exchange programs	• Stakeholder surveys • Course documentation, reports and evaluations • Committee Proceedings • MTR and Final Evaluation • PCU Progress Reports	• National political commitment to engage in regional collaboration on pollution control • Suitable candidates for training programs available and identified

NARRATIVE SUMMARY	VERIFIABLE INDICATORS	MEANS OF MEASUREMENT	ASSUMPTIONS
Sub-component 1.b *Financial sustainability mechanism*	• Formal agreements are reached between public and private sectors on the sustainable financing for maritime pollution monitoring, control and prevention by Year 5 • Public and private economic benefits of maritime pollution prevention quantified by Year 3 • Enhanced experience in sustainable financing of maritime pollution monitoring, control and prevention through the application of 2 demonstration projects by Year 4, of at least one should be considered for replication by Year 5	• Financing agreements • Reports from demonstration projects • Economic benefit analysis report • MTR and Final Evaluation • PCU Progress Reports • Evidence of interest to replicate a demonstration project	• Additional funding sources identified and secured • Suitable demonstration projects identified.
Sub-component 1.c *Monitoring and modeling strategic framework*	• Baseline of land based and marine sources of pollution and water quality within the Gulf established by Year 2 in collaboration with MBRS program	• Annual results if monitoring program • MTR and Final Evaluation • PCU Progress Reports	• Non-occurrence of major natural disaster (hurricane) that could inhibit monitoring from taking place
COMPONENT 2: BUILDING THE INFORMATION BASE FOR THE STRATEGIC ACTION PROGRAM			
Sub-component 2.a *Environmental Information System*	• All available hydrographic, oceanographic, and maritime related data (including economic data) transferred to EIS by Year 2. • Coastal communities in all three countries are aware of pollution issues through the publication of a state of the Gulf report by Year 2	• Information Management System established • Records of visitation frequency to website and other information databases • State of the Gulf reports • MTR and Final Evaluation • PCU Progress Reports	• Non-occurrence of major natural disaster (hurricane) that could inhibit monitoring from taking place
Sub-component 2.b *Transboundary Diagnostic Analysis*	• Enhanced knowledge on the relative importance and transboundary impact of land-based and marine-based sources of pollution by Year 2 and TDA endorsed by the 3 countries by Year 2 • Enhanced knowledge of the adequacy of national and regional legal and institutional frameworks for environmental management of the maritime transport industry and land based activities by Year 1 • Policy and economic barriers to marine pollution prevention confirmed by Year 1	• Transboundary Diagnostic Analysis approved by Belize, Guatemala and Honduras • Legal and institutional assessment • Socio-economic assessment • MTR and Final Evaluation • PCU Progress Reports	• Existing data made available

NARRATIVE SUMMARY	VERIFIABLE INDICATORS	MEANS OF MEASUREMENT	ASSUMPTIONS
Sub-component 2.c *Strategic Action Program (SAP) for port and navigational pollution reduction*	• Countries, funding agencies and regional organizations endorse the SAP by Year 3 • By Year 5 formal partnerships established with other funding agencies and private sector for the implementation of the SAP • At least 2 new regional agreements related to marine pollution and control entered into effect and applied by Year 4 and by Year 5 the application for the designation of the Gulf of Honduras as a Special Area under MARPOL has been submitted to IMO, • At least 2 regulatory instruments for marine pollution and control harmonized by Year 3 • Slope stabilization and erosion control measures in critical watersheds in place by Year 5	• SAP approved by Belize, Honduras and Guatemala • Signed partnership and financing agreements with donors and funding agencies (incl. Private sector) for the implementation of the SAP • Application to IMO for establishing the Gulf of Honduras as a Special Area under MARPOL 73/78 and as a Particularly Sensitive Area • Regional agreements and reports on implementation • Publication of harmonized regulatory instruments • Reports from projects related on slope stabilization and erosion control measures • MTR and Final Evaluation • PCU Progress Reports	• National political commitment to engage in regional collaboration on pollution control • Interest of other donors and funding agencies • Interest of IMO to accept application from Gulf of Honduras
COMPONENT 3: ENHANCING NAVIGATIONAL SAFETY IN SHIPPING LANES			
Sub-component 3.a *Navigational safety in shipping routes*	• Navigational safety risks identified by Year 1 • Enhanced regional communication capacity for navigational safety and surveillance established by Year 3 • Provision of 100% of the essential equipment installed by Year 5 (eg, signaling equipment)	• Navigational Risk Assessment • Regional communications protocol • Evidence of purchase, installation and use of essential equipment acquired through project • MTR and Final Evaluation • UCP Progress Reports	• National political commitment to engage in regional collaboration on pollution control • Additional funding sources identified and secured for purchase of equipment etc
Sub-component 3.b *Institutional, legal, policy, regulatory and enforcement framework for navigational safety*	• Improved institutional, legal, policy, regulatory and enforcement framework for navigational safety through the formulation of at least 10 reform projects by Year 3 • Ratification and regulations in effect by Year 5 of international conventions for the protection of the marine environment • Ballast water exchange zone (limit) established for the Gulf of Honduras by Year 2	• Reform projects • Evidence of conventions and regulation ratification and Action Plans for their implementation • Documentation establishing the ballast water exchange zone • MTR and Final Evaluation • PCU Progress Reports	• National political commitment to engage in regional and international collaboration on pollution control

