

Document of  
The World Bank

Report No:

PROJECT BRIEF

ON A

PROPOSED GRANT FROM THE  
GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF USD 12.1 MILLION

TO THE

GOVERNMENTS OF BANGLADESH, INDIA, INDONESIA, MALAYSIA, MALDIVES,  
MYANMAR, SRI LANKA, AND THAILAND

FOR A

BAY OF BENGAL LARGE MARINE ECOSYSTEM PROJECT

January 10, 2005

## CURRENCY EQUIVALENTS

(Exchange Rate Effective)

Currency Unit = USD  
US\$1.00 = US\$1.00  
US\$ = SDR 1

FISCAL YEAR  
July 1 – June 30

## ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
APFIC	Asia-Pacific Fisheries Commission
ARWP	Annual Regional Work Plan
ASEAN	Association of South East Asian Nations
BCLME	Benguela Current Large Marine Ecosystem
BH	Budget Holder
BIMSTEC	Bangladesh, India, Myanmar, Sri Lanka and Thailand Economic Cooperation
BOB	Bay of Bengal
BOB-IGO	Bay of Bengal Programme Inter-Governmental Organization
BOBLME	Bay of Bengal Large Marine Ecosystem
BOBP	Bay of Bengal Program
CAS	Country Assistance Strategy
CBM	Community-based Management
CRMP	Coastal Resource Management Project
ESCAP	United Nations Economic and Social Commission for the Asia and the Pacific
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization of United Nations
FAO-RAP	FAO Regional Office for Asia and the Pacific
GEF	Global Environment Facility
GEO	Global Environment Objective
GIS	Geographic Information System
GPA	Global Program of Action
IBRD	International Bank for Reconstruction and Development
ICM	Integrated Coastal Resources Management
ICR	Implementation Completion Report
IDA	International Development Association
IFIOR	International Forum on the Indian Ocean Region
IMO	International Maritime Organization
IOCINDIO	Regional Committee for the Central Indian Ocean
IOMAC	Indian Ocean Fisheries Commission South Asian Association for Regional Cooperation
IOTC	Indian Ocean Tuna Commission
IW	International Waters
LME	Large Marine Ecosystem

LTU	Lead Technical Unit
MCS	Monitoring and Controlling and Surveillance
MDG	Millennium Development Goals
MIS	Management Information System
MPA	Marine Protected Areas
MTR	Mid-Term Review
NACA	Network of Aquaculture Centres in Asia Pacific
NASAP	National Scientific Advisory Panels
NC	National Coordinator
NGO	Non Governmental Organization
NIOT	National Institute for Ocean Technology
NOAA	National Oceanic and Atmospheric Administration
NRM	Natural Resource Management
NSAP	National Scientific Advisory Panels
NSC	National Steering Committee
NTF	National Task Force
OECD	Organization for Economic Cooperation and Development
OP	Operational Program
PCS	Project Steering Committee
PDO	Project Development Objective
PRSP	Poverty Reduction Strategy Paper
PSC	Project Steering Committee
PY	Project Year
RC	Regional Coordinator
RCU	Regional Coordinating Unit
RSAP	Regional Scientific Advisory Panels
RWP	Regional Work Plan
SAARC	South Asian Association for Regional Co-operation
SACEP	South Asia Cooperative Environment Program
SAMP	Special Area Management Plan
SAP	Strategic Action Program
SEAFDEC	Southeast Asian Fisheries Development Center
SIDA	Swedish International Development Authority
TDA	Trans-boundary Diagnostic Analysis
TOR	Terms of References
TTL	Task Team Leader
UN	United Nations
UNCED	United Nations Commission on Environmental Development
UNCLOS	United Nation's Conference of Law of the Seas
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNEP/EAS	United Nations Environment Program East Asian Seas
USAID	United States Agency for International Development
WB	World Bank
WFC	World Fish Centre
WHO	World Health Organization

WSSD  
WWF

World Summit on Sustainable Development  
World Wildlife Fund

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**SOUTH ASIA**  
**Bay of Bengal Large Marine Ecosystem**

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## **A. STRATEGIC CONTEXT AND RATIONALE**

### **1. Country and sector issues**

For purposes of the proposed Bay of Bengal Large Marine Ecosystem (BOBLME) Program, the Bay of Bengal (BOB) region is defined as comprising the coastal watersheds, islands, reefs, continental shelves and coastal and marine waters of the Maldives, Sri Lanka, the east coast of India, Bangladesh, Myanmar, the west coast of Thailand, the west coast of Peninsular Malaysia, and the Indonesian provinces of Aceh, Riau, and North and West Sumatra (see Annex 17). This body of water, measuring approximately 3.3 million km<sup>2</sup> in area, together with the coastal drainage systems, has been identified as one of the world's sixty-four Large Marine Ecosystems (LMEs) sharing a distinct bathymetry, hydrography, productivity, and trophically dependent populations.

About one-quarter of the world's population reside in the littoral countries of the BOB of which some 400 million live in the Bay's catchment area alone, many subsisting at or below the poverty level. An average of 65% of the region's urban population live in large coastal cities and migration towards the coastal regions appears to be on the increase.

The BOB supports numerous coastal fisheries, many of which are of significant socio-economic importance to the countries bordering the water body; an estimated 2 million fishers who operate primarily in coastal and inshore waters are directly employed in the sector. Included amongst these fisheries are coastal demersal, shrimp and small pelagic fisheries, as well as offshore fisheries for tuna and similar species.

A key issue facing the region's coastal fishing communities is the unsustainable harvesting of certain species, a result of the open access nature of the resource. Many of the fishery resources in the region are already heavily exploited and if fishing is allowed to continue unregulated, the situation will likely worsen with significant adverse impacts on the large number of small-scale fishers dependent on these resources for their livelihoods and as a source of food security. The socio-economic implications of non-sustainable exploitation of fish stocks is exacerbated further by the illegal incursion of foreign fleets, increased competition and conflicts between artisanal and large-scale fisherman, encroachment by nationals into the territorial waters of neighboring countries, and an alarming increase in cyanide fishing and other non-sustainable fishing practices.

A second key issue is the continued degradation of highly productive coastal and near-shore marine habitats such as coral reefs, mangroves and estuaries, and marine grass beds, all critical fish spawning and nursery areas. Immediate causes include land conversion and reclamation, direct overexploitation, accelerated sedimentation, and destructive tourism and fishing practices. Sea-based sources of pollution include oil pollution and offshore oil and gas exploration. There are also the potential adverse impacts related to the future development of seabed minerals.

Finally and closely related to the two issues described above, are the accumulative effects associated with land-based sources of pollution that are contributing to the disruption of basic processes and functioning of the marine ecosystem. These include degradation and loss of fish spawning and nursery areas, fish kills and possible changes in the LME's trophic structure. The fate and effect of pollutants has not been studied extensively but there is a growing body of evidence to support the conclusion that most are deposited as estuarine sediments, while a smaller portion is flushed out to deeper waters. It is argued by some that

the ecosystem's assimilative capacity on the whole has not been exceeded and that pollution problems are localized in nature. There remain however, many uncertainties about the Bay's status and ecological functioning, much of it attributable to the lack of comprehensive, reliable data.

Major root causes underlying these issues include population growth and changing demographics, unabated pressure on the primary sector to feed exports due to continued demand for increased foreign exchange, a growing and diversifying industrial sector, and the undervaluing of the natural resources and the environmental “goods and services” provided by the coastal and near-shore marine ecosystems.

One of several major barriers to resolving these issues is the lack of regional institutional arrangements to facilitate a coordinated approach among the BOBLME countries to address the previously identified issues. A second critical barrier is the weak and/or inappropriate policies, strategies and legal measures that characterize much of the region. Where these do exist, they are rarely enforced. Other major constraints include lack of alternative livelihoods, weak institutional capacity, insufficient budgetary commitments, and lack of community stakeholder consultation and empowerment.

The BOBLME countries are well aware of these issues, underlying causal factors and barriers to their resolution. In response they have demonstrated significant levels of commitment to address many of the aforementioned problems, both in terms of national actions as well as their participation in a number of conventions and other legal instruments which address one or more of the aforementioned problems (see Annex 1). The substantial national participation among the 8 BOBLME countries during the project preparation process indicates that this commitment remains strong.

As noted above, there already exist a number of international, regional and sub-regional institutions and programs operating in the Bay (Annex 1). Despite their large number, none appear to have the mandate, geographical scope and/or capacity to support an initiative based on an LME approach, particularly one that addresses the shared and common issues and barriers characteristic of the BOB. However, it is equally clear that the proposed BOBLME Program cannot resolve the aforementioned issues in isolation. Rather it must build on past experience and existing institutions and activities in the region, particularly the exchange of data and information related to coastal and marine environment and fisheries issues, to achieve any significant lasting impact.

The Global Environment Facility (GEF) is in a unique position to build on and strengthen existing programs and partnerships in the region through promoting the development of a trans-boundary perspective and approach to addressing critical issues characteristic of the BOBLME. The GEF has already demonstrated its commitment to this initiative through supporting a number of preparatory activities through provision of Block B and Supplemental Block B grants (see Annex 4). These grants, supplemented by additional co-financing, have been used to: (i) put in place national and regional coordinating mechanisms to ensure both broad-based stakeholder participation in the preparation of the Project and its the future cost-efficient implementation; (ii) prepare national baseline reports; (iii) prepare a framework Trans-boundary Diagnostic Analysis (TDA); and (iv) formulate the Project Brief for consideration by GEF and other donors for possible financing. Building on this solid foundation, it now requires a concerted, focused, regional effort, one based on a long-term institutional and financial commitment from the BOBLME countries working in close



partnership with other institutions and programs, to achieve a discernible improvement in the ecological health in an ecosystem the size and complexity of the Bay of Bengal.

## **2. Rationale for Bank involvement**

### **Rationale and development hypothesis**

A great majority of the peoples of the world are dependent on coastal and marine resources for their food, livelihood and security. However, most of these resources are components of larger trans-boundary marine ecosystems which require multi-country approaches to their sustainable management and conservation. In this regard, the BOB is of particular importance given that some 400 million people live in its catchment, many subsisting at or below the poverty level. The further degradation of the coastal and marine resources of the Bay is likely to have a severe impact on quality of life and on growth prospects in the region; an impact that is likely to be disproportionately felt by the poor who, directly or indirectly, depend on these aquatic systems for income generation and are least able to adapt to adverse changes in water quality, fish catch and other aquatic resources.<sup>1</sup>

### **Donor activities in the sector**

The linkage between the poor, their livelihoods and the condition of the coastal and marine resources is well recognized by the international community. There exist a multitude of international, regional and sub-regional institutions operating in the BOB, many of which have related mandates (Annex 1). These include the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP); the South Asian Cooperative Environment Program (SACEP); United Nations Environment Program (UNEP), UNEP's Regional Coordinating Unit for East Asian Seas (UNEP EAS); Indian Ocean Marine Affairs Cooperation (IOMAC); Indian Ocean Tuna Commission (IOTC); International Forum for the Indian Ocean (IFIOR) convened by Australia; and Indian Ocean Rim Initiative; Asia-Pacific Fishery Commission (APFIC); and Network of Aquaculture Centers for Asia (NACA) and a host of others. In addition a number of donors, including Asian Development Bank, World Bank, USAID, UNDP, FAO, NGOs and bilateral donors have been active in integrated coastal resources management, biodiversity conservation, environmental capacity building and sustainable fisheries management in the region.<sup>2</sup> Finally, the BOBLME project preparation process was supported by multiple donors, including the GEF, FAO, SIDA, and the National Oceanic and Atmospheric Administration (NOAA). These partners are very active in the sector and all have contributed to improving project design.

### **Comparative advantage of the Bank in the sector**

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<sup>1</sup> This overall development hypothesis has wider implications beyond the BOB region. At a G-8 ministerial meeting in May 2003 in Evian, France, delegates together with representatives from the Bank, concluded that "global sustainable development and poverty reduction requires a healthier and more sustainably managed oceans and seas". The G-8 and UN leaders promised to maintain the productivity and biodiversity of important and vulnerable marine and coastal areas.

<sup>2</sup> Since its inception in 1979, the now completed Bay of Bengal Program (BOBP) was supported by a large number of donors including the Governments of Denmark, Sweden, Japan and U.K.

The World Bank brings to this Project, its considerable capacity to address coastal and marine issues, through its ability to: (i) facilitate policy dialogue and reform; (ii) facilitate coordination between multiple donors to parallel and co-finance complementary activities; (iii) bring together stakeholders from regional, national, sub-national and community to reach consensus for resolving competing demands on common resources; (vi) promote dialogue, influence sector adjustments and policy reforms over an extended period at the country level; and (v) support the design and implementation of national level projects and activities that build on the learning and recommendations of the trans-boundary diagnostic analysis and Strategic Action Program.

### **Unique contributions of Bank involvement**

Through a number of existing initiatives, the Bank has demonstrated its capacity to bring together various stakeholders from other regions who are concerned with their respective coastal and marine ecosystems and the communities that depend on them for their livelihoods (Annex 2). These include: the Coral Reef Rehabilitation and Management project (Indonesia); the Regional Marine Electronic Highway project (Indonesia and Malaysia), the Hon Mun Marine Protected Area (Vietnam); the Coastal and Marine Biodiversity Conservation project (Philippines), the Makulu Conservation and Natural Resource Management project (Indonesia), the Marine Biodiversity Protection and Management project (Samoa), the Aquatic Biodiversity Conservation project (Bangladesh), the Community-based Resource Management project (Philippines), and the Coastal Wetlands Protection and Management project (Vietnam). In addition, the Bank has demonstrated its capability to engage with regional and international initiatives and is currently involved in two such efforts, namely the Marine Market Transformation Initiative which is collaborating with external partners in finding solutions for the live reef trade, and the Global Program of Targeted Research and Capacity Building for Coral Reefs.

### **3. Higher level objectives to which the project contributes**

The proposed Project's project development objective (PDO) is fully compatible with the Bank's environment strategy, which seeks to protect the quality of regional and global commons through: (i) addressing and reducing trans-boundary environmental problems; (ii) promoting equitable solutions to global environmental problems; (iii) supporting efforts by riparians and littoral communities to diagnose, analyze and plan actions to address the degradation of shared ecosystems; (iv) helping to promote an increased understanding of the linkages between global public goods and national development strategies; and (v) building capacity amongst client country institutions to consider the regional and global dimensions of national sustainable development strategies. In addition, the Bank's South Asia and East Asia Regional Environment Strategies recognize the need to widen opportunities for regional integration within the countries in the region, as well as to establish links with other regional bodies, including the South Asian Association for Regional Co-operation (SAARC) and the Association of South East Asian Nations (ASEAN) as a means to facilitate regional peace, improve livelihoods of people living in the region, improve governance, accountability and transparency, and take advantage of opportunities for improved development provided by global and regional integration. The regional strategies also seek to promote improved management of regional public goods that go beyond the narrow confines of national agendas and improve opportunity for deepening capacity and skills, promote knowledge sharing and networking of best practices, experiences within the regions and beyond. Finally, the

strategies also recognize the need for client demand, leveraging resources and building partnerships with other donors and strengthening the capacity of regional institutions.

From a sectoral perspective, the Bank's recently completed Fisheries Sector Approach Paper identified a number of proven "good practices" which have been incorporated into project design.<sup>3</sup> These include: (i) strengthening of co-management; (ii) support for extension, education, and awareness, and technical assistance to empower communities and local stakeholders; (iii) establishment of marine protected areas (MPAs) which have been accepted as a viable means to rejuvenating depleted fish stocks, particularly in multi-species, small-scale fisheries; and (iv) promotion of alternative livelihoods through the creation of economic alternatives to fishing for small-scale fishers and fishing communities faced with resource degradation, over-capacity, and the need for effort reduction is essential to reducing human pressure on overexploited resources.

The aforementioned paper notes that justification for involvement of the international development community stem from relevant sections in the World Summit on Sustainable Development (WSSD) and the Millennium Development Goals (MDG) documents. Moreover, it provides additional supporting arguments citing the need to: (i) reduce poverty among small-scale fishers, (ii) address the ecological crisis that affects the fishing sector, and (iii) respond to an increase in number of requests for greater involvement of the national and international community.

The BOBLME project objectives and outcomes are also fully consistent with relevant provisions in the GEF Operational Strategy, and specifically with the Waterbody-Based Operational Program (OP # 8). With respect to OP 8, the Project will: (i) serve as a catalyst in the implementation of a more comprehensive, ecosystem-based approach to managing international waters as a means to achieve global benefits associated with countries obtaining a better understanding of the BOBLME environmental issues and working collaboratively to address same; (ii) build capacity in existing institutions (or if appropriate, develop capacity through the establishment of new institutional arrangements); and (iii) implement measures that address priority trans-boundary environmental concerns.

The Project also addresses one of the key gaps identified in the recent review of the GEF's International Water's (IW) portfolio, i.e., "stabilizing and reversing fisheries depletion in LME's through ecosystem-based approaches". This is a central theme running through the proposed project's components.

Finally, the Project addresses two IW Strategic Priorities (SP 1 & 2) identified in the GEF Fiscal Year (FY) 04-06 Strategic Business Plan (BP), the first being to catalyze financial resources to support the implementation of reforms and stress reduction measures identified through the TDA-SAP process. The second SP cites the need to expand global coverage of foundation capacity building designed to address the aforementioned program gaps.

## **B. PROJECT DESCRIPTION**

### **1. Lending instrument**

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<sup>3</sup> World Bank, 2004, Saving Fish and Fishers, Toward Sustainable and Equitable Governance of the Global fishing Sector, (World Bank, Washington, D.C.).

The Project would be partially financed by a Full-sized GEF grant in the amount of US\$12.1 million, with co-financing from: (i) the BOBLME Governments (in cash and in kind); (ii) Co-financiers (cash); and (iii) FAO (in-kind).

<b>Co-financing Sources</b>				
<b>Name of Co-financier (source)</b>	<b>Classification</b>	<b>Type</b>	<b>Amount (US\$ M)</b>	<b>Status*</b>
BOBLME Governments		Cash/in-kind support	6.3	TBC
NOAA		In-kind support	0.4	Confirmed
Other Co-financiers		Cash	8.9	TBC
FAO	Executing Agency	In-kind support	0.8	Confirmed
<b>Total Co-financing</b>			<b>16.4</b>	

\* Reflect the status of discussion with co-financiers. If there are any letters with expressions of interest or commitment, please attach them.

The total cost of the project is an estimated US\$ 28.5 million (M). Distributed by funding source these are: (i) GEF (US\$ 12.1M), (ii) BOBLME Member States (US\$ 6.3M), (iii) Co-financiers (US \$ 9.3M), and (iv) FAO (US \$0.8M). Funds would be allocated among the components as follows: (i) 44.8 % for Coastal/Marine Natural Resources Management and Sustainable Use (Component 1); (ii) 15.5 % for Improved Understanding and Predictability of the BOBLME (Component 2); (iii) 4.7% for Maintenance of Ecosystem Health and Management of Pollution (Component 3); (iv) 6.3 % Project Sustainability (Component 4); and (v) 22.5 % for Project Management (Component 5).

## **2. Project development objective and key indicators**

The PDO is to support a series of strategic interventions which will provide critical inputs into the development of the Strategic Action Program (SAP) whose implementation will lead to enhanced food security and reduced poverty for coastal communities in the BOB region.

A significant portion of Project resources are devoted to foundational/capacity building processes for multi-country collaboration in this phase of the BOBLME Program. This is justified by the need to overcome barriers to joint actions, particularly ones that involve different ministries in and among BOBLME countries. It is expected that once these barriers are overcome, GEF assistance may then be mobilized to support the implementation of agreed incremental costs associated with the reforms and investments that will eventually lead to measurable impacts both in trans-boundary waters and the fisher communities that depend on them. As a result, a significant portion of the 1<sup>st</sup> phase Project (in terms of budget) will not be focused at the field/community level. Nevertheless, there does exist a number of activities designed to address issues and barriers affecting their resolution which directly impact on rural fisher communities. These include: (i) identifying and "mainstreaming" sound policies leading to strengthening community-based approaches to integrated coastal resources management, (ii) empowering local communities to participate in processes and decisions associated with the development of sub-regional and regional fishery management plans, and (iii) increasing options such as access to alternative livelihood opportunities. The "lessons" derived from these activities will be fed into SAP design.

Key PDO indicators are: (i) policy reforms in support of community-based fisheries management (ICM) achieved, (ii) participation of fisher communities in resource management decisions, (iii) alternative livelihoods created for fisher communities associated with bi-national management efforts directed at critical trans-boundary ecosystems, and (iv) specific activities incorporated into the SAP designed to have measurable impact on the livelihoods of fisher communities in a follow-up phase to the BOBLME Project.

### **3. Project global environment objective and key indicators**

The proposed Project's GEO is to formulate an agreed on Strategic Action Program (SAP) whose implementation over time will lead to an environmentally healthy BOBLME. To achieve the GEO, the BOBLME Project, defined as the 1<sup>st</sup> phase of a multi-phase BOBLME Program, would support a series of interventions that complement relevant existing national and regional activities (the Baseline), and support the development of regional institutional mechanisms, processes, and activities designed to promote the development and implementation of a more comprehensive regional approach to the management of the BOBLME.

Project outcomes include: (i) the establishment of permanent, financially sustainable institutional arrangements that will support the continued development and broadening of commitment to a regional approach to BOBLME issues; one which will be needed to support a longer term and comprehensive effort required for an area as large and complex as the BOBLME; (ii) creation of conditions leading to improved wellbeing of rural fisher communities through incorporating regional approaches to resolving resource issues and barriers affecting their livelihoods into the SAP and future BOBLME Program activities; (iii) support for a number of regional and sub-regional activities designed to promote collaborative approaches leading to changes in sources and underlying causal agents contributing to trans-boundary environmental degradation (defined both as shared and common issues); (iv) development of a better understanding of the BOBLME's large-scale processes and ecological dynamics; (v) establishment and monitoring of basic health indicators in the BOBLME; (vi) increased capacity; and (vii) processes leading to a long-term commitment from the BOBLME countries needed to address complex situations.

Project outcomes will be measured using the following outcome and process indicators: (i) an improved environment facilitating policy reforms in support of community-based integrated coastal resources management (ICM); (ii) conditions established conducive to the creation of a permanent regional fisheries body; (iii) regional statistical data protocols; (iv) fishery management plans for selected regional/sub-regional fish stocks; (v) conditions established conducive to the creation of permanent bi-national commissions and plans to manage selected critical trans-boundary ecosystems; (vi) an agreed set of research priorities leading to an improved understanding of BOBLME oceanographic and ecological processes; (vii) development of a FSP suitable for GEF funding in support of strengthening existing and creating new marine protected areas and fish refugia; (viii) a regional network of MPA/fish refugia managers; (ix) establishment of a geo-referenced data base; (x) an agreed set of indicators to measure environmental health of the BOBLME; (xi) strategy and action plan for regional pollution monitoring; (xii) water quality criteria agreed to by BOBLME countries for selected parameters; (xiii) permanent institutional arrangements for the BOBLME Program; (xiv) a Strategic Action Program (SAP); (xv) a self-financing mechanism; (xvi) a regional

coordinating unit (RCU) and Project Steering Committee (PSC); (xvii) a project monitoring program; and (xviii) wide dissemination of project results and “lessons learned”.

#### **4. Project components**

**Component 1: Coastal/marine natural resources management and sustainable use** (Total US\$ 12.8M, GEF US\$ 4.6M).

The objective of the component is to promote the development and implementation of demonstrative regional and sub-regional collaborative approaches to common and/or shared issues which affect the health and status of the BOBLME.

*Expected Outputs:* (i) a current overview and “lessons learned” of community-based integrated coastal management (ICM) projects and activities supported in the BOBLME region with accompanying specific policy recommendations; (ii) an improved policy environment and capacity to formulate policies supportive of community-based ICM and the “mainstreaming” of selected policy recommendations on a pilot basis; (iii) establishment of fisheries-based legislation and policy data portal; (iv) improved management of selected trans-boundary fish stocks through: (a) development of regional and sub-regional institutional arrangements and plans to manage selected fish stocks, and (b) a regionally harmonized fishery data base; (v) a sub-regional collaborative approach to the sustainable management of two trans-boundary BOBLME ecosystems through establishment of: (a) conditions leading to the creation of permanent bi-national institutional arrangements; (b) updated management plans; (c) increased awareness among the public and decision-makers of the significance of these areas; and (d) improved understanding of alternative livelihood opportunities for reducing pressure on the fishery resources.

**Component 2: Improved understanding and predictability of the BOBLME** (Total US\$ 4.3M, GEF US\$ 3.6M).

The objective of the component is to support activities and participate and share information with other regional and global environmental monitoring programs that will lead to better understanding of the BOBLME ecological functions and processes.

*Expected Outputs:* (i) updating of existing knowledge of large-scale processes characterizing the BOBLME and identification of critical data gaps serving as barriers to obtaining a better understanding the relationships between large-scale BOBLME processes and dynamics and its effect on living resources; (ii) an action plan outlining studies required to address these critical data gaps; (iii) increased understanding of the role and subsequent establishment of the necessary enabling conditions that will lead to the creation of one or more sub-regional/regional systems of marine protected areas and fish refugia in a subsequent BOBLME phase; (iv) increased co-ordination and collaboration with other regional and global programs leading to improved understanding of the BOBLME; and (v) development of a Geographic Information System (GIS).

**Component 3: Maintenance of ecosystem health and management of pollution** (Total US\$ 1.3 M, GEF US\$ 0.5 M).

The objective of the component is to support activities leading to an agreed on set of environmental indicators to measure the health of the BOBLME and the development of a regional collaborative approach to identifying important coastal water pollution issues and to develop remedial strategies.

*Expected Outputs:* (i) agreed on national and regional ecosystem frameworks designed to establish a common baseline and monitoring of future environmental health of the BOBLME; and (ii) a strategy and action plan for the implementation of a regional pollution monitoring and management program which would include: (a) a monitoring design for the region; (b) a mechanism for information-sharing; (c) agreed ambient water quality criteria; (d) an initial list of priority “hotspots” identified; (e) a pilot monitoring program of selected “hotspots”; (f) proposed corrective strategies and timeframes for reducing pollution loads to acceptable levels; and (g) building large-scale awareness of pollution issues in the region and the relationships between ecosystem health and human welfare.

**Component 4: Project sustainability** (Total US\$ 1.8 M, GEF US\$ 0.6 M).

The objective of the component is to ensure the long-term institutional and financial sustainability of the BOBLME Program.

*Expected Outputs:* (i) agreed to institutional arrangements to manage the BOBLME Program; (ii) a comprehensive framework and plan of action in the form of a Strategic Action Program (SAP) whose implementation will lead to a more healthy BOBLME and management of the living resources on a sustainable basis to improve the food and livelihood security of the region’s coastal population; and (iii) a financially-sustainable BOBLME Program.

**Component 5: Project management** (Total US\$ 8.2 M, GEF US\$ 2.7M).

The objective of the component is to establish a cost-efficient project management, M&E, and information dissemination capacity and process leading to the successful implementation of the BOBLME Program.

*Expected Outputs:* (i) the successful, and cost-effective execution of the BOBLME Project (1<sup>st</sup> phase); (ii) establishment of an accurate and transparent monitoring program providing the basis to make timely decisions to address issues as they arise; and (iii) increased regional/global awareness about the objectives of, approach to, and “lessons-learned” derived from the BOBLME.

As noted above, the Project is viewed as a 1<sup>st</sup> phase of a long-term program which will be needed to address an LME the size and complexity of the Bay of Bengal. For illustrative purposes, outcomes from a possible second phase and over the longer term associated with the proposed Project outcomes has been presented in the table below.

Phase I (project) Outcomes	Phase II Outcomes (illustrative)	Long-term Outcomes
<ul style="list-style-type: none"> <li>•SAP</li> <li>•permanent institutional arrangements</li> </ul>	<ul style="list-style-type: none"> <li>•a series of investments, capacity building activities and technical assistance completed to address priority regional issues in the BOBLME</li> <li>•financially self-sustaining regional</li> </ul>	<ul style="list-style-type: none"> <li>•an environmentally “healthy” BOBLME</li> <li>•BOBLME Regional Convention</li> </ul>

<ul style="list-style-type: none"> <li>•stocktaking and “mainstream” piloting of selected policy reforms in support of community-based ICM</li> <li>•pilot collaborative approaches addressing: (i) critical habitat management, (ii) sub-regional and regional fisheries stock management, (iii) monitoring of selected environmental health indicators, and (iv) monitoring of pollution “hotspots”</li> <li>•establishment of baseline, identification of key data gaps, and development of action plan leading to a better understanding of BOBLME processes and dynamics</li> <li>•increased institutional capacity</li> </ul>	<p>body working collaboratively with other institutions in the BOBLME region.</p> <ul style="list-style-type: none"> <li>•long-term commitment of participating countries to BOBLME regional approach</li> <li>•expansion and diversification of support for relevant policy reforms in support of community-based ICM</li> <li>•expansion and replication of successful pilot collaborative approaches in the BOBLME region</li> <li>•completion of studies/applied research that addresses key data gaps</li> <li>•technical centers of excellence relevant to BOBLME needs identified and strengthened</li> </ul>	<ul style="list-style-type: none"> <li>•improved rural fisher communities well-being</li> </ul> <p>(i) transboundary areas of critical importance managed effectively within the BOBLME region, (ii) selected regional fish stocks managed sustainably, (iii) region-wide BOBLME environmental monitoring program in place, and (iv) reduction in number and severity of pollution “hotspots” in BOBLME region</p> <ul style="list-style-type: none"> <li>•improved understanding of the BOBLME processes and dynamics</li> </ul> <p>regional network of institutions working collaborative to address BOBLME needs</p>
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## 5. Lessons learned and reflected in the project design

GEF experience in supporting IW projects has demonstrated that the reversal of environmental degradation characteristic of trans-boundary marine ecosystems may take decades before the prerequisite institutional arrangements and commitments are established to lead to measurable improvements. As a result, the Project, based on the results from the preparatory grants which supported strategic work that focused on fact finding, workshops, and institutional arrangements designed largely to create the foundation and enabling environment needed to support subsequent phases of the BOBLME Program.

In addition, a number of other “lessons learned” derived from recent and on-going GEF-supported LMEs and other relevant coastal/marine projects have been incorporated into Project design (Annex 2). These include the need for:

### Achieving a "shared vision"

Multi-country approaches developed to address issues, causal agents, and barriers to their resolution characteristic of large, complex geographic areas such as an LME must be bound together by a common understanding and "vision" both of the actual status and issues affecting the water body as well as where and how the participating countries would like to end up in collectively addressing these issues. Supporting activities that lead to a common



view, agreed on end point, and "roadmap" outlining how to get there among participating countries is essential to avoid misunderstandings, inefficiencies, and ultimately delay and possibly failure in achieving a cost-efficient regional approach. This is particularly relevant to the BOBLME given the number of countries that border its waters. Particular attention has been given to this factor in project design in providing considerable time and support to develop this shared vision. Key activities include the process leading to the development of the SAP, institutional arrangements, as well as a number of regional and sub-regional activities designed to increase collaboration among countries addressing issues compatible with the BOBLME Program framework.

### **Sustained political and public commitment**

As noted elsewhere, addressing issues at the scale of the LME is a long-term proposition, one that may take decades before improvements in the environment are capable of being measured. To sustain efforts over the period required to observe these improvements requires a substantial commitment in terms of time and long-term provision of financial and human resources. This commitment is needed both on the part of the countries as well as the participating development partners. Decision-makers and communities alike need to be kept aware and sensitized to the objectives and long-term commitments required to achieve this outcome. It is particularly important to avoid the risk of rising expectations for observable improvements in the near to medium term that cannot be met readily at the scale characteristic of the LME. It is only with broad public support that a long-term Program such as the BOBLME will be able to resist the pressures and possible adverse effects associated with transitory political processes and changing priorities. Project design has attempted to address this issue through the development of a wide and deep network of institutional arrangements, promotion of collaborative activities with other regional bodies, and public awareness and information dissemination activities.

### **An agreed on institutional and legal framework**

The need for well-recognized and cost-efficient institutional arrangements capable of both coordinating regional activities as well as bringing visibility to the effort is another fundamental lesson derived from LMEs elsewhere. Each participating country must feel that they are dealing with an "honest broker" that represents all their interests in the Program equitably; real or perceived favoritism of one country could rapidly undermine any regional approach and ultimately sound the death knell of an LME. Moreover, demonstrating agreement through consensus to the creation and support for regional institutional arrangements is also a significant indicator of national and regional political commitment to the LME process. The present Project design, based on the solid foundation established in the preparatory phase, will lead to the definition and establishment of an agreed on permanent institutional structure through an open and transparent consensual process.

### **Partnerships**

Building broad partnerships among and within the BOBLME countries and with key regional/international agencies and donors are essential to achieve a coordinated implementation process and for utilizing the comparative advantage of the respective co-financing institutions. Outreach and collaboration with other regional programs as well as the donor community has been explicitly included in Project design.

## **Financial sustainability**

Regional projects often have high overhead costs given the inherent complexity of their tasks. Well-designed cost recovery mechanisms with strong enforcement can help to ensure financial sustainability. A financial sustainability subcomponent has been incorporated into the project that will be implemented in parallel and coordinated with the preparation of the SAP to ensure that cost recovery mechanisms will be developed as activities are identified for inclusion in the latter to ensure long-term sustainability.

## **6. Alternatives considered and reasons for rejection**

The evaluation of alternatives consisted of assessing options associated with two separate, but related issues: (i) the overall scope of and approach to the development of the SAP; and (ii) the institutional arrangements required for its preparation and eventual implementation. With respect to the former, the alternative that was considered was a process that would lead to a more comprehensive waterbody-based program that would concentrate on a wide range of trans-boundary problems (e.g., oil spill planning, legal and institutional reviews, pollution control measures, implementation of regional/global agreements and harmonization of legislation). In the BOB, this would entail achieving a high degree of regional co-operation with a large number of government agencies, many which would likely be directly involved in project implementation. In light of the size and complexity of the BOB and lessons learned from other GEF-supported LMEs, it was decided that a more focused approach, one based initially on the fishery sector, was the preferred option in the Program's 1<sup>st</sup> phase. This in turn, could be built on over time and expanded gradually to encompass other sectors as opportunities for collaboration were identified. This approach had the added advantage of building on existing contacts amongst fisheries institutions and the collaboration engendered through the earlier BOBP.

With respect to possible institutional arrangements three alternatives were considered: (i) establishing a new regional body; (ii) setting up a project management unit in an existing regional institution or body; and (iii) distributing project management tasks among several existing regional, sub-regional and/or national institutions. The first option was disregarded primarily due to the general view that there were already too many bodies in the region with narrow, specific mandates with the associated risk of overlap and duplication. There was also the added concern regarding the long process and accompanying expense associated with the establishment of a new regional body. Nevertheless, if this option proves to be in the long-term interest of the goals and objectives of the BOBLME, it could be considered in the Program's second phase dependent on the findings of the institutional assessment supported under subcomponent 4.1.

The second option was rejected primarily due to the absence of an existing institution with the relevant combination of thematic mandate and geographical scope compatible with the proposed BOBLME Program (see Annex 1). While a project management office could be established in one of the existing regional institutions, in the absence of a compatible mandate and geographic scope, long-term institutionalization would likely be put in doubt. During project preparation it was the general view that the preferred approach would be to work collaboratively with existing relevant institutions.

The third option was rejected due to the large number of countries (and much greater number of possible candidate institutions involved) and the recognition that the major focus during the initial phase of the BOBLME project should be placed on building the needed common vision, process, and SAP. All institutional alternatives will be re-examined during the institutional analysis which is supported under the Project.

## **C. IMPLEMENTATION**

### **1. Partnership arrangements**

The evaluation of alternatives consisted of assessing options associated with two separate, but related issues: (i) the overall scope of and approach to the development of the SAP; and (ii) the institutional arrangements required for its preparation and eventual implementation. With respect to the former, the alternative that was considered was a process that would lead to a more comprehensive waterbody-based program that would concentrate on a wide range of trans-boundary problems (e.g., oil spill planning, legal and institutional reviews, pollution control measures, implementation of regional/global agreements and harmonization of legislation). In the BOB, this would entail achieving a high degree of regional co-operation with a large number of government agencies, many which would likely be directly involved in project implementation. In light of the size and complexity of the BOB and lessons learned from other GEF-supported LMEs, it was decided that a more focused approach, one based initially on the fishery sector, was the preferred option in the Program's 1<sup>st</sup> phase. This in turn, could be built on over time and expanded gradually to encompass other sectors as opportunities for collaboration were identified. This approach had the added advantage of building on existing contacts amongst fisheries institutions and the collaboration engendered through the earlier BOBP.

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vision, process, and SAP. All institutional alternatives will be re-examined during the institutional analysis which is supported under the Project.

## **2. Institutional and implementation arrangements**

The FAO's Fisheries Department will serve as the Organization's Lead Technical Unit (LTU) to coordinate the implementation of the Project. The Regional Operations Branch in FAO's Regional Office for Asia and the Pacific will be designated as the Budget Holder (BH). The LTU will maintain primary accountability for the timeliness and quality of technical services rendered for project execution. The BH will be responsible for administrative functions, and in this capacity will authorize the disbursement of funds. Together, they would be responsible, *inter alia*, for facilitating the coordination of project activities, including the identification and recruitment of international and national project staff, facilitate the establishment of the Project Steering Committee (PSC), developing sub-contracts with the participating countries and other partners, all in close consultation with the participating countries and once established, the PSC. A Regional Coordinator (RC) will be selected and each country will designate a National Coordinator (NC). The RC will facilitate the day-to-day implementation of the project in close consultation with the NCs and PSC members.

Due to its multi-country scope, the BOBLME Project encompasses both regional and national components, and encompasses a wide range of technical fields, including fisheries and other living marine resources, critical habitats, pollution and socio-economic issues, all of which will require technically competent oversight. Furthermore, as a preparatory project focused upon building trust and cooperation between participating countries, setting priorities and identifying strategic management options for the BOB, the Project requires a considerable emphasis to be placed on inter-country coordination, communications and information dissemination. As a result, the management structure presented below and in the accompanying organogram fulfils both an administrative and coordination function and provides the basis for a range of other technical tasks not specific to individual activities. These include monitoring and information dissemination functions, as well as supervision of regional and national activities.

### **Project steering committee (PSC)**

The PSC will be the policy setting body for the Project and will also have the responsibility for endorsing the Annual Regional Work Plan (ARWP), the latter which will contain details of the previous years' technical activities and the proposed plan of work for the coming year. Composition would include two members nominated by each BOBLME member country; typically one would be drawn from the Ministry of Fisheries and the second from the Ministry of the Environment. In addition, representatives of the Executing and Implementing Agencies and co-financing agencies will be members. The Coordinator of the Regional Coordination Unit (RCU) would act as secretary. Chairmanship of the PSC would change annually (with no country repeating) and the country of the current chairman will normally be the host country for the annual PSC meeting. The chairman will retain contact with RCU during year and agree upon the site and agenda for the next meeting. A senior official of the World Bank would serve as a member of the Project Steering Committee in Ex-officio capacity.

Once endorsed by the PSC, the ARWP will be submitted to Executing/Implementing Agencies under signature of Chairman of the PSC. The PSC will also consider and provide

comments on external evaluations and audits. The PSC will normally meet once a year, although exceptional meetings (e.g. during the first year of start-up, if required) could be called.

### **Regional coordination unit (RCU)**

The RCU will act as Secretariat to the PSC. It will coordinate work at the national level through the NCs and at the regional level through regional sub-contracting agencies or individuals. The RCU will play no direct implementing role.

The RCU will be composed of three internationally recruited staff comprising a Coordinator, a Chief Technical Advisor and a Monitoring and Information (M&I) Specialist. Three nationally recruited staff would provide office management, financial management and IT skills. Support staff (secretary, driver, cleaner) and additional services not requiring a full-time staff member (e.g. legal, IT systems maintenance, and specific technical skills areas) will be contracted as required.

The primary responsibility of the RCU will be to ensure the finalization of the framework Trans-boundary Diagnostic Analysis (TDA) and the Strategic Action Program (SAP) as called for in the Project Brief. This would be achieved by preparing and coordinating the implementation of an ARWP that would draw upon Annual National Work Plans (ANWP) from each member state, as well as the programming of regional activities. The RCU will also develop and implement a monitoring program, a communications program and obtain independent scientific reviews of all significant technical matters (proposals or analyses). Reports on these activities, and financial results, would form part of the Work Plan submitted to the PSC and World Bank.

### **National task forces and coordinators**

The National Task Force (NTF) will guide the implementation of the Project at the national level. Its role would be analogous to that of the PSC, but at the national level. Members of the NTF would be nominated by participating Ministries but will also include representatives from non-governmental, civil society and private sector organizations. The NTF will consider and endorse the ANWP prior to submission to the RCU, including specifications for work within the country over the next year, and support the timely undertaking of the work plan through activities of the National Coordinator, consultants and the National Scientific Advisory Panel (NSAP).

The National Coordinator will act as both Chairman and Secretary to the NTF and will be responsible for preparing the agenda and documents required for NTF meetings as well as directly supervising implementation activities within the country. He/she would be nominated by the lead Ministry for that country, need the approval of the Executing Agency and would be supported by a secretary. The World Bank will be represented on the NTFs by the country offices (where present), in ex-officio capacity.

### **Scientific advisory panels**

Scientific Advisory Panels are proposed at both regional and national levels. Each would consist of a roster of technical specialists, acknowledged as experts at their respective levels

(regionally or nationally), who would be paid on an ‘as required’ basis but with CVs and rates previously approved under professional service procurement arrangements. The roster will comprise at least two specialists for each of the main areas of focus for the project (i.e. fisheries/living marine resources, pollution, critical habitats and socioeconomic/livelihoods). Review of subject specific proposals/analyses will be by two or three related technical specialists. Review of technically broader documents will be by one specialist from each relevant field. Panel members would work independently, as under a peer review mechanism, and would not normally meet.

The Regional Scientific Advisory Panel will provide input to the policy guidance and work plan approval tasks of the Steering Committee, through the RCU. Their reviews would normally be attached to any technical document presented to the Steering Committee.

National Scientific Advisory Panels would provide similar reviews of national technical proposals or documents.

### **Annual work plans**

The ARWP is the central tool for guiding the work of the Project and ensuring compliance of project activities with the overall Project Brief. It will be prepared by the RCU and submitted to the PSC for their endorsement within 45 days of the commencement of each calendar year and will be derived from ANWP proposals submitted by each country as well as projected regional activities. ARWPs will provide a review of the previous year’s activities (national and regional) and proposed plans for coming year. They will include a discussion of technical activities, a provisional financial report (including expenditure projections and disbursement plans), and reports on communications/dissemination, monitoring and IT.

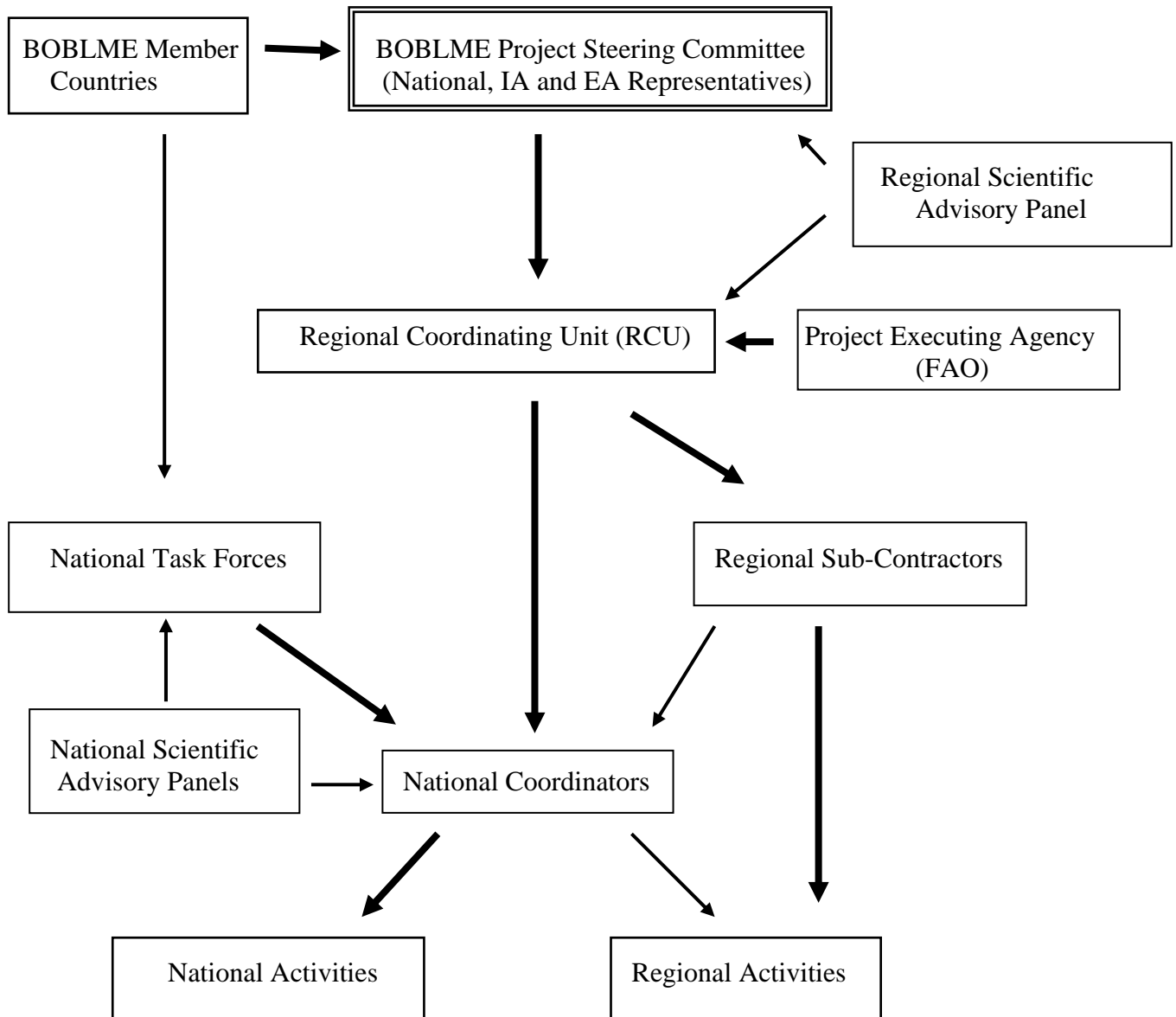
### **IT Systems**

IT systems for the project will be responsibility of the internationally recruited Monitoring and Information Specialist (M&I) with one nationally-recruited assistant. An office intranet will be established with a server to provide for common files and periodic tape back-up for the estimated eight users. Where feasible, National Coordinators will be enabled to upload and download data and other files through a web-based system. The printer and scanner will also be networked. IT systems maintenance (including ensuring updated security patches and data back-up) will be handled by a locally contracted IT company. The project website will be designed externally at the commencement of the project but will be maintained and updated by internal staff.

There will be close collaboration between the Monitoring and Information specialist and the Financial Controller to ensure the provision of management information and timely preparation of quarterly reports.

# BAY OF BENGAL – LARGE MARINE ECOSYSTEM PROJECT

## PROPOSED MANAGEMENT STRUCTURE



### **3. Monitoring and evaluation of outcomes/results**

Monitoring of project progress and outcomes will be a central function of the RCU and will be the responsibility of one of the three internationally recruited RCU staff (who will also be responsible for IT issues). He/she would be supported at the regional level by a database/IT clerk and at the country level by the National Coordinators. Resources are provided in the project budget for the finalization of a monitoring system upon project start-up.

Indicators for monitoring purposes would be drawn from the Project's Results Framework (Annex 3), adjusted where necessary and justified. Specific monitoring tasks will be defined in the context of technical and disbursement plans contained in the ARWP, broken down by quarter. Each ARWP will contain a monitoring program for the proposed activities, indicating which activities will require field interventions to gather data, and whether the task would be undertaken by the RCU staff member, the relevant National Coordinator or, in some cases, outside consultants.

Monitoring information may also be obtained from the independent scientific reviews conducted by members of either the Regional or National Scientific Advisory Panels (RSAP and NSAP), although this would largely be limited to assessment of research quality.

Each ARWP would contain a monitoring report, detailing the results of the previous year's monitoring activities.

#### **Monitoring of project progress**

Project progress will be monitored largely through the recording and verification of inputs, including financial disbursements and technical levels-of-effort. Financial inputs (disbursements) would be largely drawn from the Executing Agency financial management system, while technical inputs would be drawn from reports from National Coordinators and regional sub-contractors. The monitoring system would specifically compare financial disbursements to technical activities programmed in the ARWP and identify and assess any significant discrepancies between the two.

#### **Monitoring activity outcomes**

The monitoring of activity outcomes will constitute the second major output of the monitoring system. In some cases outcomes will be identifiable through evidence of training sessions, workshops or other activities. In others, the independent scientific review panels will provide confirmation of satisfactory results from studies etc. In some instances, it is anticipated there will be a need for physical inspection and/or surveying of activity sites and participants in order to confirm appropriate outcomes and assess their congruence with ARWP objectives. This latter task would often be undertaken by the relevant National Coordinator, or the RCU M&I specialist (the latter particularly for regional activities), but may sometimes require the use of external consultants, and provision is made in the budget for their recruitment.



## **Evaluation of project impact**

The Project will not directly attempt to evaluate project impact, as this is more appropriately undertaken by external assessors during project mid-term and final evaluations. However, the availability of base-line data may be critical for subsequent impact evaluation, and in the annual monitoring work program the RCU will nominate those activities believed to be of particular significance and for which, as a result, base-line assessment is considered cost-effective. The collection of baseline data would normally be contracted to an independent consultant not involved in project execution, working under the guidance of the NC and the RCU M&I specialist.

*Ex-post* data gathering may also occur where this is specifically requested by the Executing or Implementing Agencies or, more commonly, by the project mid-term or final evaluation mission prior to their arrival or during their mission.

## **Dissemination of project activities and results**

During the BOBLME Project preparation phase a number of the member governments emphasized their view that particular attention should be given to improved dissemination of knowledge concerning the BOBLME and the activities of the Project itself. As a result, the dissemination of general information as well as project activities and results is considered to be an important element of the project.

This task will be the second major responsibility of the M&I Specialist and a communications program will be appended to the ARWP, as well as a report summarizing communications activities over the past year. The specialist will be supported by an assistant trained in desktop publishing/website maintenance. Three specific target audiences are envisaged: (i) national governments (in all BOBLME member countries), (ii) the regional and international scientific community, and (iii) the general public. Specific strategies and products will be developed to ensure that all three groups are reached.

Communications and dissemination tools will include a dedicated BOBLME web site, press releases, and promotional materials (e.g. brochures, posters). Periodic bulletins will be circulated to all NTF member institutions, research organizations, and relevant NGOs. During the course of the Project a number of major communications efforts (e.g., the preparation of videos and similar materials for use on television and in schools), will be prepared using external specialists. Resources are provided in the project budget for the design and start-up of the website which will contain reports, news and public relations material, as well as for publishing costs for bulletins etc.

## **4. Sustainability and Replicability**

The BOBLME Program sustainability is addressed through the inclusion of three subcomponents in the 1<sup>st</sup> phase Project: (i) establishing permanent institutional arrangements, (ii) development of the Strategic Action Program (SAP) which will provide a framework and “roadmap” to guide future interventions, and (iii) developing a strategy and mechanism leading to eventual self-financing.

The institutional subcomponent of the Project is designed with two objects in mind. First, it will form the basis on which future institutional arrangements in the region will be agreed to, ensuring the long-term management of the BOBLME, and the presence of a focal point for ongoing BOBLME activities that may lie outside of the 1<sup>st</sup> phase Project-supported activities. Second, it will be a key input in the development of the SAP, so that actions in the latter can be clearly tied to those institutions appropriate and capable of taking responsibility for related actions.

With respect to the SAP, a framework Trans-boundary Diagnostic Analysis (TDA) has already been prepared during the preparation phase of the BOBLME Program and will be finalized in project year (PY) 1. This in turn will provide the factual basis for the formulation of the SAP. The development of the SAP will entail preparation and adoption of national-based SAPs. Moreover, the process will include widely recognized principles derived from other LME initiatives. These include: (i) full stakeholder participation and transparency, (ii) incorporation of an ecosystems approach, (iii) adaptive management and stepwise consensus building, (iv) actions that will take into account social and economic root causes of the problem, (v) a strong emphasis on accountability, (vi) inter-sectoral policy building, and (vii) subsidiarity achieved through attempting to strike the right balance between regional and national actions. Finally, government commitment will be demonstrated through the adoption of the SAP as a binding agreement between governments.

Financial sustainability, will be achieved through the following activities: (i) detailed analysis of the planned outcome and activities of the Program that will be carried out on an ongoing or recurrent basis following the termination of the Project's 1<sup>st</sup> phase; (ii) construction of financial sustainability models to provide structural frameworks for identifying and determining the nature and magnitude of one-time start-up costs and recurring annual expenditure requirements once specific activities have been identified for support under the SAP; (iii) identification of potential stakeholders with interest in being involved with and sustaining the outcomes and activities; (iv) an analysis of existing financing mechanisms (e.g., fund-raising, permanent/sinking endowment funds, donor funding, cost-sharing, government budget, revenue generation, etc.) that can be implemented to finance the recurrent costs of outcomes and activities to be sustained; and (v) the development and implementation of a plan of action to put into effectiveness the appropriate financing mechanisms identified.

## **5. Critical risks and possible controversial aspects**

While the proposed Project is expected to have an overall positive impact on regional collaboration and environmental management, there are some risks associated with its implementation. These risks would likely be associated with the complexity of issues addressed by the Project, the associated political risks, potential uneven commitments and performance of participating countries and potential inadequate support for the implementation of the Strategic Action Program. It is felt however, that most potential risks can be identified and addressed early before beginning to affect implementation. The chances of early detection of potential issues are significantly increased due to FAO's long and deep experience in working in the BOB region. Most recently, this includes the Organization's role in the execution of the Bay of Bengal Program (BOBP), a regional fisheries program which became operational in 1979. In its first two phases (1979 – 1994), BOBP aimed to improve the socio-economic conditions of the small-scale fisherfolk in the member countries

through the development and promotion of new and innovative techniques and technologies. These were followed by a third phase (1994 – 1999) which was designed to more directly address the serious management problems facing the Bay’s fisheries, described previously. More generally, FAO will draw on its wide range of in-house expertise in the area of marine and coastal resources management located both in Headquarters and in Organization’s Regional Office for Asia and the Pacific, coordinated through the Project Task Force, to screen for potential issues during the implementation phase (see Annex 6 for more detail).

More specifically, potential risks that may affect project success and their respective mitigation measures incorporated into project design are:

**Lack of sustained institutional and financial commitment from one or more of the BOBLME countries to support Project operations.**

The Project has placed significant emphasis on the analysis and development of financial sustainability mechanisms to support both the likely permanent institutional arrangements agreed to in future phases of the BOBLME Program as well at the field level during the 1<sup>st</sup> phase Project implementation. “Lesson-learned” on a pilot basis from the project will be incorporated into the design of relevant activities during the SAP preparation process.

**Existing political commitments to SAARC and ASEAN respectively, impede BOBLME countries from achieving Project outcomes.**

The BOBLME Project is expected to establish close collaborative relationships with the appropriate working groups of these two regional Associations and act as a bridge in sharing of information and coordinating activities where possible.

**Failure to reach consensus on a sufficiently strong institutional solution capable of ensuring long-term success of the BOBLME Program.**

The Project has developed a significant subcomponent based on assessment and the promotion of consultation and policy dialogue with all BOBLME countries over a 3-year period to ensure that all sides are heard and to provide the opportunity to reach a common position.

## **6. Loan/credit conditions and covenants**

At this time no significant, non-standard conditions and covenants are envisioned for project effectiveness or implementation.

## **D. APPRAISAL SUMMARY**

### **1. Economic and financial analyses**

#### **Baseline Costs**

In the absence of additional GEF funding, the implementation of the aforementioned on-going and planned programs/projects will contribute at least in part, to both the PDO and GEO. The estimated costs of baseline activities amount to US\$ 63.5 M (Annex 15).

## Baseline Benefits

Activities under the Baseline Scenario will produce predominantly national benefits and contribute only in a limited way to the achievement of global benefits due to the many constraints that limit the effectiveness of national actions impacts in addressing regional issues. Specific benefits include: (i) sustainable management of trans-boundary fish stocks (within national waters) and critical habitats, (ii) data collection efforts providing limited usefulness to understanding larger scale-processes characteristic of the BOBLME, (iii) creation and management of national marine protected areas and fish refugia, (iv) nation-based monitoring of water quality in coastal waters, and (v) participation in sub-regional groupings of countries formed to address *ad hoc* priority issues dependent on national policies and funding.

In view of the need for regional institutional arrangements, collaborative approaches, an agreed on Strategic Action Program (SAP) and long-term financial sustainability to address priority issues and barriers characteristic of the BOBLME, the Baseline Scenario is unlikely to contribute significantly to achieving any global benefits. In recognition of these limitations, the Governments of the BOBLME have requested assistance from the GEF to formulate and implement an Alternative Scenario that will support the achievement of incremental benefits related to the aforementioned programs that comprise the Baseline Scenario.

## GEF Alternative

The GEF Alternative will support the achievement of the PDO and GEO through strategic actions addressing key threats and barriers characteristic of the BOBLME. Financing the incremental costs associated with these actions would build on the Baseline Scenario by promoting a regional approach which will result in: (i) reduced pressure on selected trans-boundary fish stocks and critical habitat of global importance; (ii) improved understanding of the large-scale processes characteristic of the BOBLME leading to more informed national and regional efforts to address critical trans-boundary issues; (iii) improved management of trans-boundary fish stocks through more informed use and regional coordination in establishment of fish refugia; (iv) conservation of biodiversity of regional/global importance achieved through regional collaboration in establishing a system of marine protected areas; (v) establishment of a common set of environmental health indicators needed to provide the basis for assessing and monitoring status of BOBLME; (vi) a pilot water quality monitoring program designed to (a) develop experience in adopting a regional approach, and (b) identify regional “hotspots” to be addressed in subsequent BOBLME Program phases; (vii) regional institutional arrangements established to facilitate a collaborative approach to issues of regional/global concern in the BOBLME; (viii) an agreed to Strategic Action Program identifying critical priorities of regional/global importance to address in the next phase of the BOBLME Program; (ix) a sustainable source of funding to implement priority actions; and (x) improved IW project design through the exchange of “lessons learned” and other relevant experiences with other LME programs.

**Costs.** The total cost of the GEF Alternative is estimated to be US\$ 92.0 M (*GEF financing: US\$ 12.1 M*), detailed as follows (see Annex 15): (i) US \$ 48.6 M (*GEF financing: US\$ 4.6 M*) to promote regional approaches to the management and sustainable use of coastal/marine natural resources (Component 1); (ii) US\$ 17.6 M (*GEF financing: US\$3.6 M*) to support

improved understanding and predictability of the status and process characteristics of the BOBLME (Component 2); (iii) US\$ 15.7M (*GEF financing: US\$0.5 M*) to support a regional approach to addressing issues associated with land-based sources of pollution (Component 3); (iv) US\$ 1.8 M (*GEF financing: US\$ 0.6 M*) to achieve Program sustainability (Component 4); and (v) US\$ 8.2 M (*GEF financing: US\$2.7 M*) to support of Project Management, M&E, and Information Dissemination (Component 5).

## **Benefits**

Under the GEF Alternative, the benefits generated from this approach would include both national and global benefits. National benefits include: (i) diversified livelihoods and improved well-being among small-scale fisher communities; (ii) dependable, long-term sustained national production of selected trans-boundary fish stocks for BOBLME countries; (iii) increased understanding and strengthened national programs in BOBLME-relevant sectors; (iv) establishment of national environmental “health” indicators for coastal habitats/waters; (v) preparation of national Strategic Action Programs; (iii) pilot testing of cost-recovery mechanisms applicable to national activities; and (vi) increased national awareness of other BOBLME relevant activities (see complete list of national benefits in the Incremental Cost Matrix below). Global benefits include: (i) removal of barriers to creating a more focused, regionally coordinated effort to address trans-boundary issues in the BOBLME; (ii) resolution of selected priority issues (e.g., management of selected regional fish stocks, pollution, and management of critical habitat whose boundaries extend beyond one or more political jurisdictions); (iii) increasing exchange and application of shared experiences and expertise within the region; (iv) increasing public awareness of the significance and technical knowledge of the status and processes of the BOBLME; (v) developing or enhancing regional and/or local solutions among BOBLME countries; and (vi) achieving economies of scale and cost advantages which accrue from addressing certain problems in a collaborative fashion.

## **Incremental Costs**

The difference between the costs of the Baseline Scenario (US\$ 63.5 M) and the GEF Alternative (US\$ 92.0 M) is an estimated US\$ 28.5 M. The total requested GEF contribution amounts to US\$ 12.1 M, detailed as follows: (i) US \$ 4.6 M to promote regional approaches to the management and sustainable use of coastal/marine natural resources (Component 1); (ii) US\$ 3.6 M to support improved understanding and predictability of the status and process characteristics of the BOBLME (Component 2); (iii) US\$ 0.5 M to support a regional approach to addressing issues associated with land-based sources of pollution (Component 3); (iv) US\$ 0.6 M to achieve Program sustainability (Component 4); and (v) US\$ 2.7 M to support of Project Management, M&E, and Information Dissemination (Component 5). The aforementioned GEF-support would cover incremental costs of technical assistance (US\$ 3.1 M), studies and workshops (US\$ 4.3 M), training (US\$ 0.8 M), publications (US\$ 0.7 M), equipment and furniture (US\$ 0.3 M), and salaries, travel and O&M costs (US\$ 3.0 M).