NARRATIVE SUMMARY	VERIFIABLE INDICATORS	MEANS OF MEASUREMENT	ASSUMPTIONS
Sub-component 3.c *Capacity building for regional hydrographic and oceanographic data processing, inspection, pilotage and other operations at sea related to navigational safety and spills*	• Enhanced regional capacity for hydrographic and oceanographic data processing, inspection, pilotage and other operations at sea related to navigational safety and spills through the training of at least 100 people by Year 3	• Course documentation • Evidence of purchase, installation and use of essential equipment acquired through project • MTR and Final Evaluation • PCU Progress Reports	• Additional funding sources identified and secured for purchase of equipment etc • Suitable candidates for training programs available and identified • Collaboration with MACHC and IMO materialized
Sub-component 3.d *Regional/transboundary oil and chemical spill prevention and contingency plan*	• Regional/transboundary oil and chemical spill prevention and contingency plan prepared by Year 2 • At least 3 regional emergency spill response exercises carried out by Year 3 • Gaps and collaboration options in existing equipment and facilities assessed by Year 2 and provision of 100% of the essential equipment provided by Year 5	• Regional/transboundary oil and chemical spill prevention and contingency plan published • Reports from regional emergency spill response exercises • Report on needs assessment for essential equipment • Evidence of purchase, installation and use of essential equipment acquired through project • MTR and Final Evaluation • UCP Progress Reports	• National political commitment to engage in regional collaboration on pollution control • Additional funding sources identified and secured for purchase of equipment
Sub-component 3.e *Demonstration projects for navigation safety*	• Enhanced experience in navigation safety and marine environmental protection through the application of 2 demonstration projects by Year 4	• Reports from demonstration projects • MTR and Final Evaluation • UCP Progress Reports	• Suitable demonstration projects identified.
COMPONENT 4: IMPROVING ENVIRONMENTAL MANAGEMENT AND HAZARD REDUCTION MEASURES IN THE REGIONAL NETWORK OF FIVE PORTS WITHIN THE GULF OF HONDURAS			
Sub-component 4.a *Risk assessments of port operations*	• Environmental risks of port operations assessed by Year 2 with Action Plans established by Year 3	• Port environmental risk assessments and Action Plans • MTR and Final Evaluation • UCP Progress Reports	• Ports willing to participate and disclose all information available and allow audits to take place
Sub-component 4.b *Harmonization of regional guidelines, standards and policies for port environmental management and security*	• Regional harmonization of guidelines, standards and policies for port environmental management and security by Year 3. • By Year 4 partnerships established with other funding agencies (incl. private sector) for the financing and implementation of port improvements in environmental management and safety, including investments in waste receiving and recycling facilities	• Publication of harmonized guidelines, standards and policies for port environmental management • Partnership agreements with other donors and/or financing agreements • Proceedings from Port User Meetings • MTR and Final Evaluation	• National political commitment to engage in regional collaboration on pollution control • Interest of other donors and funding agencies

NARRATIVE SUMMARY	VERIFIABLE INDICATORS	MEANS OF MEASUREMENT	ASSUMPTIONS
	• Enhanced collaboration between ports and potential funders through establishment of regional port users' forum.	• PCU Progress Reports	
Sub-component 4.c *Demonstration projects for port environmental management*	• Enhanced experience in port environmental management and safety through the application of demonstration projects in 3 ports by Year 4 (eg. environmentally sound dredge spoil disposal, port-specific hydrographic surveys etc)	• Reports from demonstration projects • MTR and Final Evaluation • PCU Progress Reports	• Suitable demonstration projects identified.