Co-financing of US\$ 16.4 M of the incremental cost has been mobilized as follows: (i) US\$ 5.7 M from the BOBLME governments of which US\$ 2.2 M is in cash; (ii) US\$ 9.3 M in cash from other co-financiers; and (iii) US\$ 0.8 M (in-kind) from FAO. Incremental financing from the BOBLME Governments would include: (i) a cash contribution of US\$ 2.2 M in support of (a) the partial costs of national workshops and meetings, (b) salaries of national technical advisors and support staff, (c) the partial costs of the national task force office

O&M, and (d) the salaries of sub-project coordinators and assistants (Myanmar, Thailand, and Sri Lanka only); and (ii) an in-kind contribution of US\$ 3.5 M to finance task force salaries, local travel and travel allowances, and other O&M costs. In addition, the Government of India (GOI), as host country, will contribute US\$ 0.6 M in cash to support the Regional Coordinating Unit (RCU). This contribution will cover the costs of: (a) office space, (b) furniture, (c) salaries of selected staff, and (d) O&M including utilities. The funding from the remaining co-financiers representing US\$ 9.3 M will cover technical assistance (US\$ 2.0 M), studies and workshops (US\$ 3.9 M), training (US\$ 0.5 M), publications (US\$ 0.2 M), equipment and furniture (US\$ 0.2 M), and salaries, travel and O&M costs (US\$ 2.4 M) in support of all project components. The funding from FAO (US\$ 0.8 M) would cover the in-kind costs associated with technical assistance (US\$ 0.7) and training (US\$ 0.1).

## **2. Technical**

Much of project design is based on the foundation provided by the framework Trans-boundary Diagnostic Analysis (TDA). The TDA is a diagnostic tool used by GEF in the International Waters (IW) portfolio to identify, quantify where possible, and rank, according to severity, water-related, environmental issues and their proximate and root causes. The TDA assists in determining which of these issues have causes or effects of a trans-boundary nature, such that effective action to address these issues will require multi-country collaboration. The TDA provides the scientific basis for the collaborative development of the SAP and for the design and implementation of nationally and regionally coordinated activities addressing these issues and their causes in the context of the SAP. The BOBLME framework TDA was prepared during the PDF-B phase as part of the preparation activities and will provide the basis for the full TDA to be finalized in PY 1 of the BOBLME Project.

This framework TDA outlined the major water-related coastal and marine environmental issues as perceived by the BOBLME countries, identified the trans-boundary elements of the issues, their main proximate and root causes, major information gaps, potential areas for action and major potential constraints on intervention. It consolidated the results and recommendations of the extensive regional and national consultations held with stakeholders and of the reports and comments received, between January 2003 and May 2004 of the PDF-B phase of the BOBLME Project (see Annex 12). Based on the review of the literature, national and thematic reports, and extensive consultation with leading experts from the region, the draft TDA represents a fairly rigorous and technically sound document whose recommendations have been incorporated in the existing Project Brief.

## **3. Fiduciary**

Not applicable to project brief

## **4. Social**

The eight countries bordering the BOBLME include some of the most populous on earth, with India, Indonesia and Bangladesh being among the world's top ten. Collectively the BOBLME countries are home to some 1.55 billion people, or a little less than a quarter of the world's population. Approximately 400 million people live in the BOBLME's catchment area, and many are among the world's poorest, subsisting at or below the poverty level. Many of these poor are part of the burgeoning coastal population and they depend primarily or entirely on

coastal and marine resources, in particular the fisheries and in associated critical habitats; they have few if any alternatives to these resources for their food, shelter and livelihood. The coastal capture fisheries from the BOBLME alone provide direct employment to 2 million fishermen. Given existing population growth estimates, it is expected that the population in the region will exceed 1.8 billion by the year 2015 and account for almost 26% of the world's population. Obviously this has implications for the BOBLME's coastal and marine resources and the livelihoods of the communities that depend on said resources.

Given the magnitude and complexity of the issues involved, the Project does not pretend to directly address the socio-economic issues of the poor fishers in the BOBLME in any significant way. Rather, consistent with the Bank's poverty reduction efforts, the Project attempts to address many of these issues through supporting a foundational/capacity building processes for multi-country collaboration in this phase of the BOBLME Program justified on the need to overcome many of the previously identified constraints barring the taking of collective actions by the BOB countries. As stated previously, once the needed institutional arrangements and conditions are put in place, then GEF, the Bank, and other development partners can play a more direct and effective role in assisting the small fisher community where actions requiring a regional approach are most cost-effective. Nevertheless, it is expected that a small number of fisher communities are likely to benefit directly from activities supported under the Project. These include: the "mainstreaming" of sound community-based ICM policies (subcomponent 1.2), and the development of collaborative approaches to fishery management (subcomponent 1.3) and critical habitat management (subcomponent 1.4).

### **Stakeholder consultation**

The major stakeholders relevant to Project objectives can be classified in three groups, regional, national and local stakeholders. Regional stakeholders include multi-lateral/bi-lateral development agencies and programs, regional development banks, and international NGOs. National stakeholders include national and state government agencies, civil society organizations, NGOs, private foundations, private sector organizations, and academic institutions. Local/beneficiary stakeholders comprise local government agencies; commercial and rural fishers and their families; school teachers, students and rural youth; coastal/marine tour operators and their clients; local environmental and social/cultural NGOs; and other local citizens.

During project preparation the involvement of these stakeholders occurred through participation in: (i) national consultations and workshops, (ii) meetings of the national task forces, (iii) the development of national reports, (iv) regional workshops and technical meetings, and (v) meetings of the Project Steering Committee. A record of the aforementioned events can be found in Annex 12. Selected documentation in support of the BOBLME Project preparation process has been posted on the website (<http://www.fao.org/fi/boblme/website/index.htm>).

During project implementation, stakeholder participation is included in all Project components at varying levels of intervention. At the community level, local participation is specifically identified and costed as key inputs into the: (i) "stocktaking" activities (subcomponent 1.1); (ii) local capacity improvements as part of policy "mainstreaming" (subcomponent 1.2); development of all project-supported fishery management and critical

habitat plans (subcomponents 1.3 and 1.4, respectively); and (iv) case studies and development of guidelines associated with assessing the role of fish refugia in the management of fish stocks in the BOBLME (subcomponent 2.1). Consultations at the national level will be ensured through the creation of Project-wide National Coordinators and Project Task Forces. Additionally, specific national consultations have been included and costed as workshops (subcomponent 1.1), national fishery task forces (component 1.3), and commissions (1.4). National consultations are the “heart” of the processes leading to the finalization of BOBLME institutional arrangements (4.1) and the development of an agreed on SAP. Finally, at the regional level there are a large number of workshops and consultations which will be supported across many of the components as well as the Project-wide regional collaboration supported under the Improved BOBLME “predictability” subcomponent (2.2) and information dissemination subcomponent (5.3).

## 5. Environment

Most of the activities that will be supported in the 1<sup>st</sup> phase Project are designed to put in place the foundation and institutional arrangements, processes and capacity to support a regional collaborative effort to address critical issues, underlying causal agents and barriers which are contributing to a decline in environmental health of the BOB. Moreover, in those subcomponents where there are field interventions (primarily in the development of collaborative approaches to fishery management, critical habitats, marine protected areas and fish refugia, water quality monitoring and data sharing leading to an improved understanding of the BOB status and processes), all will contribute to positive environmental impact either over the medium-term (i.e., the life of the Project) or contribute to information and processes which will have a significant positive impact in the BOBLME Program’s subsequent phases.

## 6. Safeguard policies

<b>Safeguard Policies Triggered by the Project</b>	<b>Yes</b>	<b>No</b>
<u>Environmental Assessment</u> ( <a href="#">OP/BP/GP</a> 4.01)	[ ]	[x]
Natural Habitats ( <a href="#">OP/BP</a> 4.04)	[ ]	[x]
Pest Management ( <a href="#">OP</a> 4.09)	[ ]	[x]
Cultural Property ( <a href="#">OPN 11.03</a> , being revised as OP 4.11)	[ ]	[x]
Involuntary Resettlement ( <a href="#">OP/BP</a> 4.12)	[ ]	[x]
Indigenous Peoples ( <a href="#">OD 4.20</a> , being revised as OP 4.10)	[ ]	[x]
Forests ( <a href="#">OP/BP</a> 4.36)	[ ]	[x]
Safety of Dams ( <a href="#">OP/BP</a> 4.37)	[ ]	[x]
Projects in Disputed Areas ( <a href="#">OP/BP/GP</a> 7.60)*	[ ]	[x]
Projects on International Waterways ( <a href="#">OP/BP/GP</a> 7.50)	[x]	[ ]

## 7. Policy Exceptions and Readiness

The objective of the Project is to develop an overall framework of cooperation between the participating countries to address the key environmental (and social) aspects of the Bay of

\* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas



Bengal. As proposed project activities and regional and sub-regional pilot activities are largely directed at information sharing, resource assessment and monitoring, awareness building and collaborative management of species and habitats and does not entail direct investment in on-the-ground activities, the Project has been classified as EA Category “C”. However, this classification would be revisited should any future pilot investments be identified that may have potential adverse environmental and/or social impacts.

## **Annex 1: Country and Sector or Program Background**

### **SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**

#### **COUNTRY AND SECTOR OR PROGRAM BACKGROUND**

For the purposes of the Bay of Bengal Large Marine Ecosystem (BOBLME) Program, the Bay of Bengal (BOB) region has been defined as comprising the coastal watersheds, islands, reefs, continental shelves and coastal and marine waters of the Maldives, Sri Lanka, the east coast of India, Bangladesh, Myanmar, the west coast of Thailand, the west coast of Peninsular Malaysia, and the Indonesian provinces of Aceh, Riau, and North and West Sumatra (see Annex 17). This body of water, measuring approximately 3.3 million km<sup>2</sup> in area, together with the coastal drainage systems, has been identified as one of the world's sixty-four Large Marine Ecosystems (LMEs) sharing a distinct bathymetry, hydrography, productivity, and trophically dependent populations.<sup>4</sup>

About one-quarter of the world's population reside in the littoral countries of the BOB of which some 400 million live in the Bay's catchment area alone, many subsisting at or below the poverty level.<sup>5</sup> An average of 65% of the region's urban population live in large coastal cities and migration towards the coastal regions appears to be on the increase.<sup>6</sup>

The BOB supports numerous coastal fisheries, many of which are of significant socio-economic importance to the countries bordering the water body; an estimated 2 million fishers who operate primarily in coastal and inshore waters are directly employed in the sector.<sup>7</sup> Included amongst these fisheries are coastal demersal, shrimp and small pelagic fisheries, as well as offshore fisheries for tuna and similar species.<sup>8</sup>

The distribution of many of the BOBLME's fish stocks extend across the shared national boundaries of adjacent countries and in some cases into waters well beyond the BOB. Large pelagic species such as tuna and billfish range over vast ocean space and pass through the exclusive economic zones (EEZs) of many of the countries in the region. Some smaller pelagics often migrate through the coastal waters of two or more neighboring countries while other species are distributed throughout the coastal areas of all the BOB countries.

The key issue facing the region's coastal fishing communities is the unsustainable harvesting of certain species, a result of the open access nature of the resource (Attachment 1). Many of the fishery resources in the region are already heavily exploited and if fishing is allowed to continue unregulated the situation will likely worsen with significant adverse impacts on the large number of small-scale fishers dependent on these resources for their livelihoods and as a

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<sup>4</sup> Sherman, K., 1994. Sustainability, biomass yields and health of coastal ecosystems: an ecological perspective. *Mar. Ecol. Progr. Ser.*, 112: 277-301.

<sup>5</sup> The BOBLME countries are ranked by the UN Human Development Index (HDI) as all having reached the Medium Human Development level. Nevertheless in aggregate, these countries are also home to the world's largest concentration of income poor.

<sup>6</sup> World Resources Institute, 1990. *World Resources: a guide to the global environment*. World Resources Institute. Oxford University Press, Oxford.

<sup>7</sup> Preston, G.L., 2004. Review of the status of shared/common marine living resource stocks and of stock assessment capability in the BOBLME Region. Report prepared for the Sustainable Management of the Bay of Bengal Large Marine Ecosystem Program (GCP/RAS/179/WBG). FAO, Rome.

<sup>8</sup> Tuna are commonly sought in the vicinities of Sri Lanka, the Andaman Islands (India), Indonesia and Thailand.

source of food security.<sup>9</sup> The socio-economic implications of non-sustainable exploitation of fish stocks is exacerbated further by the illegal incursion of foreign fleets, increased competition and conflicts between artisanal and large-scale fisherman, encroachment by nationals into the territorial waters of neighboring countries, and an alarming increase in cyanide fishing and other non-sustainable fishing practices.

A second key issue is the continued degradation of highly productive coastal and near-shore marine habitats such as coral reefs, mangroves and estuaries, and marine grass beds, all critical fish spawning and nursery areas. Immediate causes include land conversion and reclamation, direct overexploitation, accelerated sedimentation, and destructive tourism and fishing practices. Sea-based sources of pollution include oil pollution and offshore oil and gas exploration. There are also the possible adverse impacts related to the future development of seabed minerals.

Finally and closely related to the two issues described above, are the accumulative effects associated with land-based sources of pollution that are contributing to the disruption of basic processes and functioning of the marine ecosystem. These include degradation and loss of fish spawning and nursery areas, fish kills and possible changes in trophic structure.<sup>10</sup> The fate and effect of pollutants have not been studied extensively but there is a growing body of evidence to support the conclusion that most are deposited as estuarine sediments, while a smaller portion is flushed out to deeper waters. While it is argued by some that the ecosystem's assimilative capacity on the whole has not been exceeded and that pollution problems are localized in nature, there remain many uncertainties about the Bay's status and ecological functioning, much of it attributable to the lack of comprehensive, reliable data.

Major root causes underlying these issues include: (i) population growth and changing demographics; (ii) continued demand for increased foreign exchange met, at least in part, by exports based on the primary sector; (iii) a growing and diversifying industrial sector; and (iv) the undervaluing of the natural resources and the environmental "goods and services" provided by the coastal and near-shore marine ecosystems.

One major barrier to resolving these issues is the absence of a regional mechanism that would facilitate multi-national collaborative efforts to address these issues. A second major barrier consists of the weak and/or inappropriate policies, strategies and legal measures that characterize much of the region. Where these do exist, they are rarely enforced. Other major constraints include lack of alternative livelihoods, weak institutional capacity, insufficient budgetary commitments, and lack of community stakeholder consultation and empowerment.

The BOBLME countries are well aware of these issues, causal factors and barriers to their resolution and in response have demonstrated significant levels of commitment to address

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<sup>9</sup> For example, the recent catch per trip of tuna in the Maldives and Sri Lanka has declined to about one-half of the 1980s level. Elsewhere, resource surveys in the coastal areas of Malaysia indicate that trawl harvests in the 1980s were already one-third of the 1970s level while on the Andaman Sea coast of Thailand they appear to be about one-half from previous levels over this same period of time.

<sup>10</sup> For example, in some regions of the Bay, for example, a change in composition of plankton species has already been noted. See E. S. Holmgren, E.S., 1994, The Impact of the Environmental on the Fisheries of the Bay of Bengal Swedish Centre for Coastal Development and Management of Aquatic Resources. SWEDMAR/BOBP. (Madras 1994).

many of them. The 1992 United Nations Conference on the Environment and Development (UNCED) produced five instruments including a blueprint for action to be applied globally from the early 1990s into the 21<sup>st</sup> Century – Agenda 21.<sup>11</sup> The principles of Agenda 21 have subsequently influenced changes in other instruments of regional and international environmental law. Of these instruments, the 8 BOBLME countries have demonstrated a high degree of participation (Attachment 2).

Despite these commitments, it is clear a number of the previously identified issues need to be addressed through a more focused, regionally coordinated effort. These include: (i) common property management issues (for example, relating to migratory species and shared stocks); (ii) fishing rights and access within the Bay of Bengal global commons; (iii) trans-boundary issues associated with pollution; and (iv) the management of ecosystems whose boundaries extend beyond one or more national political jurisdictions. Moreover, there are many benefits to be gained from addressing the problems described above through action coordinated at the regional level. For example, issues of a trans-boundary nature in which actions taken by one country may have an adverse impact on another are best tackled through a concerted, harmonized collaborative approach. The countries of the BOB also face a commonality of problems from which they would benefit through sharing experiences and expertise and developing or enhancing regional and/or local solutions. Finally, there are the economies of scale and cost advantages which accrue from addressing certain problems in a collaborative fashion.

There already exist a number of international, regional and sub-regional institutions and programs operating in the Bay (see Attachment 3). Despite their large number, none appear to have the mandate, geographical scope and/or capacity to support an initiative based on a LME approach; particularly one that addresses the shared and common issues and barriers characteristic of the Bay of Bengal.<sup>12</sup> However, it is equally clear that the BOBLME Program cannot resolve these issues acting in isolation. Rather, it must build on past experience and present institutions and activities in the region, including data and information collected through the numerous national and regional initiatives addressing the coastal and marine environment and fisheries issues in the Bay of Bengal to achieve any significant lasting impact

The Global Environment Facility (GEF) is in a unique position to build on and strengthen existing programs and partnerships in the region through supporting the development of a trans-boundary perspective and approach. It has already demonstrated its commitment to such an initiative through supporting a number of preparatory activities through provision of Block B and Supplemental Block B grants (see Annex 4).<sup>13</sup> These grants, supplemented by additional co-financing, have been used to: (i) put in place national and regional coordinating mechanisms to ensure broad-based stakeholder participation in the preparation of the project; (b) prepare baseline reports; (c) prepare a framework Trans-boundary Diagnostic Analysis

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<sup>11</sup> The others were the Rio Declaration, a Statement of Principles on Forests, and two international Conventions on Biodiversity and Climate Change.

<sup>12</sup> Twelve of these institutions were evaluated during project preparation. None were found to be suitable to support a program with the characteristics of the BOBLME due to failing to meet one or more of the following criteria: (i) their mandate was too broad, (ii) their mandate was too narrow, and/or (iii) they did not cover the region corresponding to the BOBLME. See Lugten, G. 2004. Study on options for regional coordination mechanisms. Report prepared for the Sustainable Management of the Bay of Bengal Large Marine Ecosystem Program (GCP/RAS/179/WBG). FAO, Rome.

<sup>13</sup> Additional funding was provided by SIDA.

(TDA); and (d) formulate the project document for GEF and other donor financing. Building on this solid foundation, it will now require a concerted, focused, regional effort, one based on a long-term institutional and financial commitment from the BOBLME countries, working in close partnership with other existing institutions and programs, to achieve any discernible improvement in the ecological health in an ecosystem the size and complexity of the Bay of Bengal.

### Attachment 1. Major Threats Root Causes and Constraints in the BOBLME <sup>1/</sup>

Priority Trans-boundary Environmental Issues	Priority Threats	Immediate Causes	Root Causes	Major Information Gaps	Constraints
Overexploitation of living marine resources	<ul style="list-style-type: none"> <li>• over-fishing</li> <li>• destructive fishing</li> <li>• pollution</li> <li>• coastal and upstream development</li> </ul>	<ul style="list-style-type: none"> <li>• increasing fishing pressure (e.g., due to growth in commercial fishing, non-sustainable fishing practices, coral mining, etc.)</li> <li>• accumulation of pollution wastes</li> <li>• conversion of coastal lands</li> <li>• siltation and sedimentation</li> <li>• salinization (water diversion)</li> </ul>	<ul style="list-style-type: none"> <li>• population growth</li> <li>• national demand for foreign-exchange</li> <li>• urban growth and poorly planned coastal development</li> <li>• growth and diversification of industrial activities</li> <li>• need to increase agricultural and aquacultural productivity</li> </ul>	<ul style="list-style-type: none"> <li>• fragmentary/unreliable fishery statistics</li> <li>• inadequate fishery-independent data</li> <li>• inconsistent and incomplete taxonomic identifications</li> <li>• existence and relevance of traditional ownership and customary use systems</li> </ul>	<ul style="list-style-type: none"> <li>• lack of alternative livelihoods</li> <li>• under valuing of relevant environmental goods and services</li> <li>• inadequacy in relevant legislation (overlapping and/or conflicting legislation)</li> <li>• inadequacy of existing implementation authority (sectoral approach)</li> <li>• lack of sufficient budgetary commitments</li> <li>• lack of institutional capacity</li> <li>• inadequate enforcement of existing legislation</li> <li>• lack of community stakeholder consultation</li> </ul>
Degradation of critical habitats - mangroves - coral reefs - grass beds	<ul style="list-style-type: none"> <li>• conversion and reclamation</li> <li>• direct overexploitation</li> <li>• pollution</li> <li>• siltation and sedimentation</li> <li>• salinization</li> <li>• destructive fishing practices (corals/grassbeds only)</li> <li>• destructive tourist practices (corals only)</li> <li>• sand/coral mining coral/sand mining</li> </ul>	<ul style="list-style-type: none"> <li>• poorly planned aquaculture, agriculture, salt ponds, urban development</li> <li>• sewage, domestic, industrial, and agricultural/aquacultural wastes</li> <li>• dredging</li> <li>• dynamite fishing, cyanide poisoning, etc.</li> <li>• beach replenishment</li> </ul>		<ul style="list-style-type: none"> <li>• existence and relevance of traditional ownership and customary use systems</li> <li>• valuation of “goods and services” provided by critical habitats</li> <li>• areal extent and environmental status of seagrass beds</li> </ul>	
Land based sources of pollution	<ul style="list-style-type: none"> <li>• sewage and other domestic and municipal wastes</li> <li>• agricultural and aquacultural wastes</li> <li>• industrial wastes</li> </ul>	<ul style="list-style-type: none"> <li>• harmful practices leading to the generation and transport of wastes to the coastal and marine environment</li> </ul>		<ul style="list-style-type: none"> <li>• identification and prioritization of pollution "hot spots" and relative importance</li> <li>• fate and affect of pollutants</li> <li>• permissible pollution discharge limits</li> <li>• appropriate and affordable clean production technology and best practices role and economic value of natural pollution attenuation services</li> </ul>	

<sup>1/</sup> Summary based on the framework TDA and BOBLME thematic reports.

## Attachment 2. Selected Relevant BOBLME Conventions and Agreements

	Conventions							
Legal Instrument	Bangladesh	India	Indonesia	Malaysia	Maldives	Myanmar	Sri Lanka	Thailand
Convention on Biological Diversity	R (08/96)	R (02/94)	R (08/94)	R (06/96)	R (11/92)	R (11/94)	R (03/94)	R (01/04)
	Selected Mandate/Agreements							
UN Fish Stocks Agreement <sup>1</sup>		08/03			09/00			
Jakarta Mandate on Marine and Coastal Biological Diversity <sup>2</sup>	R	R	R	R	R	R	R	R
UNEPs Regional Seas Agreements/ Program <sup>3</sup>	A South Asian (1995)	A South Asian (1995)	A East Asian (1981)	A East Asian (1981)	A South Asian (1995)		A South Asian (1995)	A East Asian (1981)
Declaration and Global Program of Action on Protection of the Marine Environment from Land-Based Activities	P	P	P	P	P		P	P
Committee of Fisheries (COFI) <sup>3</sup>	M	M	M	M	M	M	M	M

<sup>1</sup> Under UNCLOS (United Nations Conventions on the Law of the Sea which all BOBLME States except Thailand has ratified)

<sup>2</sup> Under CBD.

<sup>3</sup> Signifies agreement with the following "soft" law instruments: (i) Code of Conduct for Responsible Fisheries, (ii) FAO International Plans of Action, (iii) Rome Consensus on World Fisheries, and (iv) Plan of Action on the Sustainable Contribution of Fisheries to Food Security.

Key:

R = Ratified

P = Participant

A= Adopted

M=Member

Washington Declaration\*

### Attachment 3. International Institutions with BOB Mandate

Body	Objective	Countries								Mandate
		Bangladesh	India	Indonesia	Malaysia	Maldives	Myanmar	Sri Lanka	Thailand	
IOTC	Fishery Management		x		x			x	x	To promote cooperation between members for management, conservation and optimum utilization of tuna and tuna like species.
APFIC	Fishery Advisory	x	x	x	x		x	x	x	To promote utilization of living aquatic resources by development of fishing and culture operations.
BOB-IGO	Fishery Advisory	x	x			x		x		A small scale fisheries development program
SEAFDEC	Fishery Advisory			x	x		x		x	To develop fishery potentials in the Region.
INFOFISH	Fishery Advisory	x	x	x	x	x		x	x	To provide marketing information and technical advisory service to the fishery industry of the Asia-Pacific region.
NACA	Fishery Scientific	x	x	x	x		x	x	x	Promotion of rural development through sustainable aquaculture.
APEC	Economic			x	x				x	To give trade liberalization and economic cooperation further impetus and high-level commitment, to develop a spirit of community in the region and to promote sustainable growth and equitable development.
ASEAN	Economic			x	x		x		x	To accelerate economic growth, social progress and cultural development.
BIMSTEC+2	Economic	x	x				x	x	x	To foster socio-economic cooperation amongst member states.
SAARC	Economic	x	x			x		x		Economic and social development for people of South Asia.
IOMC	Economic			x				x		To enhance the economic and social development of Indian Ocean states
The Colombo Plan	Economic	x	x	x	x	x	x	x	x	An international economic organization for the strengthening of economic and social development in developing states in Asia and the Pacific.
SACEP	Environmental	x	x			x		x		To protect and manage the marine environment and related coastal ecosystems of the region
SAS	Environmental			x	x	x			x	To create an environment at the regional level, in which collaboration and partnership in addressing environmental problems of the South Asian Seas, between all stakeholders, and at all levels is fostered and encouraged; and to enhance the capacity of the participating governments to integrate environmental considerations into national development planning.
IOCINDIO	Research	x	x	x	x	x	x	x	x	To promote and coordinate programs that demonstrates and enhances the value of marine scientific research and systematic observations of the ocean in resolving the needs of member states.
WFC/Gofar*	Research		x	x	x			x	x	An ecosystem multidisciplinary partnership approached to fisheries research and development: improved productivity, environmental protection, saving biodiversity, improving policies and strengthening national programs.

\* International Mandate

IOTC	Indian Ocean Tuna Commission
APFIC	Asia-Pacific Fisheries Commission
BOB-IGO	Bay of Bengal Program Inter-Governmental Organization
SEAFDEC	South East Asian Fisheries Development Centre
INFOFISH	Intergovernmental Organization for Marketing Information and Technical Advisory Services for Fishery Products in the Asia – Pacific Region
NACA	Network of Aquaculture Centres for Asia
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of South East Asian Nations
BIMSTEC	Bangladesh, India, Myanmar, Sri Lanka and Thailand Economic Cooperation
SAARC	South Asian Association for Regional Co-operation
IOMC	Indian Ocean Marine Affairs Co-operation
The Colombo Plan	Colombo Plan for Cooperative Economic and Social Development in Asia and the Pacific
SACEP	South Asia Cooperative Environment Program
SAS	South Asian Seas
IOCINDIO	IOC Regional Committee for the Central Indian Ocean
WFC/Gofar	World Fish Centre, The Asia group of Fisheries and Aquatic Research



**Annex 2: Major Related Projects Financed by the Bank and/or other Agencies**  
**SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**

<b>Sector Issue</b>	<b>Project</b>	<b>Status</b>	<b>Latest Supervision (Form 590) Ratings (Bank-financed projects only)</b>	
<b>Bank-financed</b>			<b>Implementation Progress (IP)</b>	<b>Development Objective (DO)</b>
	Coral Reef Rehabilitation and Management Project (global)	On-going	S	S
	Conservation and Sustainable Use of Mesoamerican Barrier Reef (regional)	On-going	S	S
	Gulf of Aquba Environmental Action Plan (regional)	Closed	S	S
	Coral Reef Monitoring Network in Member States of Indian Ocean Commission with Coral Reef Monitoring Network (regional)	On-going	S	HS
	Coastal and Marine Biodiversity Management (Mozambique)	Active	S	S
	Coastal and Marine Conservation (Philippines)	Active	S	S
	Marine Biodiversity Protection and Management (Samoa)	Active	S	S
	Hon Mun MPA Pilot Project, (Vietnam)	Active	HS	S
	CORALINA Project (Colombia)	Active	HS	HS
	Strategic Action Program for Red Sea and Gulf of Aden	Active	S	S
	Lake Victoria Environmental, Management Project (regional)	Closed	S	S
	Coastal Contamination Prevention and Marine Management Project (Mozambique)	Active	U	S
	Integrated Coastal Management (Georgia)	Active	S	S
	Mekong River Water Utilization (regional)	Active	S	S
	Coral Reef Rehabilitation and Management program (II) Indonesia	Active	S	S
	Baltic Sea Regional Project	Active	S	S
	Nile Transboundary Environmental Action Project (regional)	Active	S	S

HS: Highly Satisfactory

S: Satisfactory

US: Unsatisfactory

**Annex 3: Results Framework and Monitoring**  
**SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**  
**Results Framework and Monitoring**

<b>Results Framework Global Environment Objective(GEO)/Project Development Objective (PDO)</b>	<b>Outcome (Process) Indicators</b>	<b>Use of Results Information</b>
<u>Global Environment Objective</u> To formulate an agreed on SAP whose implementation over time will lead to an environmentally healthy BOBLME.	- A SAP, supported by permanent institutional arrangements and funding, is put in place to support regional collaborative activities, policy reforms, and sustainable management activities in the BOBLME.	- Creation and use of an effective regional consultative mechanism by PY 1.
<u>Project Development Objective</u> To support a series of strategic interventions that will provide critical inputs into the SAP whose implementation will lead to enhanced food security and reduced poverty for coastal communities.	- Proposed actions in the SAP address the wellbeing of rural fisher communities through promoting regional approaches to resolving resource issues and barriers affecting their livelihood.	- Public consultations of national SAPs completed by PY 5
<b>Intermediate Results (one per component)</b>	<b>Results Indicators for Each Component</b>	<b>Use of Outcome Monitoring</b>
<b>Component One:</b> Regional and sub-regional collaborative management approaches applied to priority issues and barriers affecting coastal/marine living natural resources in the BOBLME and the livelihoods of dependent fisher communities.	<b>Component One:</b> - 6 pilot policy reforms in support of community-based fisheries management (ICM) achieved.  - <i>Establishment of conditions leading to the creation of a permanent Regional Fishery Body (%)</i> .  - <i>Regional statistical data protocols signed</i> .  - Fishery management plans developed and applied to the management of regional/sub-regional fish stocks.  - <i>Establishment of conditions leading to the creation of permanent bi-national commissions to manage critical trans-boundary ecosystems</i> - Development of bi-national management plans developed for critical trans-boundary ecosystems (%).	<b>Component One:</b> - Ascertain if "lessons learn" advocate meaningful policy reform by PY 2. - Confirm if mechanisms are in place to support policy reforms by PY 4. - <i>Interim Regional Fishery Task Force created by PY2</i> .  - <i>Regional statistical sub-committee established in PY1</i> . - Joint data collection /sharing for respective fisheries occurring by PY 3. - <i>Bi-national committees created by PY2</i> .  - Sector plans developed by PY 4 and PY5, respectively
<b>Component Two:</b> Increased understanding of large-scale processes and ecological dynamics and inter-dependencies characteristic of the BOBLME.	<b>Component Two:</b> - Agreed to plan of studies needed to address key data gaps serving as barriers to improving understanding of large-scale oceanographic and ecological processes controlling BOBLME living marine resources. - FSP in support of improved management of existing and creation of new MPAs approved and implemented. - establishment of regional MPA monitoring program  - development of a regional network of MPA managers  - Geo-referenced data base established	<b>Component Two:</b> - Completion of data inventory by PY 1.  - FSP proposal prepared and submitted by PY 2. - design of monitoring program and candidate sites identified by PY 2. - 1 <sup>st</sup> planning meeting of regional MPA managers held by PY2. - GIS database inventories completed by PY 1.
<b>Component Three:</b> Institutional arrangements and processes established to support a collaborative approach to ascertain and monitor the health of the BOBLME and priority coastal water quality issues.	<b>Component Three:</b> - Establishment of agreed to system-wide environmental health indicators. - <i>Strategy and action plan for regional pollution monitoring</i> .  - BOBLME countries agree to water quality criteria (%).	<b>Component Three:</b> - National workshops completed by end of PY 2 - National task forces created by end of PY 1 and data bases inventoried by PY 2. - Initial list of water quality parameters formulated by end of PY 2.

<b>Component Four:</b> Long-term sustainability of the BOBLME Program ensured.	<b>Component Four:</b> - Permanent institutional arrangements agreed to and established (%). - SAP completed and agreed to (%).  - Financial mechanism established (%).	<b>Component Four:</b> - Regional analysis completed by PY 2 - TDA finalized in PY 1 and establishment of regional SAP team by PY 2 - Financial study completed by PY 3 and final donor meeting held by PY 6.
<b>Component Five:</b> Institutional capacity established to co-ordinate regional interventions, monitor project impacts, and disseminate and exchange information.	<b>Component Five:</b> - Regional cooperation promoted through 6 meetings of the PSC. - Project monitoring program established and under implementation. - Project results and “lessons learned” disseminated (%).	<b>Component Five:</b> - Determine by PY 2 level of participation of fisheries and environmental agencies of 8 countries in PSC meetings.

### Arrangements for Results Monitoring

Outcome Indicators	Baseline	Target Values						Data Collection and Reporting		
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
<p>- A SAP, supported by permanent institutional arrangements and funding, is put in place to support regional collaborative activities, policy reforms, and sustainable management activities in the BOBLME.</p> <p>- Proposed actions in the SAP address the wellbeing of rural fisher communities through promoting regional approaches to resolving resource issues and barriers affecting their livelihood.</p>	None	-	-	-	-	-	1	Annual Regional Work Plan (ARWP)	M&E reports from project Management Information System (MIS)	RCU
								Report from mid-term review (MTR)	MTR	WB
								WB Implementation Completion Report (ICR)	ICR	WB
	To be completed in PY 1	-	-	-	-	-	1	ARWP	MIS	RCU
								MTR	MTR	WB
								ICR	ICR	WB

Results Indicators for each Component	Baseline	Target Values						Data Collection and Reporting		
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
<b>Component One:</b> - 6 policy reforms in support of community-based fisheries management (ICM) achieved. - <i>Establishment of conditions leading to a permanent Regional Fishery Body</i> - <i>Regional statistical data protocols signed.</i> - Fishery management plans developed and applied to the management of regional/sub-regional fish stocks. - <i>Establishment of conditions leading to the creation of permanent bi-national commissions to manage critical trans-boundary ecosystems</i> - Bi-national management plans developed for critical trans-boundary ecosystems.	None	-	-	-	2	2	2	ARWP Policy documents	MIS	RCU Consultants
	None	10%	20%	50%	70%	90%	100%	ARWP Legal documents	MIS	RCU Consultants
	None	-	-	-	-	3	-	ARWP Protocols	MIS	RCU BOBLME countries
	None	-	-	-	-	-	3	ARWP Management Plans	MIS	RCU Fishery TForces
	None	10%	20%	50%	70%	90%	100%	ARWP Bi-national agreements	MIS	RCU Commissions
	None	-	-	-	-	-	2	ARWP Management Plans	MIS	RCU Commissions
<b>Component Two:</b> - Agreed to plan of	None	-	-	1	-	-	-	ARWP	MIS	RCU

studies needed to address key data gaps serving as barriers to improving understanding of large-scale oceanographic and ecological processes controlling BOBLME living marine resources. -FSP in support of improved management of existing and creation of new MPAs/fish refugia approved and implemented. – establishment of regional MPA monitoring program - development of a regional network of MPA managers - Geo-referenced database established.								Study plan		Consultants  RCU BOBLME countries
None	-	-	1	-	-	-	-	ARWP Approved FSP proposal	MIS	RCU
None	-	-	-	1	-	-	-	ARWP	MIS	RCU
None	-	1	-	-	-	-	-	ARWP	MIS	RCU Consultants
National programs	-	1	-	-	-	-	-	ARWP GIS outputs	MIS	RCU
<b>Component Three:</b> - Establishment of agreed to system-wide environmental health indicators. - <i>Strategy and action plan for regional pollution monitoring.</i>  - BOBLME countries agree to water quality criteria (%).	None	-	-	-	1	-	-	ARWP System-wide plan	MIS	RCU Consultants
	None	-	-	-	-	-	-	ARWP Technical report	MIS	RCU Consultants
	None	-	-	-	30 %	60 %	100 %	ARWP Regional agreement	MIS	RCU BOBLME countries

<b>Component Four:</b> -BOBLME permanent institutional arrangements agreed to and established. - SAP completed and agreed to. - Financial administrative mechanism established.	None	-	-	50 %	-	-	100 %	ARWP PSC report	MIS	RCU PSC
	None	-	-	-	-	50 %	100 %	ARWP SAP	MIS	RCU
	None	-	-	-	-	-	1	ARWP Legal document	MIS	RCU
<b>Component Five:</b> - Regional co-operation promoted through meetings of the PSC. - Project monitoring program established and under implementation. - Project results and “lessons learned” disseminated.	None	1	1	1	1	1	1	ARWP PSC reports	MIS	RCU PSC
	None	1	-	-	-	-	-	ARWP	MIS	RCU
	None	10%	20%	50%	70%	90%	100%	ARWP Press releases Videos Website (# of “hits”)	MIS	RCU

## **Monitoring Arrangements**

Monitoring of project progress and outcomes would be a central function of the Regional Coordinating Unit (RCU) and will be the responsibility of one of the three internationally recruited RCU staff (who will also be responsible for IT issues). He/she will be supported at the regional level by a database/IT clerk and at country level by National Coordinators. Resources are provided in the project budget for the finalization of a monitoring system upon project start-up.

Indicators for monitoring purposes will be drawn from the Results Framework, adjusted where necessary and justified. Specific monitoring tasks will be defined in the context of technical and disbursement plans contained in the Annual Regional Work Plan (ARWP), broken down by quarter. Each ARWP will contain a monitoring program for the proposed activities, indicating which activities would require field interventions to gather data, and whether the task would be undertaken by the RCU staff member, the relevant National Coordinator or, in some cases, outside consultants.

Monitoring information may also be obtained from the independent scientific reviews conducted by members of either the Regional or National Scientific Advisory Panels (RSAP and NSAP, respectively), although this would largely be limited to assessment of research quality.

Each ARWP will contain a monitoring report, detailing the results of the previous year's monitoring activities.

### **Monitoring of Project Progress**

Project progress will be monitored largely through the recording and verification of inputs, including financial disbursements and technical levels-of-effort. Financial inputs (disbursements) will be largely drawn from the Executing Agency financial management system, while technical inputs will be drawn from reports from National Coordinators and regional sub-contractors. The monitoring system will specifically compare financial disbursements to technical activities programmed in the ARWP and identify and assess any significant discrepancies between the two.

### **Monitoring Activity Outcomes**

The monitoring of activity outcomes will constitute the second major output of the monitoring system. In some cases outcomes will be identifiable through evidence of training sessions, workshops or other activities. In others, the independent scientific review panels will provide confirmation of satisfactory results from studies etc. In some instances, however, it is anticipated there will be the need for physical inspection and/or surveying of activity sites and participants in order to confirm appropriate outcomes and assess their congruence with ARWP objectives. This latter task would often be undertaken by the relevant National Coordinator, or the RCU Monitoring and Information specialist (the latter particularly for regional activities), but may sometimes require the use of external consultants, and provision is made in the budget for their recruitment.



## **Evaluation of Project Impact**

The project will not directly attempt to evaluate project impact, as this is more appropriately undertaken by external assessors during project mid-term and final evaluations. However, the availability of base-line data may be critical for subsequent impact evaluation, and in the annual monitoring work program the RCU will nominate those activities believed to be of particular significance and for which, as a result, base-line assessment is considered cost-effective. The collection of base-line data would normally be contracted to an independent consultant not involved in project execution, working under the guidance of the National Coordinator and the RCU Monitoring and Information specialist.

*Ex-post* data gathering may also occur where this is specifically requested by the Executing or Implementing Agencies or, more commonly, by the project mid-term or final evaluation mission prior to their arrival or during their mission.

## **Dissemination of Project Activities and Results**

During the preparation of the BOBLME Project a number of the BOB governments emphasized their view that particular attention should be given to improved dissemination of knowledge concerning the Bay of Bengal Large Marine Ecosystem and the activities of the project itself. As a result, the dissemination of general information as well as project activities and results is considered to be an important element of the Project.

This task will be the second major responsibility of the Monitoring and Information Specialist and a communications program will be appended to the Annual Regional Work Plan, as well as a report summarizing communications activities over the past year. The specialist will be supported by an assistant trained in desktop publishing/website maintenance. Three specific target audiences are envisaged: national governments (in all BOBLME member countries); the regional and international scientific community, and the general public. Specific strategies and products will be developed to ensure that all three groups are reached.

Communications and dissemination tools will include a dedicated BOBLME web site, press releases, and promotional materials (e.g. brochures, posters). Periodic bulletins will be circulated to all NTF member institutions, research organizations, and relevant NGOs. During the course of the project a number of major communications efforts, for example the preparation of videos and similar materials for use on television and in schools, will be prepared using external specialists. Resources are provided in the project budget for the design and start-up of the website which will contain reports, news and public relations material, as well as for publishing costs for bulletins etc.

## **Annex 4: Detailed Project Description**

### **SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**

#### **General Aspects**

In view of the importance of a healthy BOBLME to the well-being and livelihoods of the millions of people living in the region, project preparation resources were approved by the GEF Secretariat to prepare the BOBLME Program. These grants, supplemented by additional co-financing, were used to: (i) put in place national and regional coordinating mechanisms to ensure broad-based stakeholder participation in the preparation of the project; (b) prepare baseline reports; (c) prepare a framework Trans-boundary Diagnostic Analysis (TDA); and (d) formulate the project document for GEF and other donor financing. Based on the consultations during preparation, the proposed initiative is envisaged as a long-term 10-15 year program consisting of two implementation phases. The first phase (designated as the Project), consists of a proposed budget of US\$28.5 million (with contingencies) and a duration of 6 years. The Project's principle output will be a Strategic Action Program (SAP) whose objective would be to protect the health of the ecosystem and manage the living resources of the Bay on a sustainable basis to improve the food and livelihood security of the region's coastal population. The SAP will provide a comprehensive framework and include well defined institutional and financial arrangements required to ensure the long-term sustainability of the BOBLME Program. It will also identify specific actions required to address the priority trans-boundary problems in the region. Potential investment, technical assistance and capacity-building interventions, both national and regional, will be proposed. The BOBLME countries have agreed that the SAP should initially focus on the management of living marine (fisheries) resources and the environmental threats to those resources. This approach could serve as a stepping stone to eventual cooperation on a more comprehensive scale.

It is within this context of the LME concept, SAP as output, and the process leading to the development of the framework TDA, the latter which served to identify priority issues, barriers, and need measures to address them, which has guided the project structure and activities.

The Project has been structured into the following five components:

1. Coastal/Marine Natural Resources Management and Sustainable Use
  1. Community-based Integrated Coastal Management (stock-taking)
  2. Improved Policy Harmonization (mainstreaming)
  3. Collaborative Regional Fishery Assessments and Management Plans
  4. Collaborative Critical Habitat and Management
2. Improved Understanding and Predictability of the BOBLME
  1. Large-scale Processes and Dynamics affecting the BOBLME
  2. Marine Protected Areas in the Conservation of Regional Fish Stocks
  3. Improved Regional Collaboration
  4. Establishment of a Geo-referenced Data Base
3. Maintenance of Ecosystem Health and Management of Pollution

1. Indicators of a Healthy BOBLME
2. Coastal Pollution Loading and Water Quality Criteria
4. Project Sustainability
  1. BOBLME Institutional Arrangements
  2. SAP Preparation
  3. Financial Sustainability
5. Project Management
  1. Establishment of the RCU
  2. Monitoring and Evaluation System
  3. Project Information Dissemination System

The total cost (with contingencies) of the project is an estimated US\$ 28.5 million (M). Distributed by funding source these are GEF (US\$ 12.1M), BOBLME Member States (US\$ 6.3M), co-financiers (US \$ 9.3M), and FAO (US \$0.8M). Funds would be allocated among the components as follows: 44.8 % for coastal resources and NRM; 15.5 % Improved Understanding of the BOBLME Environment; 4.7 % Maintenance of Ecosystem Health; 6.3 % Project Sustainability; and 28.7 % for Project Management.

All project-supported interventions are designed to act as a catalyst to promote the implementation of a more comprehensive approach to the management of the BOBLME. The project will support interventions at four levels: (i) regional, (ii) sub-regional (defined as two to seven countries), (iii) national (inter-ministerial), and (iv) sub-national (at the level of the community).

At the regional level, key activities/outputs will include: (i) development of a regional shark management plan; (ii) a harmonized system of fish data collection and data/information sharing; (iii) a process leading to the eventual establishment of a regional system of marine protected areas and fish refugia; (iv) a study identifying key data gaps and research priorities leading to an increased understanding of large-scale oceanographic and ecological processes in the BOBLME; (v) closer collaboration with other regional and global environmental monitoring programs; (v) a geo-referenced data base; (vi) a process leading to an agreed set of environmental indicators to measure the health of the BOBLME; (vii) a regional pollution assessment and process leading to the development of water quality criteria; (viii) permanent institutional arrangements and development of a financial sustainability mechanism and strategy; and (ix) a Regional Coordinating Unit (RCU).

At the sub-regional level, key activities supported under the project will be the development of: (i) fishery management plans for selected shared fish stocks, and (ii) collaborative approaches to manage coastal/marine ecosystems shared by two or more countries.

At the national level, key interventions include: (i) capacity building and training, (ii) improved policy framework, and (iii) information dissemination.

At the level of the community, key interventions include participation in sub-regional and national activities (e.g., pilots, alternative livelihoods, etc.).

Project outcomes include: (i) the establishment of permanent, financially sustainable institutional arrangements that will support the continued development and broadening of commitment to a regional approach to BOBLME issues; one which will be needed to support a longer term and comprehensive effort required for an area as large and complex as the BOBLME; (ii) creation of conditions leading to improved wellbeing of rural fisher communities through incorporating regional approaches to resolving resource issues and barriers affecting their livelihoods into the SAP and future BOBLME Program activities; (iii) support for a number of regional and sub-regional activities designed to promote collaborative approaches leading to changes in sources and underlying causal agents contributing to trans-boundary environmental degradation (defined both as shared and common issues); (iv) development of a better understanding of the BOBLME's large-scale processes and ecological dynamics; (v) establishment and monitoring of basic health indicators in the BOBLME; (vi) increased capacity; and (vii) processes leading to a long-term commitment from the BOBLME countries needed to address complex situations.

Project outcomes will be measured using the following outcome and process indicators: (i) an improved environment facilitating policy reforms in support of community-based integrated coastal resources management (ICM); (ii) conditions established conducive to the creation of a permanent regional fisheries body; (iii) regional statistical data protocols; (iv) fishery management plans for selected regional/sub-regional fish stocks; (v) conditions established conducive to the creation of permanent bi-national commissions and plans to manage selected critical trans-boundary ecosystems; (vi) an agreed set of research priorities leading to an improved understanding of BOBLME oceanographic and ecological processes; (vii) development of a FSP suitable for GEF funding in support of strengthening existing and creating new marine protected areas and fish refugia; (viii) a regional network of MPA/fish refugia managers; (ix) establishment of a geo-referenced data base; (x) an agreed set of indicators to measure environmental health of the BOBLME; (xi) strategy and action plan for regional pollution monitoring; (xii) water quality criteria agreed to by BOBLME countries for selected parameters; (xiii) permanent institutional arrangements for the BOBLME Program; (xiv) a Strategic Action Program (SAP); (xv) a self-financing mechanism; (xvi) a regional coordinating unit (RCU) and Project Steering Committee (PSC); (xvii) a project monitoring program; and (xviii) wide dissemination of project results and "lessons learned".

Under the Block and Supplemental Block B grants, there have already been extensive regional and national consultations over the period January 2003 to May 2004. These have included National task forces meetings, national workshops, the 1<sup>st</sup> Regional Workshop, the 1<sup>st</sup> and 2<sup>nd</sup> Regional Preparatory Meetings and the Regional Technical Meeting for the preparation of the logical framework (see Annex 12). In addition, other key inputs in the process of project preparation include national reports and regional thematic reviews together with comments from the national review group members on the national reports and from the project's International Scientific Review Group members on the regional thematic reviews. These provide ample evidence of the country commitment and consultation in the proposed BOBLME.

Stakeholder participation is included in all Project components at varying levels of intervention. At the community level, local participation is specifically identified and costed as key inputs into the: (i) "stocktaking" activities proposed (subcomponent 1.1); (ii) local capacity improvements as part of policy "mainstreaming" (subcomponent 1.2); development of all project-supported fishery management and critical habitat plans (subcomponents 1.3

and 1.4, respectively); and (iv) case studies and development of guidelines associated with assessing the role of fish refugia in the management of fish stocks in the BOBLME (subcomponent 2.1). Consultations at the national level will be ensured through the creation of Project-wide National Coordinators and Project Task Forces. Additionally, specific national consultations have been included and costed as workshops (subcomponent 1.1), national fishery task forces (component 1.3), and commissions (1.4). National consultations are the “heart” of the processes leading to the finalization of BOBLME institutional arrangements (4.1) and the development of an agreed on SAP. Finally, at the regional level there are a large number of workshops and consultations which will be supported across many of the components as well as the project-wide regional collaboration supported under the Improved BOBLME “predictability” subcomponent (2.2) and information dissemination subcomponent (5.3).

### **Detailed Description of Components**

#### **Component 1: Coastal/Marine Natural Resources Management and Sustainable Use (US\$ 12.8M, GEF US\$ 4.6M).**

##### ***Objectives:***

The objective of this component is to promote the development and implementation of demonstrative regional and sub-regional collaborative approaches to common and/or shared issues which affect the health and status of BOBLME.

##### ***Geographic scope:***

The scope of the component will be at the regional level for subcomponents 1.1, 1.2, and one fishery management plan (sharks) proposed under 1.3. Sub-regional activities under subcomponent 1.3 are proposed for the Indian mackerel and Hilsa sub-regional fishery management plans. Sub-regional activities under 1.4 are the development and implementation of sustainable management plans for the Mergui Archipelago (Myanmar and Thailand) and the Gulf of Mannar (India and Sri Lanka).

##### ***Activities:***

The component’s activities are described below by subcomponent.

##### **Subcomponent 1.1: Community-based Integrated Coastal Management**

**Objectives:** The objective of the subcomponent is to identify and evaluate the large and diverse body of information and experience associated with promoting: (i) community-based, fisheries and habitat management; (ii) co-management; and (iii) the creation of alternative livelihoods among fisher communities in the region; activities designed for purposes of reducing impact on coastal resources.<sup>14</sup> Specifically this subcomponent will complete a “stock-taking” exercise of the extensive experience in the BOBLME region and distil “lessons learned” to be used as a basis for supporting their “mainstreaming” through activities supported under subcomponent 1.2 below.

**Activities:** To achieve these objectives, the subcomponent will support the following activities: (i) a literature review and synthesis of findings, (ii) stakeholder consultations

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<sup>14</sup> By convention, these three activities have been collectively termed “community-based integrated coastal management.”

through focus group encounters and facilitated workshops, (iii) site visits and development of pre-selected case studies, and (iv) completion of the analysis.

**Target populations:** The primary target groups are the fisher and other rural coastal communities who have participated in the past and/or will benefit in the future from sound ICM policies.

**Expected results:** The expected results at the end of the subcomponent will be an up-to-date overview of community-based ICM projects and activities supported in the BOBLME region supported by detailed analysis and “lessons learned” and accompanying specific policy recommendations.

#### Subcomponent 1.2: Improved Policy Harmonization

**Objectives:** The objectives of the subcomponent are to: (i) promote better understanding of the policy processes in the BOBLME region, (ii) enhance capacity in the formulation of policy, (iii) promote the “mainstreaming” of selected policy recommendations stemming from subcomponent 1.1, above, and (iv) facilitating exchange of information on policy and legislation among regional institutional stakeholders. The outputs of the subcomponent will support existing and future mainstreaming activities and provide critical inputs into the Strategic Action Plan (SAP).

**Activities:** To achieve these objectives, the subcomponent will support the following activities: (i) policy studies, (ii) national technical workshops, (iii) regional policy meetings, (iv) strengthening of capacity in local policy formulation, (v) selected national policy interventions, and (vi) creation of a normative documents portal.

**Target populations:** The primary target groups are the national and local policy makers. Secondary target groups include the people whose lives would benefit from improved policies (mostly rural coastal communities) and the research community.

**Expected results:** Improved environment and capacity to formulate policies supportive of sustainable community-based integrated coastal management.

#### Subcomponent 1.3: Collaborative Regional Fishery Assessments and Management Plans

**Objectives:** To introduce and promote collaborative fisheries management approaches for selected key trans-boundary species through the development of regional and sub-regional management plans and harmonization of data collection and standardization.

**Activities:** To achieve these objectives, the subcomponent would support the following activities: (i) development of a regional fishery management plan for sharks; (ii) development of sub-regional fishery management plan for Indian mackerel (Bangladesh, India, Indonesia, Malaysia, Myanmar, and Thailand); (iii) development of sub-regional fishery management plan for Hilsa (Bangladesh, India, and Myanmar); and (iv) design and implementation of a common fishery data/information system in the BOBLME.

**Target populations:** The primary target groups are the coastal fishers whose livelihoods depend on the shark, Indian mackerel, and Hilsa fisheries. Secondary target groups include commercial fishing interests and fishery managers.

**Expected results:** Improved management of selected trans-boundary fish stocks through the development of regional and multi-national fishery management plans, an improved data base, and more effective institutional arrangements.

#### Subcomponent 1.4: Collaborative Critical Habitat Management

**Objectives:** To promote multi-national approaches to manage and address issues affecting trans-boundary coastal/marine eco-systems within the broader BOBLME region. To achieve these objectives, two candidate sites have been selected and initially prepared for inclusion under this subcomponent. These are the Mergui Archipelago (Thailand and Myanmar) and the Gulf of Mannar (India and Sri Lanka). The specific objectives for each site are to support a series of activities that will lead to the development of a bi-national collaborative institutional approach and system-wide master plan to facilitate the joint management of the respective ecosystems.

**Activities:** To achieve these objectives, the subcomponent will support the following activities: (i) contribute to the updating of the existing environmental baselines; (ii) address major data gaps in the baselines associated with basic oceanography, fish larval patterns, rare and endangered species, and the prevailing current regime; (iii) develop a systematic monitoring program based on current “best practices” in the region; (iv) develop and pilot alternative livelihood activities designed to mitigate existing non-sustainable fishing practices; (v) increase public awareness of the existence and significance of the ecosystems; and (vi) increase planning capacity and the development of bi-national management plans.

**Target populations:** The primary target groups in the two selected sites are the rural community coastal fishers whose livelihoods are based on healthy fish stocks and the underlying ecosystem on which the latter depend. Secondary groups include dive tour operators, tourists, coastal aquaculturalists, and researchers.

**Expected results:** The expected results at the end of the sub-projects are: (i) conditions leading to the establishment of a permanent bi-national institutional arrangements supporting the sustainable management of the ecosystems, (ii) updated management plans, (iii) increased awareness among the public and decision-makers of the significance of these areas, and (iv) improved understanding of alternative livelihood opportunities for reducing pressure on the fishery resource.

#### **Component 2: Improved Understanding and Predictability of the BOBLME Environment (US\$ 4.3M, GEF US\$ 3.6M).**

##### ***Objectives:***

The objective of the component is to support activities and participate and share information with other regional and global environmental monitoring programs which will lead to better understanding of the BOBLME ecological functions and processes.

##### ***Geographic scope:***

The scope of the component will be regional for all subcomponents.

**Activities:**

The component's activities are described below by subcomponent.

**Subcomponent 2.1 Improved Understanding of Large-scale Processes and Dynamics affecting the BOBLME**

**Objectives:** The objective of the subcomponent is to contribute to an improved understanding of large-scale oceanographic and ecological processes controlling BOBLME living resources.

**Activities:** To achieve this objective, the subcomponent would support: (i) an inventory and collection of relevant data sets that measure past variability in the BOBLME and its links to system productivity (e.g., data on monsoonal related phenomena, meteorology, oceanography, ocean color, and primary productivity); (ii) completion of 8 national retrospective studies; and (iii) regional workshops to identify and assemble datasets, identify data gaps, and plan relevant studies.

**Target populations:** The primary target groups include the research community (primarily oceanographers and fishery scientists) involved in activities leading to an improved understanding of large-scale processes in the BOBLME.

**Expected results:** Stocktaking of existing data sets and updating of existing knowledge of large-scale processes characterizing the BOBLME and identification of critical data gaps and needed studies to obtain a better understanding the relationships between large-scale BOBLME environmental variability and its effect on living resources.

**Subcomponent 2.2 Marine Protected Areas in the Conservation of Regional Fish Stocks**

**Objectives:** The objective of the subcomponent is to develop a better understanding of and promote a more comprehensive approach to the establishment and management of marine protected areas and fish refugia for sustainable fish management and biodiversity conservation objectives.

**Activities:** To achieve these objectives, the subcomponent would support the following activities: (i) establishment of a working group of regional experts in MPAs/fish refugia; (ii) review and updating of MPA/fish refugia classification criteria; (iii) inventory and updating of status of existing MPAs/fish refugia in the BOBLME; (iv) a gap analysis to assess effectiveness of existing system of MPAs in: (a) conserving biodiversity of global importance, and (b) providing critical habitat for priority trans-boundary fish stocks; (v) field-based case studies; (vi) establishment of common regional data requirements and protocols to promote national efforts to establish MPAs/fish refugia; (vii) mapping existing and potential MPA/fish refugia sites with GIS technology; (viii) development of a regional action plan that would lead to the strengthening of existing and creation of new priority MPAs/fish refugia under a separate FSP; (ix) training and capacity building; (x) awareness and outreach activities; (xi) supporting studies and (xii) preparation of a full sized project proposal for management of existing and creation of new MPAs.



**Target populations:** The primary target groups are the public bodies and/or rural fishing communities responsible for the creation and management of marine protected areas and fish refugia in the BOBLME region.

**Expected results:** Establishment of the necessary enabling conditions that will lead to the creation of one or more sub-regional/regional systems of MPAs/fish refugia in a subsequent BOBLME phase.

### Subcomponent 2.3 Improved Regional Collaboration

**Objectives:** The objective of the subcomponent is to establish effective partnerships with other regional and global environmental assessment and monitoring programs that would serve to achieve a better understanding of the status and processes characteristic of the BOBLME.

**Activities:** To achieve these objectives, the subcomponent could support participation in relevant activities and processes associated with one or more of the following programs: (i) the Global International Waters Assessment (GIWA) of trans-boundary region # 55, once follow-up activities are determined; (ii) coastal module activities (e.g., sustainable fisheries and marine biodiversity) associated with the Indian Ocean Global Ocean Observing System (IOGOOS); (iii) Global Coral Reef Monitoring Network (GCRMN); (iv) strategies and measures supported under the regional implementation of the Global Plan of Action (GPA) in South Asian Seas; (v) UNEP's East and South Asian Seas Programs; and (vi) the South Asia Co-operative Environment Program (SACEP). In addition, the project would expect to co-ordinate closely with other relevant GEF-supported regional (e.g., the currently active Andaman Sea and Gulf of Mannar initiatives) and global (e.g., IW:LEARN) projects.

**Target populations:** The primary target groups include existing and future partners involved in environmental assessment and monitoring relevant to the BOBLME.

**Expected results:** Increased co-ordination and collaboration with other regional and global programs leading to improved understanding of the BOBLME.

### Subcomponent 2.4 Establishment of a Geo-reference Data Base

**Objectives:** The objective of the subcomponent is to establish a project-wide geographic information system which will serve to integrate different data sets and facilitate increased awareness and understanding of the status and processes characteristic of the BOBLME.

**Activities:** To achieve these objectives, the subcomponent would support: (i) identification and inventorying of key project relevant geo-referenced data sets in the BOB region (e.g., fishery resources, critical habitats, coastal and near-shore marine pollution “hotspots” etc.); (ii) design and implementation of a common GIS data-model to store and retrieve geo-reference data on a regional basis; (iii) accessing and inputting existing and project-generated spatial data; (iv) production and dissemination of regional data products; and (v) training and technical assistance.

**Target populations:** The primary target groups include national executing BOBLME agencies and existing and future partners involved in supporting natural resources based/environmental development activities in the BOBLME.

**Expected results:** A GIS data-model for the storage of geo-reference data defining common standards and designed to facilitate: (i) greater exchange of data between participating BOB countries/agencies; (ii) increased understanding of the current status, processes and characteristics of the BOBLME; (iii) identification of critical data gaps; and (iv) monitoring of project-supported activities and other developments relevant to the Project.

**Component 3: Maintenance of Ecosystem Health and Management of Pollution** (US\$ 1.3 M, US\$ GEF 0.5).

***Objectives:***

The objective of the component is to support activities leading to an agreed on set of environmental indicators to measure the health of the BOBLME and the development of a regional collaborative approach to identifying important coastal water pollution issues and to develop remedial strategies.

***Geographic scope:***

The project component is focused on the coastal waters of the Bay of Bengal and Straits of Malacca, and some of the major rivers that feed into them.

***Activities:***

The component's activities are described below by subcomponent.

**Subcomponent 3.1 Establishment of an Agreed to Ecosystem Indicator Framework**

**Objectives:** The objective of the subcomponent is to establish an agreed to ecosystem indicator framework designed to measure progress toward sustaining BOBLME health.