Environmental Protection and Maritime Transport Pollution Control in the Gulf of Honduras (RS-X1009)

INDICATIVE PROJECT PROCUREMENT PLAN

DESCRIPTION	AMOUNT IDB/GEF (US$)	PROCUREMENT METHOD	PRE-QUALIFICATION YES/NO	TENTATIVE PUBLICATION DATE	STATUS
1. GOODS					
1.1 Equipment for RPCU (computers, printers etc)	75,000	NCB	NO	Q2 2005	Pending
1.2 Vehicle for the RPCU	25,000	NCB	NO	Q2 2005	Pending
1.3 Navigational Safety and hydrographic charting equipment	410,000	ICB	YES	2006	Pending
2. CONSULTING SERVICES					
2.1 RPCU Staff					
2.1 Project Director	300,000	SL	YES	Q1 2005	Pending
2.2 Maritime Expert	230,000	SL	YES	Q2 2005	Pending
2.3 Environmental Specialist	230,000	SL	NO	Q2 2005	Pending
2.4 Financial assistant	130,000	SL	NO	Q2 2005	Pending
2.5 Administrative assistant	75,000	SL	NO	Q2 2005	Pending
2.6 Facilitator	127,000	SL	NO	Q2 2005	Pending
2.2 Consultancy 1: Project communications strategy	125,000	NCB	NO	Q2 2005	Pending
2.3 Consultancy 2: Sustainable financing mechanisms and analysis of economic incentives	200,000	ICB	YES	2006	Pending
2.4 Consultancy 3: Policy formulation	73,000	NCB	NO	2006	Pending
2.5 Consultancy 3: Data and Information Management System, Establishment of the baseline and Preparation of the Transboundary Diagnostic Analysis (TDA)	300,000	ICB	YES	Q3 2005	Pending
2.6 Consultancy 4: Strategic Action Programme (SAP)	180,000	NCB	NO	2007	Pending
2.6 Consultancy 5: Navigational Risk Assessments and harmonization of regulations relating to navigational safety	290,000	ICB	YES	2006	Pending
2.8 Consultancy 6: Port Risk Assessments	100,000	NCB	NO	2006	Pending
2.9 Consultancy 7: Training modules in marine environmental management (2-3 topics to be determined during project)	130,000	NCB	NO	2006	Pending
2.10 Consultancy 8: Training module in hydrography and oceanography	77,000	NCB	NO	2006	Pending
2.10 Consultancy 9: Training module in navigational safety	50,000	NCB	NO	2006	Pending
2.11 Design and publishing of various project related publications (State of the Gulf Report, TDA, SAP)	118,000	NCB	NO	2006	Pending
2.12 Evaluation	155,000	NCB	NO	2008, 2010	Pending
2.13 Audit	75,000	NCB	NO	Q2 2005	Pending

Notes: ICB = International Competitive Bidding, NCB = National Competitive Bidding, SL = Short List
Thresholds for ICB: Goods: US$350,000, Works: US$1,000,000, Services: US$200,000

IV - 14 - 05

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-__/__

Regional. Nonreimbursable Investment Financing of the Global Environment Facility (GEF) for Environmental Protection and Maritime Transport Pollution Control in the Gulf of Honduras

The Board of Executive Directors

RESOLVES:

1. That the President of the Inter-American Development Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, as Administrator of the IADB/GEF Fund, to enter into such agreement or agreements as may be necessary with the Central American Maritime Transport Commission "COCATRAM", and to adopt such other measures as may be pertinent for the execution of the project proposal contained in document ____ with respect to a nonreimbursable investment financing of the GEF for environmental protection and maritime transport pollution control in the Gulf of Honduras.

2. That up to the sum of US$4,800,000 is authorized for the purposes of this resolution, chargeable to the resources of the IADB/GEF Fund.

3. That the above-mentioned sum is to be provided on a nonreimbursable basis.