**Activities:** To achieve this objective, the subcomponent would support: (i) a series of national workshops to identify existing indicators of environmental health used in BOBLME countries, gaps, and development of a suite of indicators and accompanying quantitative objectives; and (ii) a regional workshop to reach consensus of system-wide indicators, thresholds and targets, and timelines for achieving objectives.

**Target populations:** The primary target groups include representatives from national and state/provincial authorities responsible for assessing and monitoring a range of parameters reflecting environmental health of the BOBLME.

**Expected results:** Agreed on national and regional ecosystem frameworks designed to establish a common baseline and monitoring of future environmental health of the BOBLME.

**Subcomponent 3.2 Coastal Pollution Loading and Water Quality Criteria**

**Objectives:** Development of a regional collaborative approach to identifying important coastal water pollution issues and to develop remedial strategies.

**Activities:** Specifically, under this component, the BOBLME Project would support the following activities: (i) meetings (Think Tanks) to develop a coastal water quality monitoring mechanism for the region, investigate and propose ambient water quality criteria, develop approaches to addressing identified pollution hotspots, and provide background documentation to support a regional mechanism for managing pollution; (ii) address identified capacity needs for monitoring and managing water quality and disseminating information; (iii) develop a systematic coastal water quality program capable of identifying pollution “hotspots” in relation to agreed criteria, including a pilot monitoring program of selected “hotspots”; (iv) annual technical meetings to discuss results obtained and their implications, provide support for problems encountered and share lessons learned; and (v) increase public awareness particularly among decision makers and the public of the pollution problems in the BOBLME and impacts on the regions shared ecosystem and its resources.

**Expected results:** A strategy and action plan for the implementation of a regional pollution monitoring and management program which would include: (i) a monitoring design for the region; (ii) a mechanism for information-sharing, including GIS of monitoring results; (iii) agreed ambient water quality criteria; an initial list of priority “hotspots” identified during pilot monitoring; (iv) proposed corrective strategies and timeframes for reducing pollution loads to acceptable levels; and (v) building large-scale awareness of pollution issues in the region and the relationships between ecosystem health and human welfare.

#### **Component 4: Project Sustainability (US\$ 1.8M, GEF US\$ 0.6M).**

##### ***Objectives:***

The objective of the component is to ensure the long-term institutional and financial sustainability of the BOBLME Program.

##### ***Geographic scope:***

The scope of the component will be regional for all subcomponents.

##### ***Activities:***

The component’s activities are described below by subcomponent.

#### **Subcomponent 4.1 BOBLME Institutional Arrangements**

**Objectives:** The objective of the subcomponent is to identify and establish agreed to permanent institutional arrangements ensuring the long-term management of the BOBLME.

**Activities:** To achieve these objectives, the subcomponent would support the following activities: (i) comprehensive national and regional institutional analyses, (ii) consultative workshops, (iii) regional meetings, and (iv) an inter-ministerial conference.

**Target populations:** The primary target groups are national stakeholders, existing and future partners, and individuals who would receive benefits over the long-term from a more comprehensive approach to the management of the BOBLME.

**Expected results:** Agreed to institutional arrangements to manage the BOBLME Program.

#### **Subcomponent 4.2 SAP Preparation**

**Objectives:** The objective of the subcomponent is to prepare an agreed Strategic Action Program (SAP).

**Activities:** To achieve these objectives, the subcomponent would support the following activities: (i) review of the previously experience associated with SAPs, (ii) establishment of national (and a regional) SAP teams, (iii) finalization of the TDA, (iv) political consultations, (v) preparation of the draft SAP, (vi) public consultations and national endorsements, (vii) adoption of BOBLME governments, and (viii) publication and dissemination.

**Target populations:** The primary target groups are the national public stakeholders, existing and future partners, and individuals who would receive benefits over the long-term from a financially-sustainable BOBLME.

**Expected results:** A comprehensive framework and plan of action whose implementation will lead to a more healthy BOBLME and management of the living resources on a sustainable basis to improve the food and livelihood security of the region's coastal population.

#### Subcomponent 4.3 Financial Sustainability

**Objectives:** The objectives of the subcomponent are to: (i) design and establish a financing mechanism to fund the annual recurrent costs of agreed on BOBLME management structure ensuring the continued beneficial impact of the BOBLME Program; and (ii) assist BOBLME countries to prepare for the mobilization of financial resources and development of financial mechanisms for implementing specific actions that will be developed, agreed and included under the SAP (see below).

**Activities:** To achieve these objectives, the subcomponent would support the following activities: (i) establish an ongoing dialogue and relationship with potential partners and stakeholders, (ii) establish appropriate regional and national institutional mechanisms to generate and administer program-related funds, and (iii) the testing of activity-specific financing mechanisms designed to cover their respective recurrent costs.

**Target populations:** The primary target groups are existing and future partners, stakeholders, and individuals who would receive benefits over the long-term from a financially-sustainable BOBLME.

**Expected results:** A financially-sustainable BOBLME.

#### **Component 5: Project Management (US\$ 8.2 M, GEF US\$ 2.7M).**

##### ***Objectives:***

The objective of the component is to establish a cost-efficient project management, M&E, and information dissemination capacity and process leading to the successful implementation of the BOBLME Program.

##### ***Geographic scope:***

The scope of the component will be regional for all subcomponents.

### ***Activities:***

The component's activities are described below by subcomponent.

#### **Subcomponent 5.1 Establishment of the RCU**

**Objectives:** The objective of the subcomponent is to establish a regional coordinating unit (RCU) whose responsibility is to ensure the cost-effective coordination of all BOBLME supported activities leading to the finalization of the Strategic Action Program.

**Activities:** To achieve these objectives, the subcomponent would support the following activities: (i) recruitment of a mixed international and national staff, (ii) completion of arrangements with the host-government to support the RCU office, (iii) purchase of necessary equipment, and (iv) operations.

**Target populations:** The primary target groups are the partners, stakeholders, and beneficiaries of the BOBLME Program.

**Expected results:** The successful execution of the BOBLME Project (1<sup>st</sup> phase) in a cost-effective manner.

#### **Subcomponent 5.2 Monitoring and Evaluation System**

**Objectives:** The objective of the subcomponent is to establish a cost-effective monitoring and evaluation system in conformity with existing FAO and World Bank policies and procedures.

**Activities:** To achieve these objectives, the subcomponent would support the following activities: (i) recruitment of a monitoring and information specialist (costed under subcomponent 5.1); (ii) design (or purchase) of software to support computer-based M&E program; (iii) provision of training to national coordinators (and outside regional contractors) to facilitate accurate data collection, formatting, and reporting to the RCU; and (iv) a mid-term and final project evaluation.

**Target populations:** The primary target groups are the partners, stakeholders, and beneficiaries of the BOBLME Program.

**Expected results:** Successful execution of the 1<sup>st</sup> phase Project of the BOBLME Program through the establishment of an accurate and transparent monitoring program providing the basis to make timely decisions to address issues as they arise.

#### **Subcomponent 5.3 Project Information Dissemination System**

**Objectives:** The objective of the subcomponent is to disseminate information to regional and global stakeholders relevant to the BOBLME and the BOBLME Program.

**Activities:** To achieve these objectives, the subcomponent would support the following activities: (i) contract the monitoring and information specialist (costed under subcomponent 5.1), (ii) establish a dedicated website, (iii) press releases, (iv) development of promotional materials, and (v) the design and dissemination of country-specific audio-visual materials. In

addition, the IW:LEARN Project, which is about to enter its second phase, could include hosting learning exchanges associated with the BOBLME through the IW:Learn website ([www.IWLearn.net](http://www.IWLearn.net)). These learning exchanges could feature, among other themes: (i) results associated with the ICM “stock-taking” and policy “mainstreaming” subcomponents; (ii) experiences gleaned from promoting regional and sub-regional approaches to fisheries management; and (iii) approaches to reaching consensus on coastal water quality criteria.

**Target populations:** The primary target groups are the regional and global BOBLME stakeholders.

**Expected results:** Increased regional/global awareness about the objectives of, approach to, and “lessons-learned” derived from the BOBLME.

**Annex 5: Project Costs**  
**SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**

**Project Cost by Component/Subcomponent**

Component	Total (US \$ '000)	% Total Base Costs
<b>A. Coastal/Marine Natural Resources Management and Sustainable Use</b>		
1. Community-based Integrated Coastal Management (stocktaking)	389.1	1.7
2. Improved Policy Harmonization and Institutional Strengthening (mainstreaming)	1,894.2	8.4
3. Collaborative Regional Fishery Assessments and Management Plans	6,024.4	26.6
4. Collaborative Critical Habitat and Management	1,843.3	8.1
<b>Subtotal: Coastal/Marine Natural Resources Management and Sustainable Use</b>	<b>10,150.9</b>	<b>44.8</b>
<b>Improved Understanding and Predictability of the BOBLME</b>	<b>A.</b>	
1. Large-scale Processes and Dynamics affecting the BOBLME	B. 328.	1.5
2. Marine Protected Areas in the Conservation of Regional Fish Stocks	6	11.6
3. Improved Regional Collaboration	C. 2,63	0.4
4. Geo-referenced Data Base	6.9	2.1
<b>Subtotal: Improved and Predictability of the BOBLME</b>	<b>D. 90.0</b>	<b>15.5</b>
	<b>E. 466.</b>	
	<b>0</b>	
	<b>F. 3,52</b>	
	<b>1.5</b>	
<b>C. Maintenance of Ecosystem Health and Management of Pollution</b>		
1. Indicators of a Healthy BOBLME	259.4	1.1
2. Coastal Pollution Loading and Water Quality Criteria	795.6	3.5
<b>Subtotal: Maintenance of Ecosystem Health and Management of Pollution</b>	<b>1,055.0</b>	<b>4.7</b>
<b>D. Project Sustainability</b>		
1. BOBLME Institutional Arrangements	258.4	1.1
2. SAP Preparation	980.9	4.3
3. Financial Sustainability	188.8	0.8
<b>Subtotal: Project Sustainability</b>	<b>1,428.1</b>	<b>6.3</b>
<b>E. Project Management</b>		
1. Establishment of the RCU	5,093.5	22.5
2. Monitoring and Evaluation System	813.7	3.6
3. Project Information Dissemination System	595.4	2.6
<b>Subtotal: Project Management</b>	<b>6,502.5</b>	<b>28.7</b>
<b>Total BASELINE COSTS</b>	<b>22,658.0</b>	<b>100.0</b>
Physical Contingencies	3,851.9	17.0
Price Contingencies	1,971.9	8.7
<b>Total PROJECT COSTS</b>	<b>28,481.8</b>	<b>125.7</b>

### Project Cost by Expenditure Accounts

Project Cost by Category	Total (US \$ '000)	% Total Base Costs
<b>I. Investment Costs</b>		
A. Equipment and Furniture	420.6	2
B. Vehicles	15.0	--
C. Technical Assistance	4,675.7	21
D. Studies and Workshops	7,421.5	33
E. Training	1,148.7	5
F. Publications	690.0	3
<b>Total Investment Costs</b>	<b>14,371.4</b>	<b>63</b>
<b>II. Recurrent Costs</b>		
A. Staff salaries	5,784.2	26
B. Office O&M Costs	2,295.3	10
C. Travel	207.1	1
<b>Total Recurrent Costs</b>	<b>8,286.6</b>	<b>37</b>
<b>Total BASELINE COSTS</b>	<b>22,658.0</b>	<b>100</b>
Physical Contingencies	3,851.9	17
Price Contingencies	1,971.9	8.7
<b>Total PROJECT COSTS</b>	<b>28,481.8</b>	<b>125.7</b>

### Financial Summary

	Years Ending December 31 (US\$ ' 000)						
	2006	2007	2008	2009	2010	2011	Total
<b>Total Project Costs</b>							
Total Investment	2,255.3	6,100.3	3,418.3	2,692.4	1,905.7	1,596.0	<b>17,968.0</b>
Total Recurrent Costs	1,367.2	1,701.4	1,928.1	1,862.1	1,835.5	1,819.5	<b>10,513.8</b>
<b>Financing Sources</b>							
GEF	1,646.4	4,142.6	2,277.8	1,579.8	1,273.4	1,176.0	<b>12,096.1</b>
Governments (cash)	194.5	433.4	420.4	453.4	364.2	330.2	<b>2,196.1</b>
Governments (in-kind)	358.0	578.0	750.4	655.8	597.4	553.2	<b>3,492.8</b>
GOI (cash)	97.6	92.4	95.0	97.4	99.8	102.4	<b>584.6</b>
NOAA (in-kind)	88.6	127.8	65.4	43.8	49.6	37.8	<b>413.0</b>
Other Co-financiers	1,077.6	2,154.4	1,624.4	1,632.6	1,258.6	1,370.0	<b>8,884.6</b>
FAO (in-kind)	159.8	273.0	113.0	91.6	98.0	79.0	<b>814.4</b>
<b>% of total project costs</b>							
GEF	5.8	14.5	8.0	5.5	4.5	4.1	<b>42.5</b>
Governments (cash)	0.7	1.5	1.5	1.6	1.3	1.2	<b>7.7</b>
Governments (in-kind)	1.3	2.0	2.6	2.3	2.1	1.9	<b>12.3</b>
GOI (cash)	0.3	0.3	0.3	0.3	0.4	0.4	<b>2.1</b>
NOAA (in-kind)	0.3	0.4	0.2	0.2	0.2	0.1	<b>1.4</b>
Other Co-financiers	3.8	7.6	5.7	5.7	4.4	4.1	<b>31.2</b>
FAO	0.6	1.0	0.4	0.4	0.3	0.3	<b>2.9</b>



## **Annex 6: Implementation Arrangements**

### **SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**

#### **Partnership Arrangements**

##### **BOBLME National Governments**

The long-term success of the BOBLME Program will ultimately depend on the shared vision, approach and commitment of the BOB countries to the Program's existence. Participating Governments can mobilize the global community to participate through strategic partnerships, primarily in the form of provision of support for activities which in turn will lead to the creation of the necessary enabling environment to achieve the aforementioned commitment over the long-term. National governments have demonstrated their substantial commitment to the 1<sup>st</sup> phase Project, through provision of significant levels of support in both cash and in-kind contributions. Cash contributions will be equivalent for all countries and be used to cover the costs of: (i) a contracted full-time national technical advisor, (ii) the *pro rata* portion of the salary of the national coordinator, (iii) associated office space and utilities, and (iv) in-country costs associated with sponsoring project-related national workshops and the participation of national representatives. In addition, BOBLME Governments will provide substantial in-kind contributions which will cover: (i) all counterpart salaries for workshops and training and local travel and (ii) the time of National Task Force members. Furthermore, there will be additional cash and in-kind contributions from the countries participating in the Mergui (Myanmar and Thailand) and Gulf of Mannar (Sri Lanka) sub-projects. Finally, India as host country has generously agreed to support the Regional Coordination Unit (RCU) which will be located in Chennai. Support will consist of provision of appropriate office space, related office operational costs and utilities including telecommunications, and the contracting of 3 support staff (secretary, driver, and cleaner). It is understood, this commitment may be adjusted once the BOBLME institutional arrangements have been finalized.

##### **GEF**

The GEF's added value is to provide incentives and financial support for national and local institutions to address priority trans-boundary environmental problems in the BOBLME. The Project's regional approach, with GEF support, will make financial resources available to recipient countries, to meet the "incremental costs" to address trans-boundary issues. GEF funds will assist in providing linkages and harmonizing national and local actions with regional environmental objectives.

##### **World Bank**

The WB will bring its extensive international experience and knowledge on coastal and marine issues in supervising the Project and assist client countries to benefit from experiences and lessons of similar projects around the world. It will support the Regional Coordinating Unit (RCU) with technical assistance, policy support and the sharing of "lessons-learned." In the implementation of the regional and sub-regional projects, the Bank, through its country offices will provide technical support and help seek assistance for specific investment opportunities at country level that may evolve during the implementation of the BOBLME.

## **FAO**

FAO is the leading international organization in the area of sustainable fisheries management and development. As the executing agency of the BOBLME Program, FAO will draw on its wide range of in-house expertise in the area of marine and coastal resources management and on 25 years of experience in the Bay of Bengal region, to support the proposed Project. An interdivisional Project Task Force (PTF) will be established and comprised of experts in the areas of marine resources assessment and management, fisheries policy and planning, fisheries statistics and information, legal expertise on institutional issues and on the sustainable management of trans-boundary fish stocks, among others. The Project will also benefit from FAO's extensive work on conservation and management of fisheries resources within the ecosystem context, with major emphasis on the implementation of the FAO Code of Conduct for Responsible Fisheries and associated International Plans of Action, at global and regional levels. It is understood that this expertise will be used largely for technical backstopping and that national/regional expertise will be used in implementing the Project wherever possible.

In addition to the technical support, FAO will provide administrative and operational support to the project, drawing on its network of decentralized country offices and field operations and technical staff in the Regional Office for Asia and the Pacific.

## **Co-Financiers**

Co-financing agencies are an essential partner to the BOBLME Program. GEF resources are only catalytic in nature and additional sources of financing and expertise are essential to achieving the identified Project objectives and Program goal over the longer term. This is particularly relevant in an area as large and complex as the BOB. Once confirmed, sources of finance are likely to represent a mix of traditional, re-directed, and leveraged, co-finance.

## **Structure for Project Management and Coordination**

Due to its multi-country scope, the BOBLME project encompasses both regional and national components, and encompasses a wide range of technical fields, including fisheries and other living marine resources, critical habitats, pollution and socio-economic issues, all of which will require technically competent oversight. Furthermore, as a preparatory project focused upon building trust and cooperation between participating countries, setting priorities and identifying strategic management options for the Bay of Bengal, the Project requires a considerable emphasis to be placed on inter-country coordination, communications and information dissemination.

The management structure presented in this annex and in the accompanying organogram fulfils not only an administrative and coordination function but also provides the basis for a range of other technical tasks not specific to individual activities. These include monitoring and information dissemination functions, as well as supervision of regional and national activities.

## **Project Steering Committee (PSC)**

The PSC will be the policy setting body for the project and will also have the responsibility for endorsing the Annual Regional Work Plan (ARWP), which will contain details of the previous years' technical activities and the plan for the next year. Composition will include two members nominated by each BOBLME member country; typically one will be drawn from the Ministry of Fisheries and the second from the Ministry of the Environment. In addition, representatives of the Executing and Implementing Agencies and co-financing agencies will be members. The Coordinator of the Regional Coordination Unit (RCU) will act as secretary. Chairmanship of the PSC will change annually (with no country repeating) and the country of the current chairman will normally be the host country for the annual PSC meeting. The chairman will retain contact with RCU during year and agree upon the site and agenda for the next meeting.

Once endorsed by the PSC, the annual regional work plan will be submitted to Executing/Implementing Agencies under signature of Chairman of the PSC. The PSC will also consider and provide comments on external evaluations and audits. The PSC will normally meet once a year, although exceptional meetings (e.g. during the first year of start-up, if required) could be called. TORs for the PSC are appended (Attachment 1a).

To facilitate this process of information exchange and learning, the World Bank will be represented by a senior official on the BOBLME Steering Committee in ex-officio capacity. This will provide a mechanism for ensuring adequate coordination and oversight of project implementation and information sharing within the Bank.

## **Regional Coordination Unit (RCU)**

The RCU will act as Secretariat to the PSC. It will coordinate work at the national level through the National Coordinators (NC) and at regional level through regional sub-contracting agencies or individuals. The RCU will play no direct role in the execution of the Project.

The RCU will be composed of three international staff, recruited from the region as far as possible, comprising a Coordinator, a Chief Technical Advisor and a Monitoring and Information Specialist. Three nationally recruited staff will provide the needed office management, financial management and IT skills. Support staff (secretary, driver, cleaner) and additional services not requiring a full-time staff member (e.g. legal, IT systems maintenance, and specific technical skills areas) will be contracted as required.

The primary responsibility of the RCU will be to ensure the effective development of the Trans-boundary Diagnostic Analysis (TDA) and the Strategic Action Program (SAP) as called for under the project document. This will be achieved by preparing and coordinating the implementation of an ARWP, which will draw upon Annual National Work Plans (ANWP) from each member state, as well as the programming of regional activities. The RCU will also develop and implement a monitoring program, a communications program and obtain independent scientific reviews of all significant technical matters (proposals or analyses). Reports on these activities, and financial results, will form part of the Work Plan submitted to the PSC. TORs for the RCU are appended (Attachment 1b).

## **National Task Forces and Coordinators**

The National Task Force (NTF) will guide the implementation of the project at national level. Its role will be analogous to that of the PSC, but at national level. Members of the NTF will be nominated by participating Ministries but will also include representatives from non-governmental, civil society and private sector organizations. The NTF will consider and endorse the ANWP for submission to the RCU, including specifications for work within the country over the next year, and support the timely undertaking of the work plan through activities of the National Coordinator, consultants and the National Scientific Advisory Panel (NSAP).

The National Coordinator will act as both Chairman and Secretary to the NTF and will be responsible for preparing agenda and documents required for NTF meetings, as well as directly supervising implementation activities within the country. He/she will be nominated by the lead Ministry for that country, and approved by the Executing Agency and will be supported by a secretary. TOR for the NTF and the National Coordinator are appended (Attachment 1c and 1d).

Representatives from the World Bank country offices, if present, will serve on the multi-sectoral National Task Forces, in ex-officio capacity that will be responsible for guiding the implementation of the BOBLME Project as well as provide opportunity for ensuring the project results feed into country dialogue and future investments.

## **Scientific Advisory Panels**

Scientific Advisory Panels are proposed at both regional and national levels. Each will consist of a roster of technical specialists, acknowledged as experts at their respective levels (regionally or nationally) who will be paid on an 'as required' basis, but with CVs and rates previously approved under professional service procurement arrangements. The roster will comprise at least two specialists for each of the main areas of focus for the project (i.e. fisheries/living marine resources, pollution, critical habitats and socioeconomic/livelihoods). Review of subject specific proposals/analyses will be by two or three related technical specialists. Review of technically broader documents will be by one specialist from each relevant field. Panel members will work independently, as under a peer review mechanism, and will not normally meet.

The Regional Scientific Advisory Panel will provide input to the policy guidance and work plan approval tasks of the Steering Committee, through the RCU. Their reviews will normally be attached to any technical document presented to the Steering Committee.

National Scientific Advisory Panels will provide similar reviews of national technical proposals or documents. TORs for the RSAP and NSAP are appended (Attachment 1e and 1f).

## **Annual Work Plans**

The ARWP is the central mechanism for guiding the work of the project and ensuring compliance of project activities with the overall Project Brief. It will be prepared by the RCU and submitted to the PSC for their endorsement within 45 days of the commencement of each

calendar year and will be derived from ANWP proposals for each country as well as projected regional activities. ARWPs will provide a review of the previous year's activities (national and regional) and proposed plans for coming year. They will include a discussion of technical activities, a provisional financial report (including expenditure projections and disbursement plans), and reports on communications/dissemination, monitoring and IT.

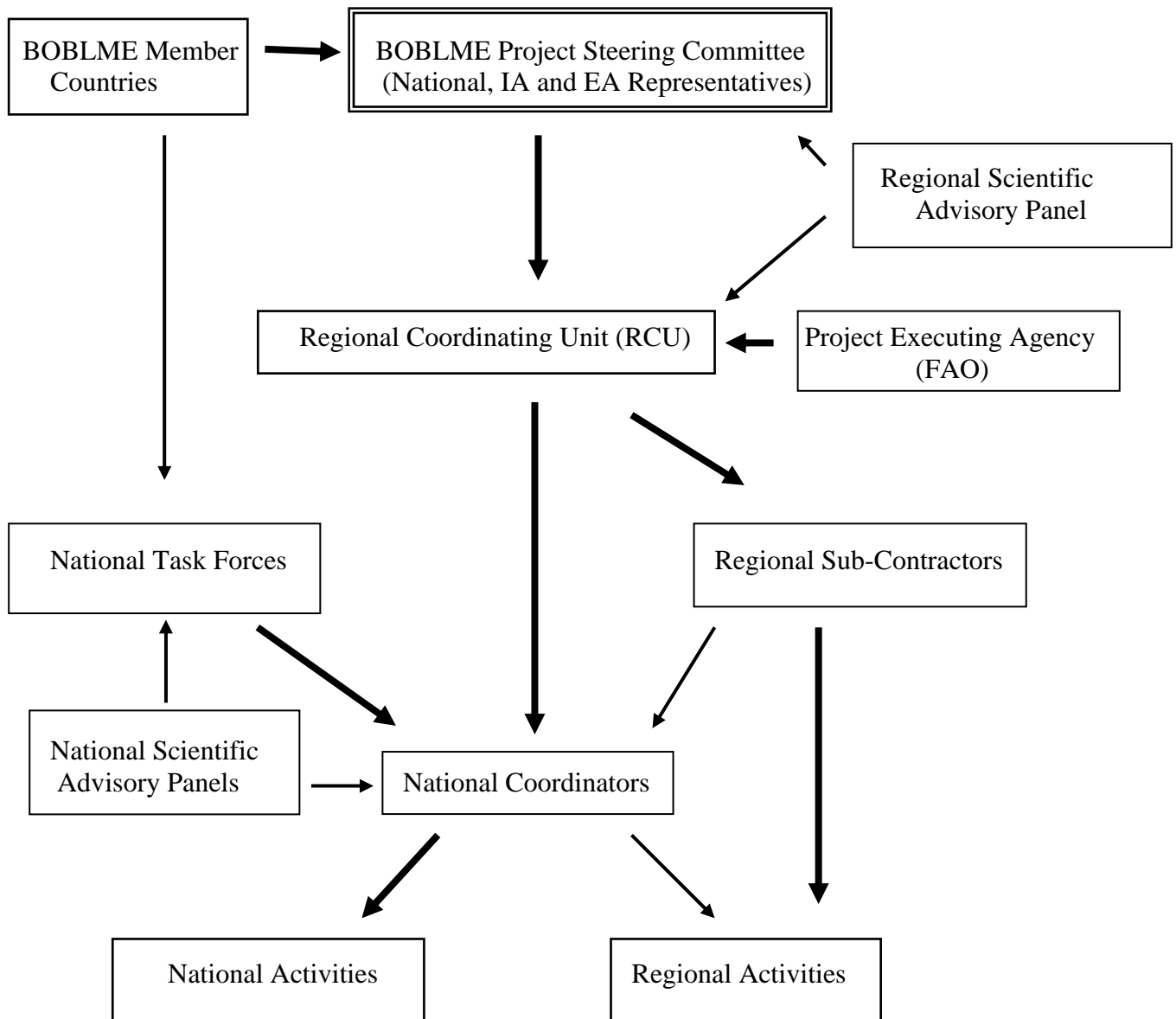
### **IT Systems**

IT systems for the project will be the responsibility of the internationally recruited Monitoring and Information Specialist with one nationally-recruited assistant. An office intranet will be established with a server to provide for common files and periodic tape back-up for the estimated eight users. Where feasible, National Coordinators will be enabled to upload and download data and other files through a web-based system. The printer and scanner will also be networked. IT systems maintenance (including ensuring updated security patches and data back-up) will be handled by a locally contracted IT company. The project website will be designed externally at the commencement of the project but will be maintained and updated by internal staff.

There will be close collaboration between the Monitoring and Information specialist and the Financial Controller to ensure the provision of management information and timely preparation of quarterly reports.

# BAY OF BENGAL – LARGE MARINE ECOSYSTEM PROJECT

## PROPOSED MANAGEMENT STRUCTURE



## **Attachment 1a: PROJECT STEERING COMMITTEE (PSC)**

### **Terms of Reference**

**Role:** The Project Steering Committee (PSC) will be responsible for providing general oversight of the execution of the Bay of Bengal Large Marine Ecosystems Project and will ensure that all inputs and processes required for the development of the Trans-boundary Diagnostic Analysis (TDA), the Strategic Action Program (SAP) and any additional activities agreed upon under the GEF project document are adequately prepared and carried out. In particular, it will:

- Provide overall guidance to the Regional Coordination Unit in the execution of the project.
- Ensure all project outputs are in accordance with the BOBLME Project Brief.
- Review, amend if appropriate, and approve the draft Annual Regional Work Plan of the project for submission to GEF and the designated Project Executing Agency.
- Facilitate the “mainstreaming” of relevant project findings and recommendations into national policy.

**Membership:** The PSC shall comprise two high level national representatives nominated by each participating member country (Maldives, Sri Lanka, India, Bangladesh, Myanmar, Thailand, Malaysia and Indonesia). Normally one national representative will be nominated from the Ministry of Fisheries or other national agency responsible for living marine resources, while the second representative will be from the Ministry of Environment or other national agency responsible for coastal and marine environmental issues. A senior official from the GEF Implementing Agency (World Bank) and Executing Agency (FAO) shall also be represented on the PSC, in ex-officio capacity. Other institutions active in the region such as UNDP, UNEP, the South Asian Cooperative Environment Program (SACEP), the International Maritime Organization (IMO) and co-financiers may also be requested to participate as observers. Experts selected for the Regional or National Scientific Advisory Panels will be ineligible for membership in the PSC. The Coordinator of the Regional Coordination Unit will be an ex-officio member of the PSC. Members of the PSC or their designated representatives are expected to participate on National Task Forces for their country of residence.

**Meetings:** Project Steering Committee meetings will normally be held annually, but the Chairman will have the discretion to call an additional meeting, if this is considered necessary (e.g. during the first year of execution, or for significant modifications to the approved Annual Regional Work Plan<sup>15</sup>). No more than 13 months may elapse between PSC meetings.

**Chairman:** The first PSC meeting will be chaired by the Coordinator of the RCU. At the termination of this meeting, the PSC will select a Chairman from among the national representatives on the PSC by a simple vote. The Chairman will serve for one year, finishing his/her term upon the completion of the PSC meeting held closest to one year after selection. At this point a successor Chairman shall be chosen by the PSC voting members in a similar manner. The position of Chairman is not renewable and the new Chairman shall not be of the same nationality as the outgoing Chairman. In liaison with the PSC Secretariat, the Chairman

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<sup>15</sup> Interim sessions of the PSC would not necessarily require a physical meeting, and could be undertaken by e-mail or other electronic format.

shall be responsible for determining the date, site and agenda of the PSC meeting(s) during his/her period of tenure, as well as the chairing of such meetings. He/she will ensure circulation by the Secretariat to PSC members of all relevant documents, and will sign approved Annual Regional Work Plans and any subsequent proposed amendments submitted to the GEF Executing Agency.

**Secretariat:** The Regional Coordinating Unit (RCU) of the project will act as Secretariat to the PSC and be responsible for providing PSC members with all required documents in advance of PSC meetings, including the draft ARWP and independent scientific reviews of significant technical proposals or analyses. The RCU will prepare written minutes of all PSC meetings and be responsible for logistical arrangements relative to the holding of such meetings.

**Compensation:** Travel and associated travel costs incurred by PSC national representatives attending PSC meetings shall be recompensed in accordance with GEF Executing Agency rules and regulations. No honorarium shall be paid to any person for their participation in PSC business or meetings.



## **Attachment 1b: REGIONAL COORDINATING UNIT (RCU)**

### **Terms of Reference**

**Role:** The Regional Coordinating Unit (RCU), under the supervision of the Project Steering Committee (PSC), will be responsible for management of all regional activities under the program, as well as supervision and oversight on national activities carried out through the National Task Forces (NTFs), particularly for the inputs and processes required for the development of the Trans-boundary Diagnostic Analysis (TDA), the Strategic Action Program (SAP) and any additional activities agreed upon under the GEF project document. In particular, it will:

- Undertake the preparation of the Annual Regional Work Plan (ARWP), including incorporating the contents of the approved Annual National Work Plans (ANWP), and present the draft document to the PSC for its approval
- Undertake, as required by the PSC, the recruitment of members of the Regional Scientific Advisory Panel (RSAC) for independent reviews of proposals and completed studies
- Provide overall guidance to the National Coordinators (NCs) in the execution of the program at the national level
- As provided for the ANWP, utilize RCU staff or recruited experts to undertake tasks of a regional nature
- Maintain records pertaining to the technical and financial aspects of program operation, including the monitoring of program activities and their outcomes
- Arrange for all PSC meetings, regional workshops and other multinational activities as agreed with the PSC
- Maintain minutes of PSC meetings and circulate these documents to all PSC members

The RCU will not be involved in the actual execution of Project activities.

**Composition:** The RCU shall initially comprise three international staff; a Program Coordinator, a Chief Technical Advisor and a Monitoring and Communications Specialist. These staff shall be assisted by three locally recruited skilled staff; a Financial Controller, a Senior Secretary/Office Manager and a IT/Database Clerk. There will also be three locally recruited support staff; a Secretary/Receptionist, a Driver and a Cleaner/Caretaker. Changes to this staffing may occur with the approval of the PSC and the funding agencies.

**Program Coordinator:** The RCU will be under the direct management of the Program Coordinator, and will also act as Secretary to the PSC. He/she will be responsible for the supervision of all RCU staff, as well as of the National Coordinators (NCs) and shall have overall responsibility, under the PSC, for program functioning and performance. Between PSC meetings the Coordinator will liaise with the current PSC chairperson and maintain effective working relations with each BOBLME member government and shall produce such periodic reports (financial and technical) as will be required. The Coordinator will have the responsibility for hiring and firing locally recruited staff, in accordance with laid down procedures, and will directly supervise the activities of the Financial Controller and the Senior Secretary.

The Program Coordinator will be qualified to post-graduate level (generally Ph.D.) in either a marine discipline or management, and will have at least 12 years professional experience in the marine sector. He/she will have previous successful management experience of large inter-disciplinary teams involving relations with senior government officials.

**Chief Technical Advisor:** Under the overall supervision of the Program Coordinator, the Chief Technical Advisor (CTA) will have primary responsibility for all program work relating to fisheries and living marine resources and will either conduct any such work occurring at regional level, or will recruit and supervise regional and international experts to do so. He/she will also, in agreement with the Monitoring and Information Specialist, undertake monitoring of the results of studies and other activities relating to his/her area of expertise conducted by the program, where this is not his/her own work.

The CTA will be qualified to post-graduate level (typically with a Ph.D.) in fisheries, living marine resources, or a comparable field, and will have a minimum of 10 years of experience including the conduct of research and the undertaking of sector studies within the marine sector.

**Monitoring and Information Specialist:** Under the overall supervision of the Program Coordinator, the Monitoring and Information Specialist will take responsibility for planning and conducting the monitoring activities required to provide adequate information on activities undertaken through the program and their outcomes. He/she will either undertake monitoring activities personally, or will recruit regional or international experts to do so. He/she will also supervise the monitoring activities conducted at national level by the National Coordinators. The Specialist shall also take responsibility for the operation of the program information technology (IT) system, which will include, among other activities, a web site with information on the program, a regular printed bulletin for distribution to member governments and relevant other organizations and individuals, a financial management system, and an e-mail system for staff. He/she will directly supervise the work of the IT/Data Entry clerk and any outside contractors hired to maintain system operation.

The Monitoring and Information Specialist shall be qualified to post-graduate level in informatics, computer science, management, economics or a related discipline and have at least 6 years experience of running information systems and planning and undertaking monitoring activities.

**Locally Recruited Staff:** Locally recruited staff will have responsibilities and possess qualifications as prepared by the Program Coordinator and approved by the PSC.

## **Attachment 1c: NATIONAL TASK FORCE (NTF)**

### **Terms of Reference**

**Role:** Each member country shall establish a multi-sectoral National Task Force (NTF) which will be responsible for guiding the implementation of the BOBLME project at national level. Specifically, it will:

- Approve the proposed Annual National Work Plan for submission to the Regional Coordinating Unit (RCU). The work plan will comprise reviews of activities undertaken and/or completed over the last year, as well as proposals for national project activities to be conducted over the next year.
- Establish the specifications, contents and a time frame for national work plan activities approved by the Project Steering Committee, and their resulting reports;
- Support the National Coordinator in overseeing the execution of national activities, and national components of regional activities undertaken within the country;
- In collaboration with the National Coordinator and RCU, request members of the National Scientific Advisory Panel (NSAP) to conduct independent evaluations of significant technical proposals, assessments and analyses, and take account of such comments;
- Convene, as required, thematic sub-groups to consider reports covering specific technical areas and associated NSAP evaluations;
- Schedule, organize and conduct such national workshops as may be decided upon in consultation with the National Coordinator and RCU;
- Ensure adequate communication of national activities to all stakeholders, including Government, private sector and NGOs, and invite and encourage the participation of non-NTF stakeholders, particularly local groups, in national activities and consultations when appropriate.

**Establishment:** The NTF shall be established as soon as possible following the first meeting of the BOBLME Project Steering Committee (PSC).

**Membership:** Where possible, national Governments will attempt to ensure that the NTF will be composed of representatives of: (a) all relevant Government Ministries and agencies; (b) the World Bank and FAO national office, as observers (if present); (c) national non-governmental organizations (NGOs) active in the areas of the environment, community development, women, fishery and other areas with respect to coastal and marine areas; (d) business and industrial associations representing private enterprises with an interest in marine, tourism and coastal activities; (e) senior academics and researchers working in the area of coastal and marine issues, and; (f) other stakeholders as deemed necessary. International donor agencies and NGOs active nationally in areas relevant to the project shall be offered observer status. The National Coordinator will act as Chairman of the NTF. No member of the NTF may also concurrently serve on the Regional or National Scientific Advisory Panels (RSAP/NSAP).

**Thematic Working Groups:** In consultation with the National Coordinator, the NTF shall, where deemed useful and necessary, establish small thematic working sub-groups in areas such as fisheries resources, oceanography, biodiversity, coastal zone management, aquaculture, legislation and socio-economics, to consider specific technical issues. Each sub-group will be led by a sectoral specialist from the NTF but membership may include specialists from the NSAP where appropriate.

**Meetings:** The National Task Force shall meet at least twice per year. One NTF meeting annually should focus on the review and approval of the Annual National Work Plan.

**Compensation:** Travel and associated travel costs incurred by out-stationed NTF representatives attending NTF meetings shall be recompensed in accordance with Executing Agency rules and regulations. No honorarium shall be paid to any person for their participation in NTF business or meetings.

## **Attachment 1d. NATIONAL CO-ORDINATOR**

### **Terms of Reference**

**Role:** The National Coordinator will take primary responsibility for the implementation of BOBLME activities within his/her country of operation and will ensure that all national inputs and processes required for the development of the Trans-boundary Diagnostic Analysis (TDA), the Strategic Action Program (SAP) and any additional activities agreed upon under the GEF project document are adequately prepared and carried out. Specifically he/she will:

- Act as Chairman and Secretary of the National Task Force (NTF), with responsibility for convening meetings, drafting agendas and assembling and preparing materials for consideration by the NTF;
- In consultation with the RCU, identify nominations for the National Scientific Advisory Panel (NSAP) and arrange for their pre-approval by the GEF Executing Agency;
- In consultation with the NTF and RCU, determine those proposals and studies requiring evaluation by the NSAP, select appropriate members of the NSAP for this purpose, and prepare TORs for their work;
- In consultation with the NTF and RCU, identify consultants to undertake national level assignments in accordance with the approved Annual Work Plan, and submit all required documentation to the RCU for their approval and contracting;
- Monitor and supervise the work of the above consultants, and as far as possible, ensure the timely and responsive delivery of contracted outputs;
- Provide assistance and support to staff of the RCU or regional consultants visiting, or engaged in assignments in, his/her country of responsibility, including preparing itineraries, appointments and assisting with travel and other logistical arrangements;
- In consultation with the NTF, determine dates, agendas, budgets and participation for national workshops, and upon approval of these plans by the RCU, undertake the organization and conduct of the workshops;
- Ensure adequate communication of national activities to all stakeholders, including Government, private sector and NGOs, and invite and encourage the participation of non-NTF stakeholders, particularly local groups, in national activities and consultations when appropriate.

The NC is expected and shall be able to contact and coordinate as necessary with other relevant government ministries and departments and state and local authorities whose input is important to the BOBLME Project, consistent with appropriate government communication channels.

**Requisites:** The National Coordinator shall be a senior official or expert in the field of fisheries and/or the marine environment nominated by the national Government and approved by the GEF Executing Agency. He/she shall have at least 10 years of demonstrable experience in the scientific and technical fields of fisheries (including aquaculture) and have a sound knowledge of environmental issues affecting coastal and marine resources. He/she shall have strong leadership capabilities, experience with regional fisheries bodies/agencies and possess proven experience in the administration and management of complex programs, as well as having strong written and oral communication skills in English.

**Duration and Commitment:** The minimum period of appointment of the National Coordinator shall be two years, and where the position is filled by a Government staff member, the Government shall provide written confirmation that the BOBLME process will have priority over other duties which to which he/she may also be assigned.

**Collaboration:** The National Coordinator shall communicate and/or meet with the Director of the RCU on a regular basis to ensure timely delivery of national inputs and to request assistance to address any problems that may arise during the course of the process, including the identification and recruitment of specialists unavailable within the country. He/she will also collaborate closely with any organization or individual undertaking an approved BOBLME regional activity or study which requires action or input within the country.

## **Attachment 1e. REGIONAL SCIENTIFIC ADVISORY PANEL (RSAP)**

### **Terms of Reference**

**Role:** The function of the RSAP is to provide independent advice and comments on the technical and scientific contents of all significant regional proposals, evaluations, assessments and reports.

**Membership:** The panel will consist of internationally recognized experts, normally trained to the Ph.D. level, with substantial experience gained from both Western and Eastern sections of the BOBLME area in the fields of living marine resources, oceanography, marine pollution, coastal management and related environmental, management and socio-economic issues. Preference will be given to citizens or residents of BOBLME member countries. The panel will comprise a minimum of three experts in each principal thematic area. Experts serving on the RSAP will not be eligible for membership of the PSC or NTFs.

**Selection:** The members of the RSAP shall be nominated by National Coordinators, the Program Steering Committee (PSC), project donors and the GEF Implementing and Executing Agencies. Final selection will be made by the GEF Executing Agency, after consultation with the PSC and project donors.

**Functioning:** In consultation with the RCU, the PSC will determine which documents shall be subject to independent scientific review. However, reviews shall always be conducted of proposals for major activities to be included in the Annual Work Plan as well as for reports arising from such activities. The members of the panel are not expected to meet and their work will be conducted under the peer review system. Normally, a thematic paper will be reviewed by three panel members who are experts in that area. Broader papers will be reviewed by at least one expert from each of the areas of relevance to the document or proposal.

**Compensation:** Experts selected for membership of the RSAP will have their CVs and honorariums pre-approved by the Executing Agency but will be paid only on an 'as-and-when-employed' basis. The RCU, in consultation with the PSC and the GEF Executing Agency, shall determine the level of effort required for each review.

## **Attachment 1f. NATIONAL SCIENTIFIC ADVISORY PANEL (NSAP)**

### **Terms of Reference**

**Role:** The function of the NSAP is to provide independent advice and comments on the technical and scientific contents of all significant national proposals, evaluations, assessments and reports.

**Membership:** The panel will consist of nationally recognized experts, normally trained to M.Sc. or Ph.D. level, either from the country or with extensive national experience, in the fields of living marine resources, oceanography, marine pollution, coastal management and related environmental, management and socio-economic issues. The panel will comprise a minimum of two experts in each principal thematic area. NSAP panel members are not eligible for membership of the PSC or NTFs.

**Selection:** The members of the NSAP shall be nominated by National Coordinators, national Governments and their agencies, project donors and the GEF Implementing and Executing Agencies. Final selection will be made by the RCU after consultation with the GEF Executing Agency.

**Functioning:** In consultation with the RCU, the NTF will determine which documents shall be subject to independent scientific review. However, reviews shall always be conducted of proposals for major national activities to be included in the Annual Work Plan as well as for reports arising from such activities. The members of the panel are not expected to meet and their work will be conducted under the peer review system. Normally, a thematic paper will be reviewed by two panel members who are experts in that area. Broader papers will be reviewed by at least one expert from each of the areas of relevance to the document or proposal.

**Compensation:** Experts approved for membership of the NSAP will have their CVs and honorariums pre-approved by the Executing Agency but will be paid only on an 'as-and-when-employed' basis. The NTF, in consultation with the RCU, shall determine the level of effort required for each review.



**Annex 7: Financial Management and Disbursement Arrangements**  
**SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**

**Annex 8: Procurement Arrangements**  
**SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**  
(Recommended length 2-4 pages)

*[The following standard text should be used. Insert additional text as needed per the instructions in brackets]*

**A. General**

Procurement for the proposed project would be carried out in accordance with the World Bank's "Guidelines: Procurement Under IBRD Loans and IDA Credits" dated May 2004; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, and the provisions stipulated in the Legal Agreement. The various items under different expenditure categories are described in general below. For each contract to be financed by the Loan/Credit, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

**Procurement of Works:** Works procured under this project would include: *[Describe the types of works]*. The procurement will be done using the Bank's Standard Bidding Documents (SBD) for all ICB and National SBD agreed with or satisfactory to the Bank. *[Indicate any special requirements specific to the project.] [If the project involves procurement carried out by communities, indicate where details can be found in the Project Implementation Manual or similar documents.]*

**Procurement of Goods:** Goods procured under this project would include :*[ Describe the types of goods]*. The procurement will be done using the Bank's SBD for all ICB and National SBD agreed with or satisfactory to the Bank. *[Indicate any special requirements specific to the project.]*

**Procurement of non-consulting services:** *[ Provide a general description of non-consulting services to be procured under the project and information on the bidding documents to be used for the procurement.]*

**Selection of Consultants :** *[Provide a general description of the consulting services from firms and individuals required for the project.]* Short lists of consultants for services estimated to cost less than \$\_\_\_\_\_equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. *[If applicable, provide any information regarding engaging universities, government research institutions, public training institutions, NGOs, or any special organizations.]*

**Operating Costs:** *[Describe the operating costs which would be financed by the project and procured using the implementing agency's administrative procedures which were reviewed and found acceptable to the Bank.]*

**Others:** *[Describe if any special arrangements for scholarships, grants etc. ]*

The procurement procedures and SBDs to be used for each procurement method, as well as model contracts for works and goods procured, are presented in the [*name the Project Implementation Manual or the equivalent document.*].

## **B. Assessment of the agency's capacity to implement procurement**

Procurement activities will be carried out by [*name of the Implementing Agency*]. The agency is staffed by [*describe the key staff positions*], and the procurement function is staffed by [*describe the staff who will handle procurement*].

An assessment of the capacity of the Implementing Agency to implement procurement actions for the project has been carried out by [*name of the procurement staff*] on [*date*]. The assessment reviewed the organizational structure for implementing the project and the interaction between the project's staff responsible for procurement Officer and the Ministry's relevant central unit for administration and finance.

The key issues and risks concerning procurement for implementation of the project have been identified and include [*describe the risks/issues*]. The corrective measures which have been agreed are [*Describe the corrective measures*].

The overall project risk for procurement is [*give the risk rating*].

## **C. Procurement Plan**

The Borrower, at appraisal, developed a procurement plan for project implementation which provides the basis for the procurement methods. This plan has been agreed between the Borrower and the Project Team on [*date*] and is available at [*provide the office name and location*]. It will also be available in the project's database and in the Bank's external website. The Procurement Plan will be updated in agreement with the Project Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

## **D. Frequency of Procurement Supervision**

In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended [*frequency*] supervision missions to visit the field to carry out post review of procurement actions.

## **E. Details of the Procurement Arrangements Involving International Competition**

### **1. Goods, Works, and Non Consulting Services**

(a) List of contract packages to be procured following ICB and direct contracting:

1	2	3	4	5	6	7	8	9
Ref. No.	Contract (Description)	Estimated Cost	Procurement Method	P-Q	Domestic Preference (yes/no)	Review by Bank (Prior / Post)	Expected Bid-Opening Date	Comments

(b) ICB contracts estimated to cost above [*fill in threshold amount*] per contract and all direct contracting will be subject to prior review by the Bank.

## 2. Consulting Services

(a) List of consulting assignments with short-list of international firms.

1	2	3	4	5	6	7
Ref. No.	Description of Assignment	Estimated Cost	Selection Method	Review by Bank (Prior / Post)	Expected Proposals Submission Date	Comments

(b) Consultancy services estimated to cost above [*fill in threshold amount*] per contract and single source selection of consultants (firms) for assignments estimated to cost above [*fill in threshold amount*] will be subject to prior review by the Bank.

(c) Short lists composed entirely of national consultants: Short lists of consultants for services estimated to cost less than [*fill in threshold amount*] equivalent per contract, may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

**Annex 9: Economic and Financial Analysis**  
**SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**

**Annex 10: Safeguard Policy Issues**  
**SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**

**Annex 11: Project Preparation and Supervision**  
**SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**

	Planned	Actual
PCN review		
Initial PID to PIC		
Initial ISDS to PIC		
Appraisal		
Negotiations		
Board/RVP approval		
Planned date of effectiveness		
Planned date of mid-term review		
Planned closing date		

Key institutions responsible for preparation of the project:

Bank staff and consultants who worked on the project included:

Name	Title	Unit
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Bank funds expended to date on project preparation:

1. Bank resources:
2. Trust funds:
3. Total:

Estimated Approval and Supervision costs:

1. Remaining costs to approval:
2. Estimated annual supervision cost:

**Annex 12: Documents in the Project File**  
**SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**

**Documents Available on the Internet for Public Consultations**  
(<http://www.fao.org/fi/boblme/website/reports.htm>)

**National Reports**

- Hossain, M.M.M. (2003)* National Report of Bangladesh. Unpublished report prepared for the BOBLME Program. Unedited version.
- Sampath, V. (2003)* National Report of India. Unpublished report prepared for the BOBLME Program. Unedited version.
- Purnomohadi, S. H. (2003)* National Report of Indonesia. Unpublished report prepared for the BOBLME Program. Unedited version .
- Omar, I.H. (2003)* National Report of Malaysia. Unpublished report prepared for the BOBLME Program. Unedited version.
- Ali, M. (2003)* National Report of the Maldives. Unpublished report prepared for the BOBLME Program. Unedited version.
- Myint, P. (2003)* National Report of Myanmar. Unpublished report prepared for the BOBLME Program. Unedited version.
- Joseph, L. (2003)* National Report of Sri Lanka. Unpublished report prepared for the BOBLME Program. Unedited version.
- Juntarashote, K. (2003)* National Report of Thailand. Unpublished report prepared for the BOBLME Program. Unedited version.

**Workshop Reports**

- BOBLME /REP/1 (2003) Verlaan, P.A. (ed.)* Report of the First Regional Workshop of the Bay of Bengal Large Marine Ecosystem Program. Pattaya, Thailand, 17-21 February 2003. BOBLME, Report No. 1, Chennai, India, in 2 volumes: Vol. 1, 40 pp., Vol. 2, 134 pp.
- BOBLME/REP/2 (2004)* Report of the Preparatory Meeting for the Second Regional Workshop of the BOBLME Program. Penang, Malaysia, 15-17 March 2004. Unpublished provisional version.
- Second Regional Workshop Report (**scheduled**)
- BOBLME/REP/3 (2004)* Report of the First Technical Meeting of the BOBLME Program. Bangkok, Thailand, 27-29 April 2004. Unpublished provisional version.
- BOBLME/IPSC (2001)* Report of the First Project Steering Committee Meeting of the BOBLME 28-29 January 2002, Chennai.
- BOBLME/2PSC (2003)* Report of the Second Project Steering Committee Meeting of the BOBLME 19 February 2003.
- BOBLME/3PSC (2004)* Report of the Third Project Steering Committee Meeting of the BOBLME 17 March 2004.



**BOBLME/4PSC/ Report of the Fourth Project Steering Committee Meeting (scheduled)**

**Theme Consultant Reports**

**Angell, C.L. (2004)** Review of Critical Habitats: Mangroves and Coral Reefs. Unpublished report prepared for the BOBLME Program. Unedited version.

**Edeson, W. (2004)** Review of Legal and Enforcement Mechanisms in the BOBLME Region. Unpublished report prepared for the BOBLME Program. Unedited version.

**Kaly, U.L. (2004)** Review of Land-based Sources of Pollution to the Coastal and Marine Environments in the BOBLME Region. Unpublished report prepared for the BOBLME Program. Unedited version.

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## List of Consultations

The logical framework of the program developed during the technical meeting held at Bangkok Thailand during 27-29 April 2004. List of participants is at Annexure-I.

Date	Meeting	Venue	Observations
29.1.2003	India - National Task Force	New Delhi	Establishing of the National Task Force and to guide in the preparation of the national, regional, thematic and summary report.
12.9.2003	India - National Task Force	New Delhi	Finalization and seeking comments and suggestions on the National Report
04.6.2004	India - Special Task Force	New Delhi	To discuss the Logical Frame Work
8.3.2003	Bangladesh - National Task Force	Dhaka	First National Task Force Meeting
18.9.2003			Comments and suggestions on the National Report
03.2.2003	Indonesia - National Task Force	Jakarta	Nomination of NC, NRG members
08.9.2003			Comments and suggestions on the National Report
4.4.2003	Malaysia - National Task Force	Penang	Nomination of the NRG and ISRG members
2.9.2003		Kuala Lumpur	Seeking comments and suggestions on the National Report
20.4.2003	Maldives - National Task Force	Maldives	Nomination of NC, NRG and ISRG members
25.1.2004			Comments and suggestions on the National Report
4.2.2003	Myanmar - National Task Force	Yangon	Discussions on how to protect the health of the Eco-systems and manage the living resources of the BOB improving food and livelihood security. Nomination of NC, NRG and ISRG members.
4.9.2003			Second National Task Force Meeting
2.4.2003	Sri Lanka - National Task Force	Colombo	Nomination of NC, NRG and ISRG members
12.9.2003			Second National Task Force Meeting
21.3.2003	Thailand - National Task Force	Bangkok	Nomination of NC, MRG and ISRG Members
26.8.2003			Second National Task Force Meeting
30-31/10/2003	India – National Workshop	Chennai	National Workshop
18-19/12/2003	Bangladesh - National Workshop	Dhaka	National Workshop
23-24/10/2003	Indonesia - National Workshop	Bogor	National Workshop
20-21/10/2003	Malaysia - National Workshop	Penang	National Workshop
30-31/12/2003	Maldives - National Workshop	Male	National Workshop
04.2.2003	Myanmar - National Workshop		National Workshop
11-12/11/2003	Sri Lanka - National Workshop	Colombo	National Workshop
29-30/10/2003	Thailand - National Workshop	Bangkok	National Workshop

Date	Meeting	Venue	Observations
<b>Project Steering Committee Meetings</b>			
28-29.1.2002	1 <sup>st</sup> Project Steering Committee Meeting	Chennai	Nomination of NC and PCS members Preparation for the 1 <sup>st</sup> Regional Workshop
19.2.2003	2 <sup>nd</sup> Project Steering Committee Meeting	Pattaya	Guidelines and dates were decided for holding the National workshops and National Task Force meetings
17.3.2004	3 <sup>rd</sup> Project Steering Committee Meeting	Bangkok	Co funding of projects/activities
	4 <sup>th</sup> Project Steering Committee	scheduled	
17-21.2.2003	First Regional Workshop	Bangkok	
15-17.3.2004	Preparatory Meeting	Penang	Member countries were requested to obtain endorsements for potential sources of co-financing activities.
27-29.4.2004	First Technical Meeting	Bangkok	Developed and reached agreement on a draft Logical framework
25-30.10.2004	Second Regional Workshop	Colombo	Scheduled

**Annex 13: Statement of Loans and Credits**  
**SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**

									Difference between expected and actual disbursements	
Project ID	FY	Purpose	Original Amount in US\$ Millions				Cancel.	Undisb.	Orig.	Frm. Rev'd
			IBRD	IDA	SF	GEF				
Total:			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**SOUTH ASIA**  
**STATEMENT OF IFC's**  
**Held and Disbursed Portfolio**  
**In Millions of US Dollars**

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
Total portfolio:		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

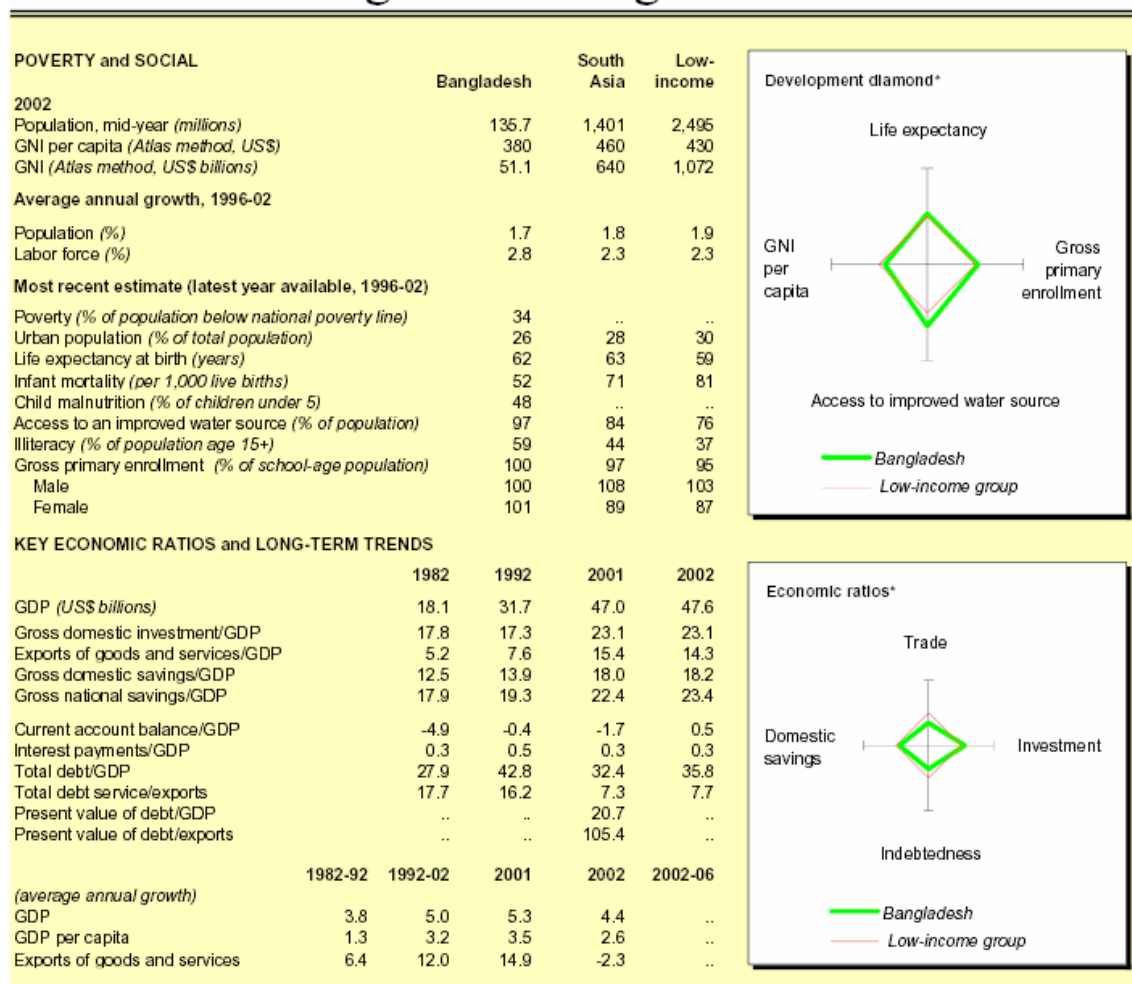
FY Approval	Company	Approvals Pending Commitment			
		Loan	Equity	Quasi	Partic.

## Annex 14: Country at a Glance

### SOUTH ASIA: Bay of Bengal Large Marine Ecosystem

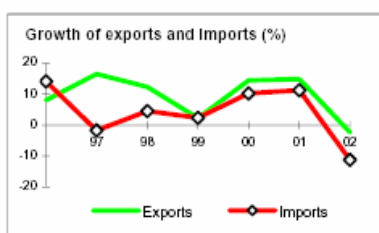
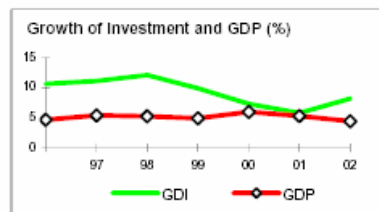
## Bangladesh at a glance

8/29/03



#### STRUCTURE of the ECONOMY

	1982	1992	2001	2002
(% of GDP)				
Agriculture	31.2	29.4	24.1	22.7
Industry	21.1	22.5	25.9	26.4
Manufacturing	13.7	13.9	15.6	15.9
Services	47.7	48.1	50.0	50.9
Private consumption	88.4	83.0	78.5	76.6
General government consumption	4.5	4.5	4.5	5.0
Imports of goods and services	15.9	12.3	21.5	19.0
	1982-92	1992-02	2001	2002
(average annual growth)				
Agriculture	2.2	3.4	3.1	0.0
Industry	6.0	7.1	7.4	6.5
Manufacturing	5.6	6.6	6.7	5.5
Services	3.7	4.8	5.5	5.4
Private consumption	3.0	3.7	4.8	-0.1
General government consumption	2.7	4.5	4.5	19.2
Gross domestic investment	6.3	9.6	5.8	8.2
Imports of goods and services	2.3	9.4	11.2	-11.2

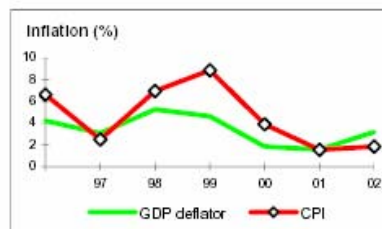


Note: 2002 data are preliminary estimates.

\* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

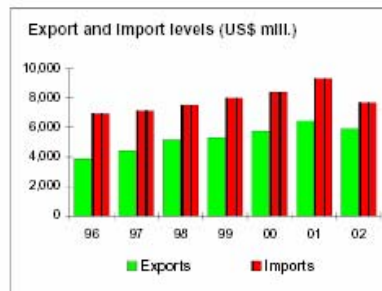
## PRICES and GOVERNMENT FINANCE

	1982	1992	2001	2002
<i>Domestic prices</i>				
(% change)				
Consumer prices	..	4.5	1.6	1.9
Implicit GDP deflator	9.7	3.0	1.6	3.2
<i>Government finance</i>				
(% of GDP, includes current grants)				
Current revenue	..	8.3	9.0	10.1
Current budget balance	..	1.9	1.4	2.1
Overall surplus/deficit	-9.6	-4.5	-5.0	-4.6



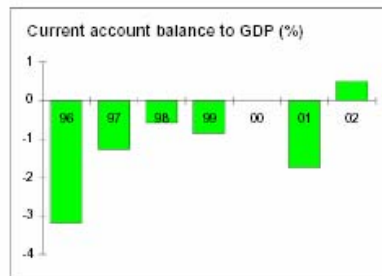
## TRADE

	1982	1992	2001	2002
(US\$ millions)				
Total exports (fob)	..	1,986	6,476	5,929
Raw jute	..	106	67	61
Leather and leather products	..	139	254	207
Manufactures	..	1,593	5,766	5,367
Total imports (cif)	..	3,526	9,363	7,697
Food	..	265	380	437
Fuel and energy	..	168	848	723
Capital goods	..	1,289	2,400	2,617
Export price index (1995=100)	..	86	112	115
Import price index (1995=100)	..	107	129	106
Terms of trade (1995=100)	..	81	87	108



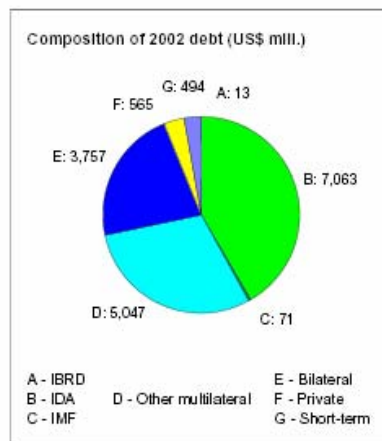
## BALANCE of PAYMENTS

	1982	1992	2001	2002
(US\$ millions)				
Exports of goods and services	840	2,468	7,235	6,794
Imports of goods and services	2,759	3,932	10,103	9,061
Resource balance	-1,919	-1,464	-2,868	-2,267
Net income	-97	-89	-264	-319
Net current transfers	1,121	1,435	2,316	2,826
Current account balance	-895	-118	-816	240
Financing items (net)	387	635	490	35
Changes in net reserves	508	-517	326	-275
<i>Memo:</i>				
Reserves including gold (US\$ millions)	..	1,600	1,307	1,583
Conversion rate (DEC, local/US\$)	20.0	37.7	54.0	57.4



## EXTERNAL DEBT and RESOURCE FLOWS

	1982	1992	2001	2002
(US\$ millions)				
Total debt outstanding and disbursed	5,054	13,561	15,216	17,010
IBRD	55	60	17	13
IDA	1,270	4,534	6,439	7,063
Total debt service	220	552	671	722
IBRD	3	7	7	7
IDA	9	52	143	156
Composition of net resource flows				
Official grants	759	357	287	410
Official creditors	739	623	419	220
Private creditors	21	-19	230	85
Foreign direct investment	7	4	174	65
Portfolio equity	0	6	0	-6
World Bank program				
Commitments	571	353	296	479
Disbursements	188	323	312	301
Principal repayments	0	24	99	112
Net flows	188	300	213	190
Interest payments	12	35	50	51
Net transfers	175	264	163	138



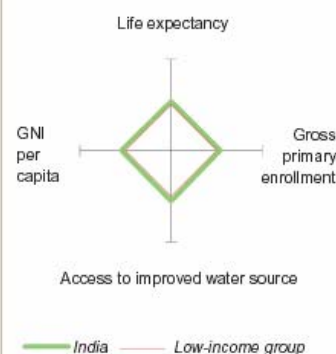
# India at a glance

7/30/04

## POVERTY and SOCIAL

	India	South Asia	Low-income
<b>2002</b>			
Population, mid-year (millions)	1,048.3	1,401	2,495
GNI per capita (Atlas method, US\$)	470	460	430
GNI (Atlas method, US\$ billions)	494.8	640	1,072
<b>Average annual growth, 1996-02</b>			
Population (%)	1.7	1.8	1.9
Labor force (%)	2.2	2.3	2.3
<b>Most recent estimate (latest year available, 1996-02)</b>			
Poverty (% of population below national poverty line)	29	..	..
Urban population (% of total population)	28	28	30
Life expectancy at birth (years)	63	63	59
Infant mortality (per 1,000 live births)	68	71	81
Child malnutrition (% of children under 5)	..	..	..
Access to an improved water source (% of population)	78	84	76
Illiteracy (% of population age 15+)	41	44	37
Gross primary enrollment (% of school-age population)	102	97	95
Male	111	108	103
Female	92	89	87

### Development diamond\*



## KEY ECONOMIC RATIOS and LONG-TERM TRENDS

	1982	1992	2001	2002
<b>GDP (US\$ billions)</b>	194.8	244.2	478.5	510.2
Gross domestic investment/GDP	21.7	23.8	22.3	22.8
Exports of goods and services/GDP	6.1	9.0	13.5	15.2
Gross domestic savings/GDP	18.3	21.8	21.7	22.5
Gross national savings/GDP	19.2	21.8	23.7	24.6
Current account balance/GDP	-2.0	-1.6	0.1	0.6
Interest payments/GDP	0.4	1.4	0.8	0.7
Total debt/GDP	14.1	37.0	20.4	20.6
Total debt service/exports	13.6	28.0	11.7	13.9
Present value of debt/GDP	..	..	14.2	..
Present value of debt/exports	..	..	84.7	..
<b>(average annual growth)</b>	<b>1982-92</b>	<b>1992-02</b>	<b>2001</b>	<b>2002</b>
GDP	5.6	6.0	5.2	4.6
GDP per capita	3.4	4.2	3.5	3.0
Exports of goods and services	6.9	13.5	7.1	21.8

### Economic ratios\*



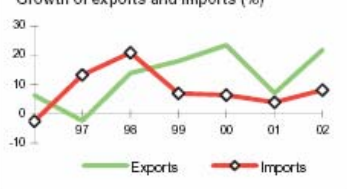
## STRUCTURE of the ECONOMY

	1982	1992	2001	2002
<b>(% of GDP)</b>				
Agriculture	35.9	30.9	25.0	22.7
Industry	25.8	26.7	25.7	26.6
Manufacturing	16.2	16.2	15.3	15.6
Services	38.3	42.3	49.4	50.7
Private consumption	69.9	65.8	65.9	65.0
General government consumption	10.7	11.2	12.5	12.5
Imports of goods and services	8.4	9.8	14.1	15.6
<b>(average annual growth)</b>	<b>1982-92</b>	<b>1992-02</b>	<b>2001</b>	<b>2002</b>
Agriculture	3.1	2.5	6.5	-5.2
Industry	6.7	6.2	3.4	6.4
Manufacturing	6.5	6.6	3.6	6.2
Services	6.8	8.2	6.8	7.1
Private consumption	5.3	5.0	6.2	-0.8
General government consumption	6.1	7.1	3.0	3.1
Gross domestic investment	5.7	7.2	1.6	9.5
Imports of goods and services	5.7	12.0	4.0	8.1

### Growth of Investment and GDP (%)



### Growth of exports and imports (%)



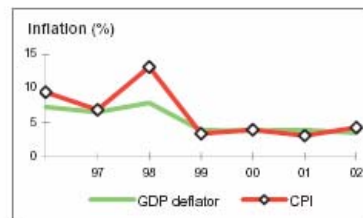
Note: 2002 data are preliminary estimates.

\* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.



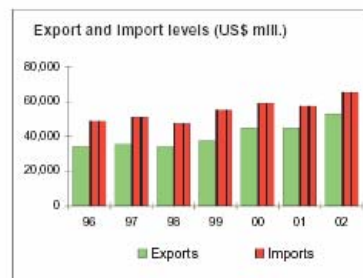
## PRICES and GOVERNMENT FINANCE

	1982	1992	2001	2002
<b>Domestic prices</b>				
(% change)				
Consumer prices	6.7	12.6	3.1	4.3
Implicit GDP deflator	7.7	8.8	3.9	3.5
<b>Government finance</b>				
(% of GDP, includes current grants)				
Current revenue	..	18.7	17.5	19.1
Current budget balance	..	-3.2	-8.1	-7.4
Overall surplus/deficit	..	-7.2	-10.5	-10.9



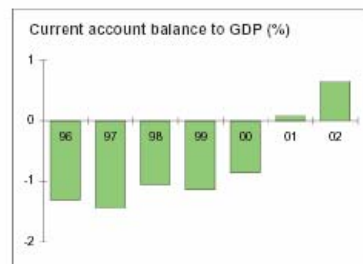
## TRADE

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total exports (fob)	9,490	18,869	44,915	52,512
Marine products	377	602	1,237	1,381
Ores and minerals	445	738	1,262	1,900
Manufactures	5,109	14,039	33,370	38,353
Total imports (cif)	16,468	24,316	57,618	65,422
Food	1,071	507	2,043	2,368
Fuel and energy	5,957	6,100	14,000	17,640
Capital goods	2,662	4,532	9,882	12,746
Export price index (1995=100)	94	95	90	101
Import price index (1995=100)	125	96	93	100
Terms of trade (1995=100)	75	99	97	101



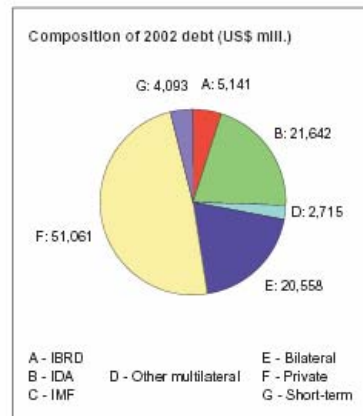
## BALANCE of PAYMENTS

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Exports of goods and services	12,377	23,599	65,580	77,475
Imports of goods and services	18,352	27,917	73,706	83,620
Resource balance	-5,975	-4,318	-8,126	-6,145
Net income	-335	-3,423	-3,601	-4,882
Net current transfers	2,510	3,852	12,125	14,807
Current account balance	-3,800	-3,889	398	3,727
Financing items (net)	3,101	4,692	11,359	13,682
Changes in net reserves	699	-803	-11,757	-16,980
<b>Memo:</b>				
Reserves including gold (US\$ millions)	4,896	9,832	54,106	75,428
Conversion rate (DEC, local/US\$)	9.7	30.6	47.7	48.4



## EXTERNAL DEBT and RESOURCE FLOWS

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total debt outstanding and disbursed	27,546	90,264	97,516	105,210
IBRD	1,395	9,326	7,015	5,141
IDA	6,983	15,438	20,402	21,642
Total debt service	2,054	7,697	9,327	13,042
IBRD	172	1,395	1,372	3,029
IDA	72	267	569	637
<b>Composition of net resource flows</b>				
Official grants	394	363	384	410
Official creditors	1,352	2,543	365	-3,657
Private creditors	1,180	1,563	-1,569	-1,861
Foreign direct investment	0	313	4,741	3,611
Portfolio equity	0	244	1,951	944
<b>World Bank program</b>				
Commitments	1,889	2,678	2,190	1,523
Disbursements	1,397	1,954	2,089	1,465
Principal repayments	98	834	1,467	3,196
Net flows	1,300	1,119	622	-1,730
Interest payments	146	828	474	470
Net transfers	1,153	292	148	-2,200



The World Bank Group: This table was prepared by country unit staff; figures may differ from other World Bank published data.

7/30/04

# Indonesia at a glance

9/3/2003

POVERTY and SOCIAL		Indonesia	East Asia & Pacific	Low-income	
2002					
Population, mid-year (millions)		211.7	1,838	2,496	
GNI per capita (Atlas method, US\$)		710	950	430	
GNI (Atlas method, US\$ billions)		149.9	1,740	1,072	
Average annual growth, 1996-02					
Population (%)		1.3	1.0	1.9	
Labor force (%)		2.2	1.2	2.3	
Most recent estimate (latest year available, 1996-02)					
Poverty (% of population below national poverty line)		16	..	..	
Urban population (% of total population)		43	38	30	
Life expectancy at birth (years)		67	69	59	
Infant mortality (per 1,000 live births)		34	33	81	
Child malnutrition (% of children under 5)		25	15	..	
Access to an improved water source (% of population)		78	76	76	
Illiteracy (% of population age 15+)		12	13	37	
Gross primary enrollment (% of school-age population)		110	106	95	
Male		111	105	103	
Female		109	106	87	
KEY ECONOMIC RATIOS and LONG-TERM TRENDS					
	1982	1992	2001	2002	
GDP (US\$ billions)	94.7	139.1	141.3	172.9	
Gross domestic investment/GDP <sup>1</sup>	27.8	30.5	21.8	20.2	
Exports of goods and services/GDP	25.3	27.9	42.3	35.4	
Gross domestic savings/GDP	29.0	33.4	24.9	21.1	
Gross national savings/GDP	..	21.4	22.8	17.1	
Current account balance/GDP	-5.6	-2.0	4.9	4.3	
Interest payments/GDP	1.6	2.7	3.2	1.8	
Total debt/GDP	26.5	63.3	94.2	74.5	
Total debt service/exports	18.1	32.6	25.9	23.7	
Present value of debt/GDP	..	..	93.0	..	
Present value of debt/exports	..	..	235.5	..	
	1982-92	1992-02	2001	2002	2003-07
(average annual growth)					
GDP	6.9	2.5	3.4	3.7	3.9
GDP per capita	5.0	1.1	2.1	2.3	2.4
Exports of goods and services	6.9	3.1	1.9	-1.2	3.6

Development diamond\*

Life expectancy

GNI per capita

Gross primary enrollment

Access to improved water source

— Indonesia

— Low-income group

Economic ratios\*

Trade

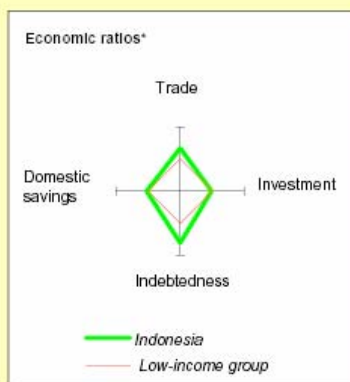
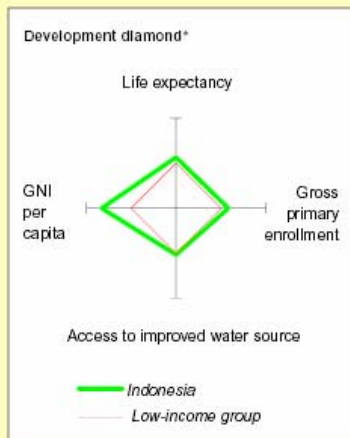
Domestic savings

Investment

Indebtedness

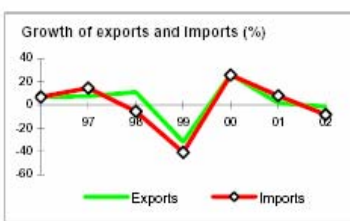
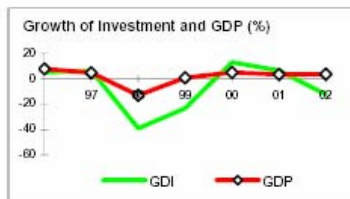
— Indonesia

— Low-income group



## STRUCTURE of the ECONOMY

	1982	1992	2001	2002
(% of GDP)				
Agriculture	23.9	18.7	17.0	17.5
Industry	37.9	39.6	45.6	44.5
Manufacturing	11.9	22.0	25.0	25.0
Services	38.2	41.7	37.5	38.1
Private consumption	59.5	57.8	67.3	70.7
General government consumption	11.5	8.8	7.8	8.2
Imports of goods and services	24.1	25.0	34.9	28.5
(average annual growth)	1982-92	1992-02	2001	2002
Agriculture	3.8	1.6	1.0	1.7
Industry	9.2	3.2	3.3	3.7
Manufacturing	12.6	4.7	4.1	4.0
Services	6.5	2.3	4.6	4.4
Private consumption	4.4	5.2	4.4	4.7
General government consumption	4.9	0.4	9.0	12.8
Gross domestic investment	9.6	-4.7	6.3	-12.5
Imports of goods and services	3.0	1.9	8.1	-8.3



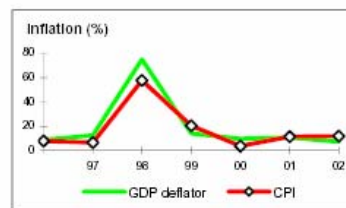
Note: 2002 data are preliminary estimates.

<sup>1</sup> Gross domestic investment excludes change in inventories for 2001 and 2002.

\* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

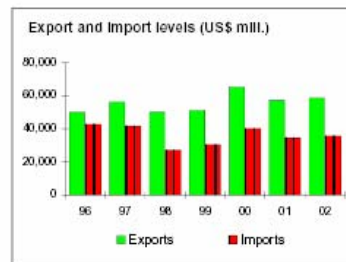
## PRICES and GOVERNMENT FINANCE

	1982	1992	2001	2002
<b>Domestic prices</b> (% change)				
Consumer prices	..	7.6	11.5	11.9
Implicit GDP deflator	6.1	5.4	10.8	7.2
<b>Government finance</b> (% of GDP, includes current grants)				
Current revenue	..	..	20.7	18.9
Current budget balance	..	..	0.0	0.6
Overall surplus/deficit	..	..	-2.9	-1.7



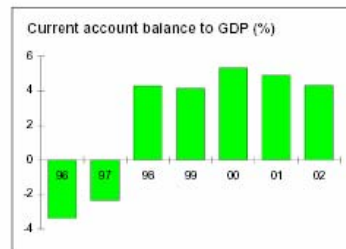
## TRADE

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total exports (fob)	..	33,796	57,364	58,817
Fuel	..	10,671	12,648	12,139
Rubber	..	684	872	1,238
Manufactures	..	14,224	22,275	19,119
Total imports (cif)	..	27,280	34,669	35,805
Food	..	1,274	2,497	2,852
Fuel and energy	..	2,104	5,523	6,558
Capital goods	..	11,700	9,050	8,606
Export price index (1995=100)	..	..	..	..
Import price index (1995=100)	..	..	..	..
Terms of trade (1995=100)	..	..	..	..



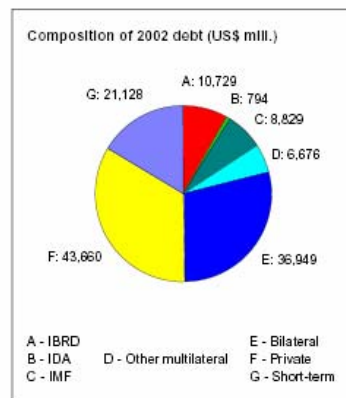
## BALANCE of PAYMENTS

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Exports of goods and services	20,251	37,187	62,864	64,004
Imports of goods and services	22,716	34,874	50,549	51,498
Resource balance	-2,465	2,313	12,315	12,506
Net income	-2,993	-5,664	-8,143	-6,508
Net current transfers	134	571	2,728	1,453
Current account balance	-5,324	-2,780	6,900	7,451
Financing items (net)	3,471	4,850	-8,278	-3,430
Changes in net reserves	1,853	-2,070	1,378	-4,021
<b>Memo:</b>				
Reserves including gold (US\$ millions)	..	..	27,890	31,911
Conversion rate (DEC, local/US\$)	661.4	2,029.9	10,260.9	9,311.2



## EXTERNAL DEBT and RESOURCE FLOWS

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total debt outstanding and disbursed	25,133	88,002	133,072	128,765
IBRD	1,735	10,640	11,435	10,729
IDA	707	814	722	794
Total debt service	3,856	12,457	14,445	13,893
IBRD	207	1,515	1,753	1,905
IDA	8	22	32	33
<b>Composition of net resource flows</b>				
Official grants	92	298	0	0
Official creditors	1,067	3,097	615	-440
Private creditors	1,401	2,655	-6,199	-2,915
Foreign direct investment	225	1,777	-5,877	-7,066
Portfolio equity	0	146	1,145	1,243
<b>World Bank program</b>				
Commitments	977	1,256	645	103
Disbursements	583	1,003	585	419
Principal repayments	82	692	853	1,065
Net flows	501	311	-268	-646
Interest payments	133	845	932	873
Net transfers	368	-533	-1,200	-1,519



The World Bank Group: This table was prepared by country unit staff; figures may differ from other World Bank published data.

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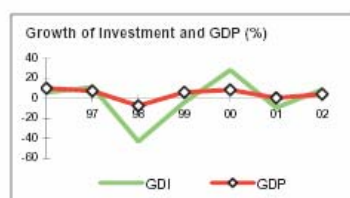
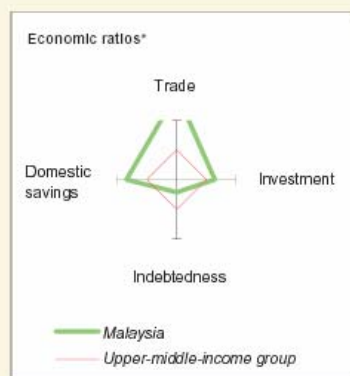
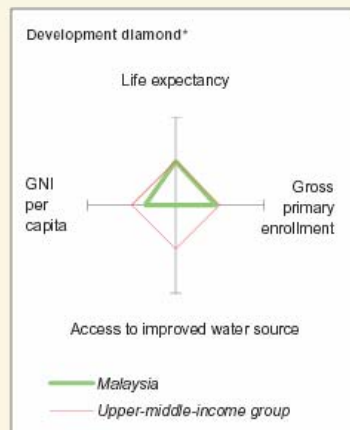
# Malaysia at a glance

4/13/04

POVERTY and SOCIAL					
	Malaysia	East Asia & Pacific	Upper-middle-income		
<b>2002</b>					
Population, mid-year (millions)	24.3	1,838	329		
GNI per capita (Atlas method, US\$)	3,540	960	5,110		
GNI (Atlas method, US\$ billions)	86.0	1,768	1,682		
<b>Average annual growth, 1996-02</b>					
Population (%)	2.3	1.0	1.2		
Labor force (%)	3.2	1.2	1.8		
<b>Most recent estimate (latest year available, 1996-02)</b>					
Poverty (% of population below national poverty line)	..	..	..		
Urban population (% of total population)	59	38	75		
Life expectancy at birth (years)	73	69	73		
Infant mortality (per 1,000 live births)	8	32	19		
Child malnutrition (% of children under 5)	..	15	..		
Access to an improved water source (% of population)	..	76	..		
Illiteracy (% of population age 15+)	12	13	7		
Gross primary enrolment (% of school-age population)	95	111	104		
Male	95	112	104		
Female	95	111	104		
<b>KEY ECONOMIC RATIOS and LONG-TERM TRENDS</b>					
	1982	1992	2001	2002	
GDP (US\$ billions)	27.3	59.2	88.0	94.9	
Gross domestic investment/GDP	33.6	35.4	24.0	24.5	
Exports of goods and services/GDP	50.1	76.0	116.4	114.1	
Gross domestic savings/GDP	24.9	36.7	42.3	41.9	
Gross national savings/GDP	..	31.7	32.3	32.2	
Current account balance/GDP	-13.2	-3.7	8.3	7.6	
Interest payments/GDP	2.7	1.6	2.2	1.8	
Total debt/GDP	48.9	33.8	50.7	51.2	
Total debt service/exports	10.7	9.1	6.0	7.3	
Present value of debt/GDP	..	..	52.3	..	
Present value of debt/exports	..	..	44.1	..	
	1982-92	1992-02	2001	2002	2002-06
(average annual growth)					
GDP	6.3	5.3	0.3	4.1	6.0
GDP per capita	3.3	2.8	-1.9	1.9	4.2
Exports of goods and services	12.3	9.0	-7.5	3.6	6.0

STRUCTURE of the ECONOMY					
	1982	1992	2001	2002	
(% of GDP)					
Agriculture	21.1	14.6	8.1	9.0	
Industry	37.9	41.1	48.3	47.4	
Manufacturing	19.1	25.8	30.5	30.6	
Services	41.0	44.3	43.7	43.6	
Private consumption	57.3	50.3	45.1	44.2	
General government consumption	17.7	13.0	12.6	13.9	
Imports of goods and services	58.8	74.6	98.0	96.6	
	1982-92	1992-02	2001	2002	
(average annual growth)					
Agriculture	3.1	0.1	-0.9	3.0	
Industry	7.7	6.7	-3.8	8.0	
Manufacturing	11.6	8.0	-5.8	..	
Services	6.4	5.2	4.8	0.6	
Private consumption	5.4	4.2	2.3	4.4	
General government consumption	3.3	5.3	17.0	12.2	
Gross domestic investment	6.5	0.7	-9.4	8.9	
Imports of goods and services	10.6	6.8	-8.6	6.2	



Note: 2002 data are preliminary estimates.

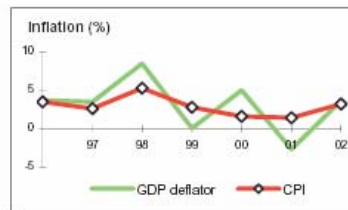
This table was produced from the Development Economics central database.

\* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.



## PRICES and GOVERNMENT FINANCE

	1982	1992	2001	2002
<b>Domestic prices</b>				
(% change)				
Consumer prices	..	4.7	1.4	3.2
Implicit GDP deflator	2.5	2.4	-2.7	3.6
<b>Government finance</b>				
(% of GDP, includes current grants)				
Current revenue	..	26.0	23.8	23.2
Current budget balance	..	4.0	4.7	4.1
Overall surplus/deficit	..	-0.9	-5.5	-5.6



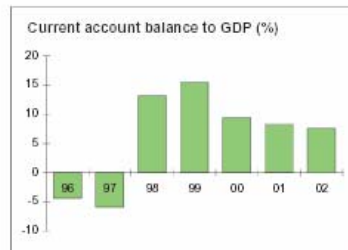
## TRADE

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total exports (fob)	..	39,613	87,969	93,178
Fuel	..	3,591	2,926	3,052
Rubber	..	925	496	656
Manufactures	..	28,051	75,083	78,664
Total imports (cif)	..	36,238	0	0
Food	..	2,434	1,879	1,888
Fuel and energy	..	2,700	9,356	..
Capital goods	..	18,249	42,386	..
Export price index (1995=100)	..	..	..	..
Import price index (1995=100)	..	..	..	..
Terms of trade (1995=100)	..	..	..	..



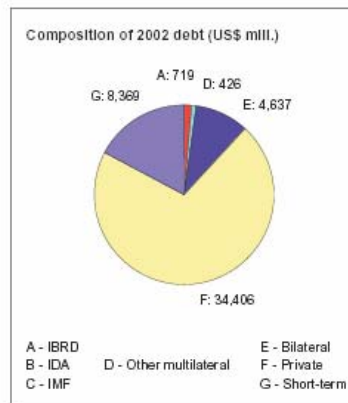
## BALANCE of PAYMENTS

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Exports of goods and services	13,649	44,812	102,436	108,261
Imports of goods and services	16,071	44,009	86,254	91,696
Resource balance	-2,421	803	16,181	16,565
Net income	-1,147	-3,143	-6,743	-6,595
Net current transfers	-32	172	-2,152	-2,781
Current account balance	-3,601	-2,168	7,286	7,189
Financing items (net)	3,339	8,786	-8,250	-10,924
Changes in net reserves	262	-6,618	964	3,734
<b>Memo:</b>				
Reserves including gold (US\$ millions)	..	..	30,800	34,600
Conversion rate (DEC, local/US\$)	2.3	2.5	3.8	3.8



## EXTERNAL DEBT and RESOURCE FLOWS

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total debt outstanding and disbursed	13,354	20,018	44,612	48,557
IBRD	660	1,072	788	719
IDA	0	0	0	0
Total debt service	1,525	4,209	6,229	8,082
IBRD	90	278	141	180
IDA	0	0	0	0
<b>Composition of net resource flows</b>				
Official grants	5	49	8	12
Official creditors	166	-26	2,071	-204
Private creditors	3,749	502	951	1,853
Foreign direct investment	1,397	5,183	554	3,203
Portfolio equity	0	2,695	-673	-250
<b>World Bank program</b>				
Commitments	152	235	0	0
Disbursements	124	148	60	56
Principal repayments	44	191	83	126
Net flows	80	-43	-23	-70
Interest payments	46	87	59	55
Net transfers	34	-130	-81	-125

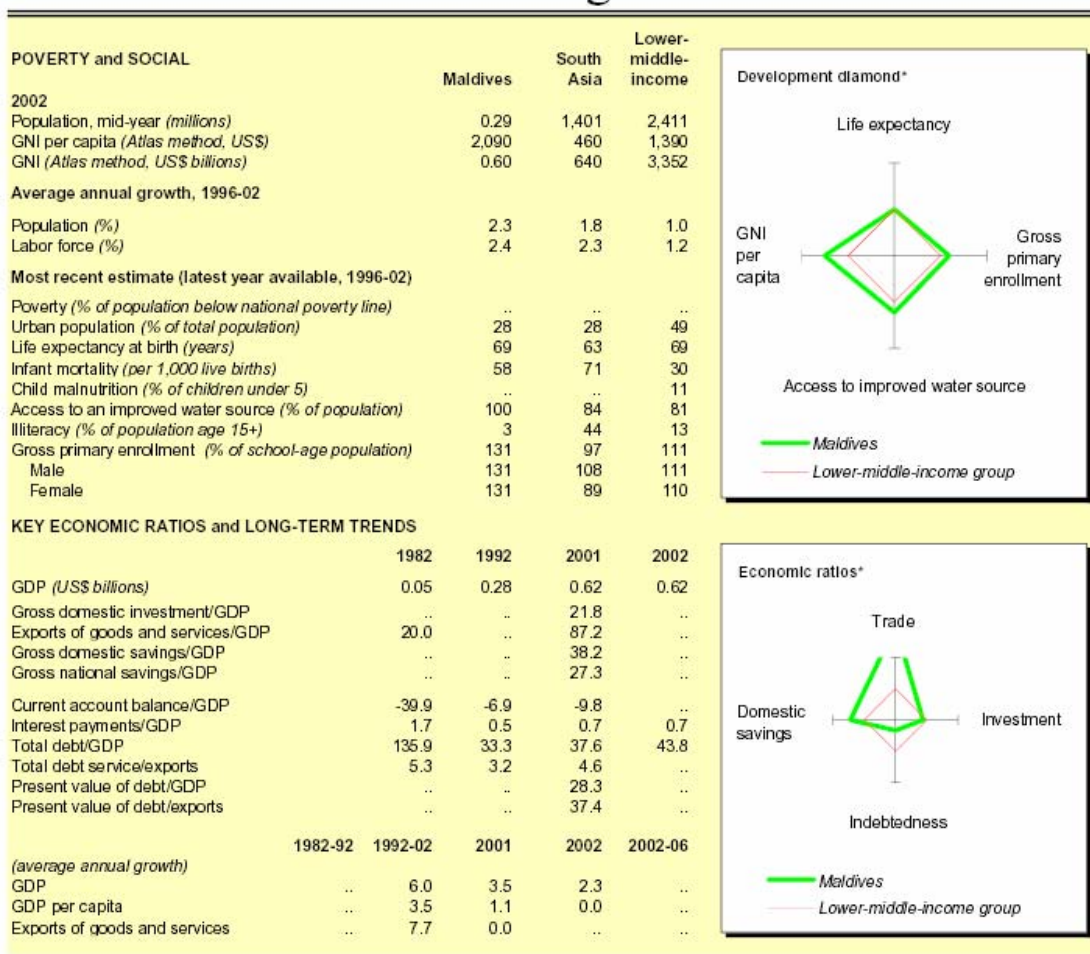


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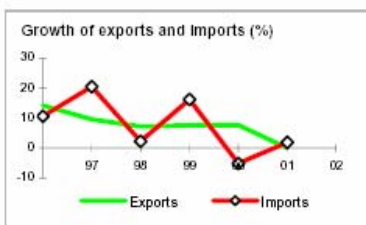
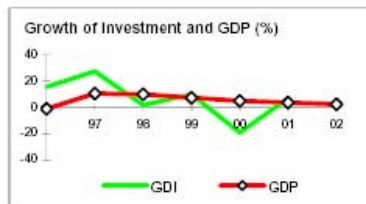
# Maldives at a glance

8/29/03



## STRUCTURE of the ECONOMY

	1982	1992	2001	2002
(% of GDP)				
Agriculture	..	..	..	..
Industry	..	..	..	..
Manufacturing	..	..	..	..
Services	..	..	..	..
Private consumption	..	..	38.1	..
General government consumption	..	..	23.7	..
Imports of goods and services	80.0	..	70.8	..
	1982-92	1992-02	2001	2002
(average annual growth)				
Agriculture	6.2	2.1	1.6	1.4
Industry	10.3	8.8	4.7	2.7
Manufacturing	10.1	5.6	3.1	1.5
Services	10.2	8.6	-3.0	..
Private consumption	..	3.0	4.9	..
General government consumption	..	13.3	7.7	..
Gross domestic investment	..	5.2	6.7	..
Imports of goods and services	..	7.6	1.9	..



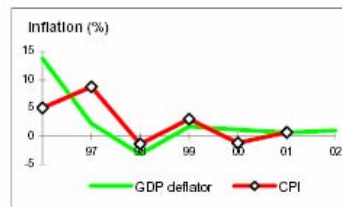
Note: 2002 data are preliminary estimates.

This table was produced from the Development Economics central database.

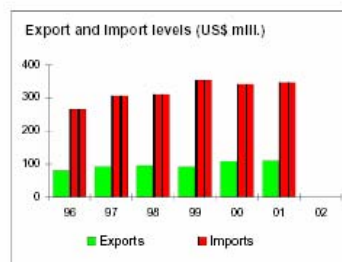
\* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

**PRICES and GOVERNMENT FINANCE**

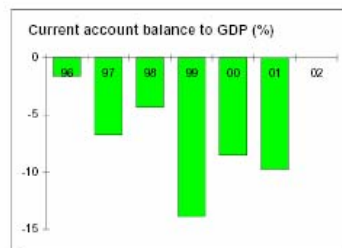
	1982	1992	2001	2002
<b>Domestic prices</b>				
(% change)				
Consumer prices	22.0	16.8	0.7	..
Implicit GDP deflator	..	..	0.6	1.0
<b>Government finance</b>				
(% of GDP, includes current grants)				
Current revenue	..	27.7	32.8	34.7
Current budget balance	..	9.8	6.4	7.9
Overall surplus/deficit	..	-11.8	-4.9	-6.8


**TRADE**

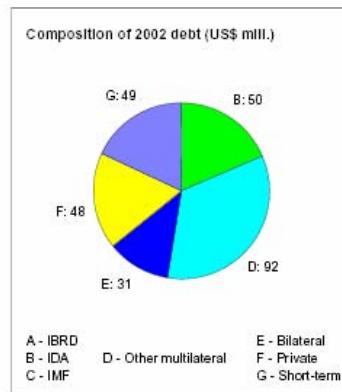
	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total exports (fob)	..	65	110	..
Marine exports	..	32	44	..
Garments	..	8	32	..
Manufactures	..	..	..	..
Total imports (cif)	..	189	348	..
Food	..	..	85	..
Fuel and energy	..	23	48	..
Capital goods	..	..	..	..
Export price index (1995=100)	..	86	123	..
Import price index (1995=100)	..	92	79	..
Terms of trade (1995=100)	..	94	156	..


**BALANCE of PAYMENTS**

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Exports of goods and services	77	219	464	..
Imports of goods and services	94	217	457	..
Resource balance	-17	2	7	..
Net income	-5	-17	-35	..
Net current transfers	3	-5	-30	-42
Current account balance	-19	-20	-61	..
Financing items (net)	26	17	40	..
Changes in net reserves	-7	3	21	-5
<b>Memo:</b>				
Reserves including gold (US\$ millions)	..	18	94	..
Conversion rate (DEC, local/US\$)	7.2	10.6	12.2	12.8

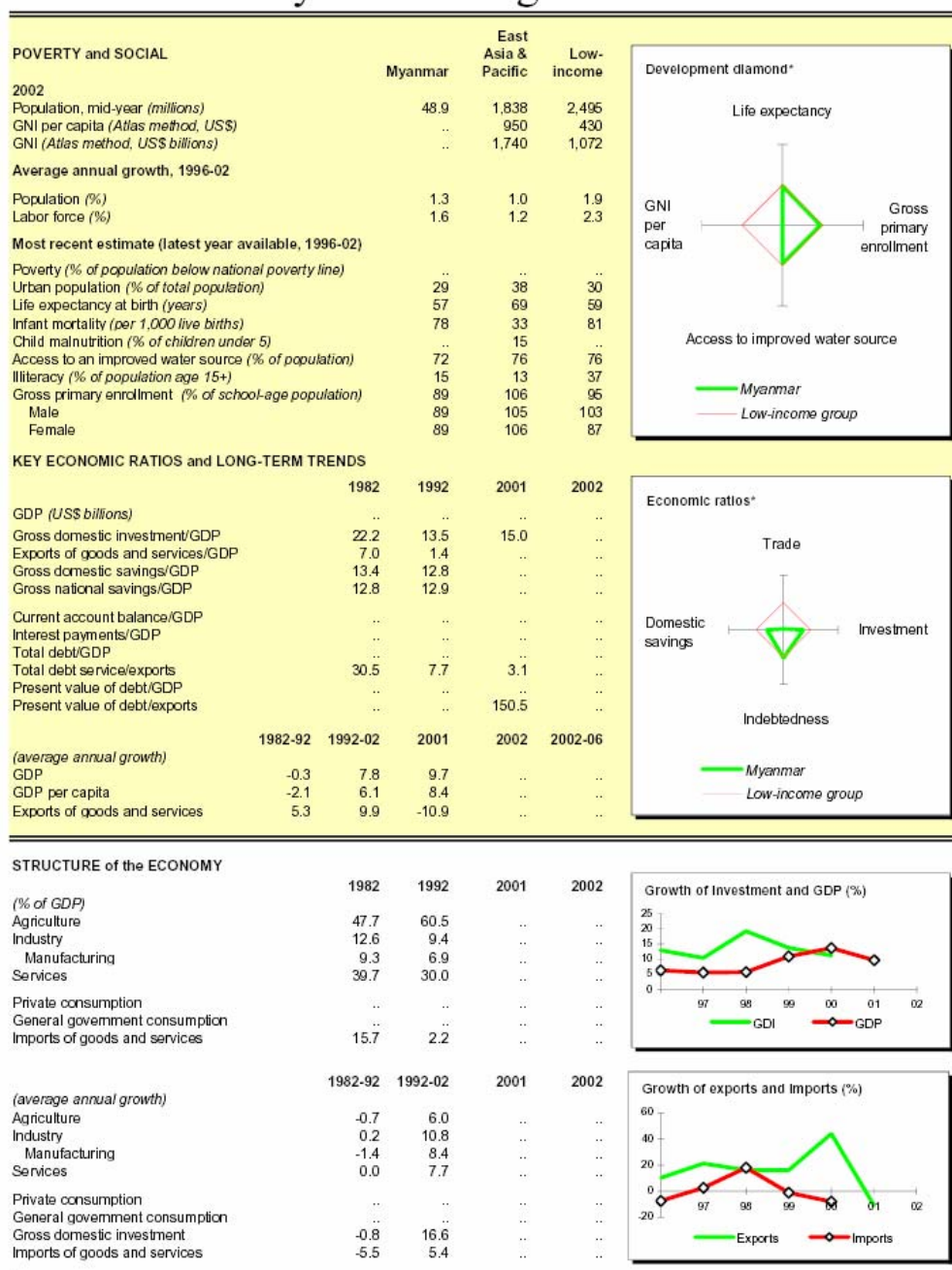

**EXTERNAL DEBT and RESOURCE FLOWS**

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total debt outstanding and disbursed	65	95	235	270
IBRD	0	0	0	0
IDA	2	22	44	50
Total debt service	4	7	22	22
IBRD	0	0	0	0
IDA	0	0	1	1
<b>Composition of net resource flows</b>				
Official grants	1	12	15	0
Official creditors	6	13	4	10
Private creditors	0	3	1	15
Foreign direct investment	0	7	12	0
Portfolio equity	0	0	0	0
<b>World Bank program</b>				
Commitments	0	10	0	0
Disbursements	0	8	0	3
Principal repayments	0	0	0	1
Net flows	0	8	0	3
Interest payments	0	0	0	0
Net transfers	0	8	-1	2



# Myanmar at a glance

8/20/03



Note: 2002 data are preliminary estimates.

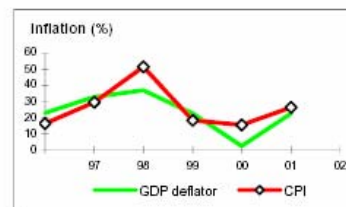
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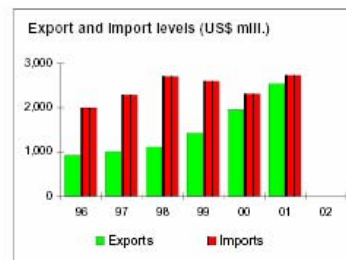
## PRICES and GOVERNMENT FINANCE

	1982	1992	2001	2002
<b>Domestic prices</b>				
(% change)				
Consumer prices	..	21.9	26.5	..
Implicit GDP deflator	3.4	21.7	22.6	..
<b>Government finance</b>				
(% of GDP, includes current grants)				
Current revenue	..	8.3	4.7	..
Current budget balance	..	0.0	..	..
Overall surplus/deficit	..	0.0	0.2	..



## TRADE

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total exports (fob)	..	591	2,544	..
Timber	..	156	280	..
Rice	..	41	112	..
Manufactures	..	5	..	..
Total imports (cif)	..	1,010	2,736	..
Food	..	101	122	..
Fuel and energy	..	..	0	..
Capital goods	..	415	828	..
Export price index (1995=100)	..	..	..	..
Import price index (1995=100)	..	..	..	..
Terms of trade (1995=100)	..	..	..	..

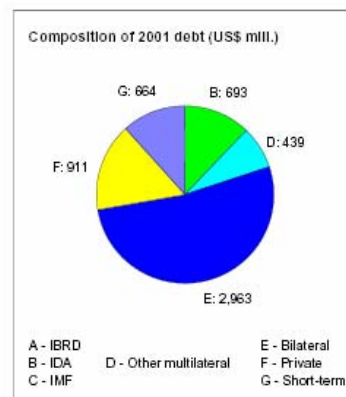


## BALANCE of PAYMENTS

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Exports of goods and services	459	702	2,646	..
Imports of goods and services	973	679	3,016	..
Resource balance	-514	23	-370	..
Net income	-55	-148	-57	..
Net current transfers	..	..	..	..
Current account balance	-562	-55	-218	..
Financing items (net)	407	149	293	..
Changes in net reserves	155	-94	-75	..
<b>Memo:</b>				
Reserves including gold (US\$ millions)	..	..	524	..
Conversion rate (DEC, local/US\$)	..	..	..	..

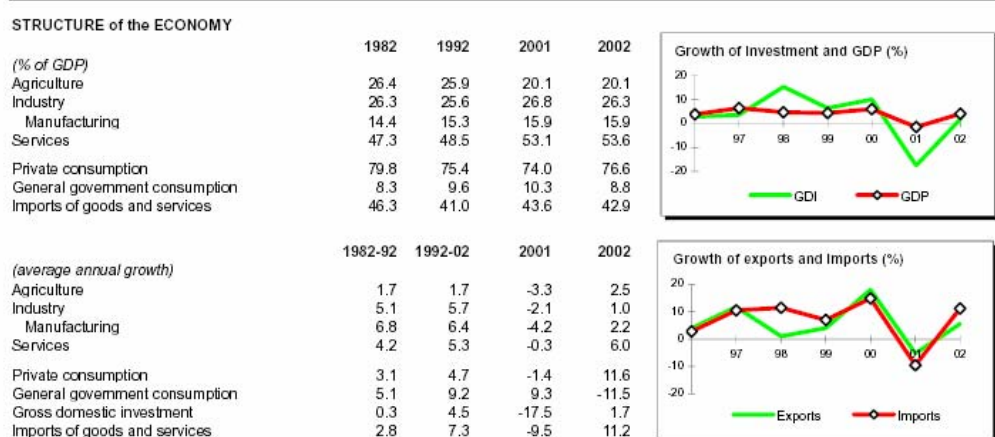
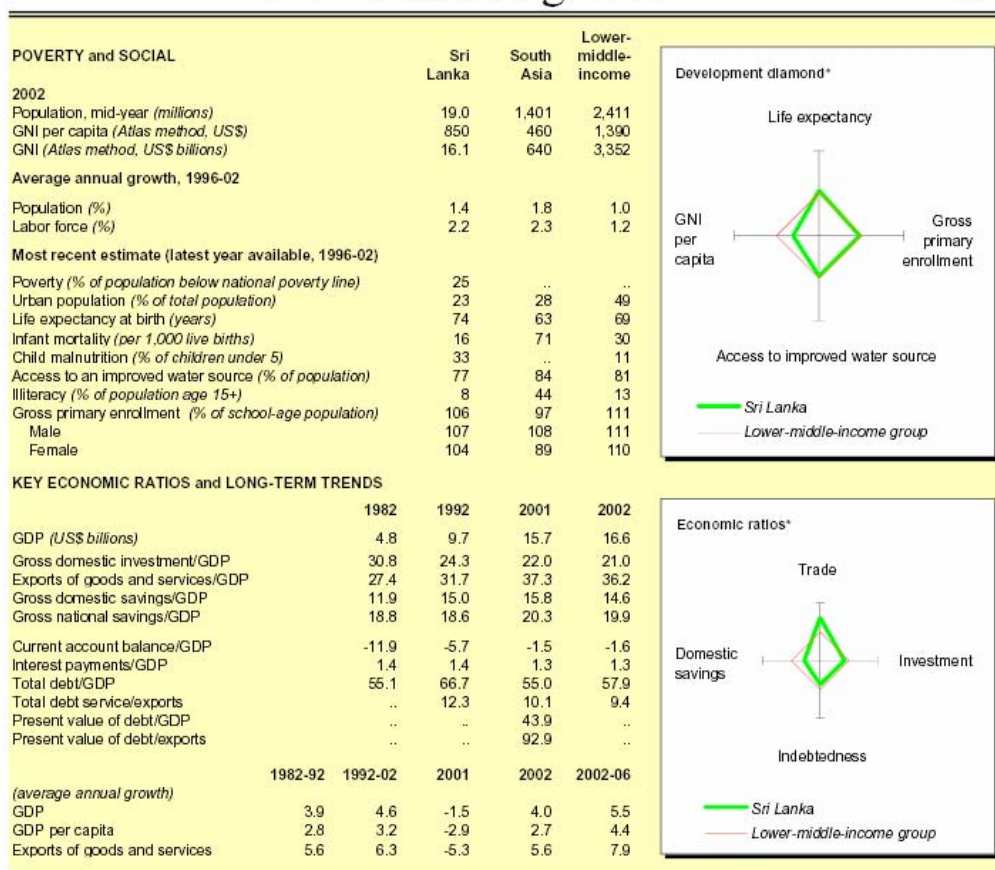
## EXTERNAL DEBT and RESOURCE FLOWS

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total debt outstanding and disbursed	2,046	5,355	5,670	..
IBRD	0	0	0	..
IDA	233	765	693	..
Total debt service	143	54	84	..
IBRD	0	0	0	..
IDA	2	11	0	..
<b>Composition of net resource flows</b>				
Official grants	50	39	60	..
Official creditors	274	53	2	..
Private creditors	56	-1	-63	..
Foreign direct investment	0	172	208	..
Portfolio equity	0	0	0	..
<b>World Bank program</b>				
Commitments	116	0	0	..
Disbursements	48	15	0	..
Principal repayments	0	5	0	..
Net flows	48	10	0	..
Interest payments	2	6	0	..
Net transfers	47	4	0	..



# Sri Lanka at a glance

8/29/03

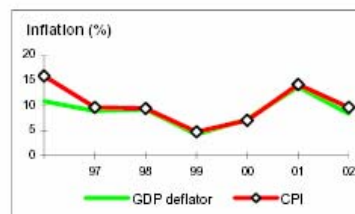


Note: 2002 data are preliminary estimates.

\* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

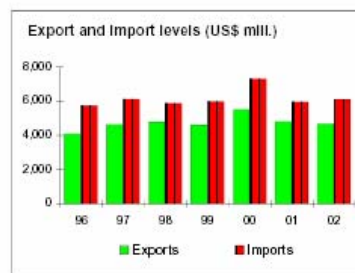
## PRICES and GOVERNMENT FINANCE

	1982	1992	2001	2002
<b>Domestic prices</b>				
(% change)				
Consumer prices	..	11.4	14.2	9.6
Implicit GDP deflator	12.1	9.4	13.7	8.3
<b>Government finance</b>				
(% of GDP, includes current grants)				
Current revenue	..	22.1	17.0	16.9
Current budget balance	..	1.0	-4.5	-3.9
Overall surplus/deficit	-14.0	-5.4	-10.4	-8.5



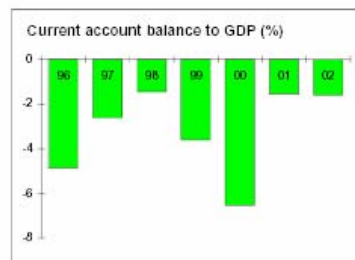
## TRADE

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total exports (fob)	..	2,459	4,817	4,699
Tea	..	340	690	660
Other agricultural goods	..	164	330	319
Manufactures	..	1,214	2,543	2,424
Total imports (cif)	..	3,676	5,974	6,106
Food	..	524	654	696
Fuel and energy	..	175	731	789
Capital goods	..	851	1,081	1,170
Export price index (1995=100)	..	..	169	173
Import price index (1995=100)	..	..	130	135
Terms of trade (1995=100)	..	..	130	128



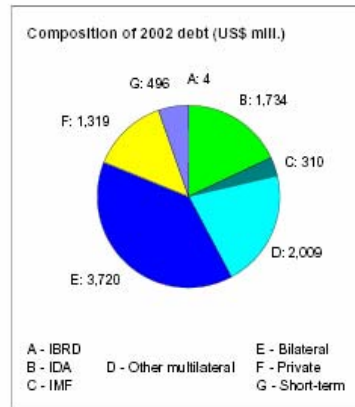
## BALANCE of PAYMENTS

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Exports of goods and services	..	3,081	6,172	5,967
Imports of goods and services	2,185	3,976	7,154	7,103
Resource balance	..	-895	-982	-1,136
Net income	-94	-178	-267	-252
Net current transfers	426	523	1,006	1,123
Current account balance	-568	-550	-244	-264
Financing items (net)	521	897	464	602
Changes in net reserves	47	-347	-220	-338
<b>Memo:</b>				
Reserves including gold (US\$ millions)	..	936	1,181	1,566
Conversion rate (DEC, local/US\$)	20.8	43.8	89.4	95.7



## EXTERNAL DEBT and RESOURCE FLOWS

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total debt outstanding and disbursed	2,625	6,475	8,658	9,592
IBRD	32	65	8	4
IDA	179	1,095	1,570	1,734
Total debt service	245	453	748	688
IBRD	4	15	5	5
IDA	3	14	39	44
<b>Composition of net resource flows</b>				
Official grants	171	122	198	55
Official creditors	175	188	174	179
Private creditors	221	-37	61	-56
Foreign direct investment	64	121	172	235
Portfolio equity	0	26	-11	25
<b>World Bank program</b>				
Commitments	126	39	37	75
Disbursements	60	74	39	91
Principal repayments	4	14	31	36
Net flows	56	60	8	55
Interest payments	3	14	13	13
Net transfers	53	46	-5	42

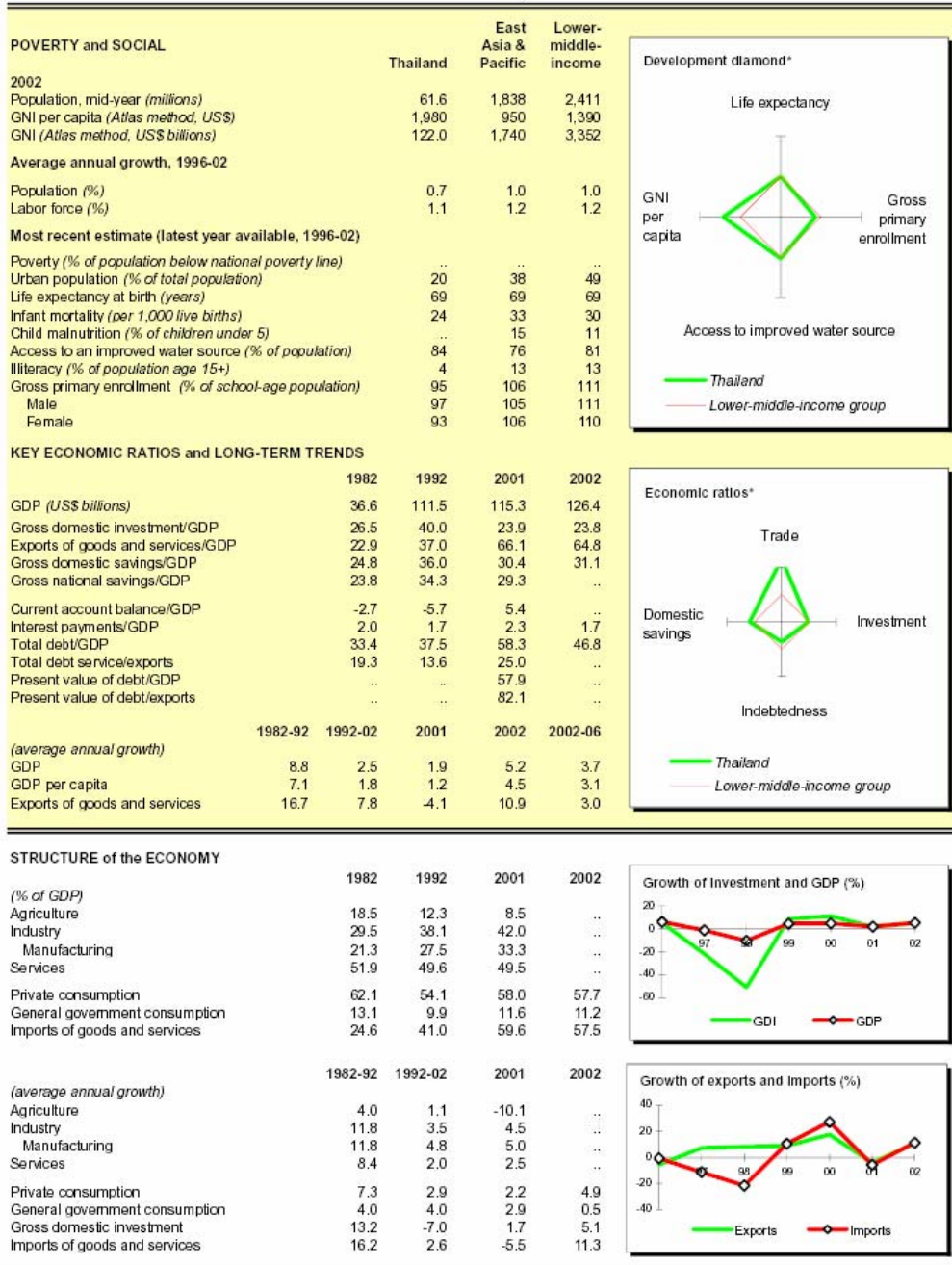


The World Bank Group: This table was prepared by country unit staff; figures may differ from other World Bank published data.

8/29/03

# Thailand at a glance

8/26/03



Note: 2002 data are preliminary estimates.

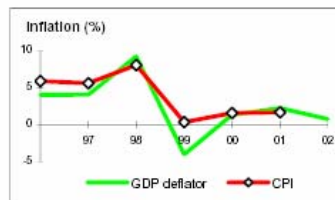
This table was produced from the Development Economics central database.

\* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.



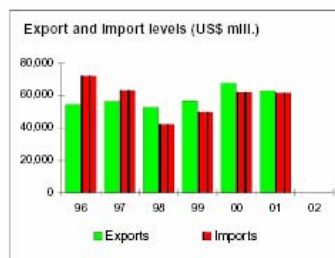
## PRICES and GOVERNMENT FINANCE

	1982	1992	2001	2002
<b>Domestic prices</b> (% change)				
Consumer prices	5.2	4.2	1.7	..
Implicit GDP deflator	5.1	4.5	2.2	0.7
<b>Government finance</b> (% of GDP, includes current grants)				
Current revenue	13.8	17.7	15.1	..
Current budget balance	-1.0	6.7	1.1	..
Overall surplus/deficit	-5.9	2.6	-2.6	..



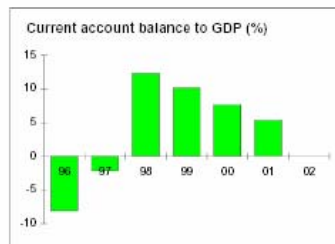
## TRADE

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total exports (fob)	6,835	32,095	63,190	..
Rice	979	1,432	1,585	..
Rubber	413	1,144	1,325	..
Manufactures	..	24,976	55,532	..
Total imports (cif)	8,549	40,679	61,847	..
Food	321	1,976	2,067	..
Fuel and energy	2,642	3,298	7,130	..
Capital goods	..	16,773	29,457	..
Export price index (1995=100)	..	..	..	..
Import price index (1995=100)	..	..	..	..
Terms of trade (1995=100)	..	..	..	..



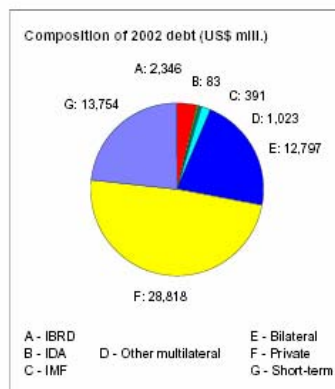
## BALANCE of PAYMENTS

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Exports of goods and services	8,552	41,387	76,215	..
Imports of goods and services	9,223	46,628	69,216	..
Resource balance	-672	-5,241	1,802	..
Net income	-514	-1,708	-1,357	..
Net current transfers	183	646	600	..
Current account balance	-1,003	-6,303	6,227	..
Financing items (net)	922	9,332	-4,910	..
Changes in net reserves	81	-3,029	-1,317	..
<b>Memo:</b>				
Reserves including gold (US\$ millions)	2,652	21,182	33,048	..
Conversion rate (DEC, local/US\$)	23.0	25.4	44.4	43.0



## EXTERNAL DEBT and RESOURCE FLOWS

	1982	1992	2001	2002
<b>(US\$ millions)</b>				
Total debt outstanding and disbursed	12,235	41,784	67,211	59,212
IBRD	1,270	1,898	2,998	2,346
IDA	70	106	86	83
Total debt service	1,940	5,895	20,314	19,859
IBRD	124	814	449	991
IDA	0	2	4	4
<b>Composition of net resource flows</b>				
Official grants	64	161	44	0
Official creditors	656	-282	-156	-4,102
Private creditors	664	2,168	-6,893	-3,099
Foreign direct investment	191	2,113	3,820	0
Portfolio equity	0	455	18	0
<b>World Bank program</b>				
Commitments	616	369	0	0
Disbursements	389	177	365	104
Principal repayments	35	646	263	803
Net flows	353	-470	102	-699
Interest payments	89	170	190	192
Net transfers	264	-639	-88	-891



## Annex 15: Incremental Cost Analysis

### SOUTH ASIA: Bay of Bengal Large Marine Ecosystem

#### Overview

The development objective of the BOBLME Project (PDO) is to support a series of strategic interventions that will provide critical inputs into the development of the Strategic Action Program (SAP) whose implementation will lead to enhanced food security and reduced poverty for coastal communities in the BOB region.

A significant portion of Project resources are devoted to foundational/capacity building processes for multi-country collaboration in this phase of the BOBLME Program. This is justified by the need to overcome barriers to joint actions, particularly ones that involve different ministries in and among BOBLME countries. It is expected that once these barriers are overcome, GEF assistance may then be mobilized to support the implementation of agreed incremental costs associated with the reforms and investments that will eventually lead to measurable impacts both in trans-boundary waters and the fisher communities that depend on them. As a result a significant portion of the 1<sup>st</sup> phase Project (in terms of budget) will not be focused at the field/community level but rather to the building of the aforementioned foundation. Nevertheless, there does exist a number of activities designed to address issues and barriers affecting their resolution which directly impact on rural fisher communities. These include: (i) identifying and "mainstreaming" sound policies leading to strengthening community-based approaches to integrated coastal resources management, (ii) empowering local communities to participate in processes and decisions associated with the development of sub-regional and regional fishery management plans, and (iii) increasing options such as access to alternative livelihood opportunities. The "lessons" derived from these activities will be fed into SAP design.

The Project's **global environmental objective** (GEO) is to formulate an agreed on Strategic Action Program (SAP) whose implementation over time will lead to an environmentally healthy BOBLME. To achieve the GEO, the BOBLME Project, defined as the 1<sup>st</sup> phase of a multi-phase BOBLME Program, will support a series of interventions that complement relevant existing national and regional activities (the Baseline), and support the development of regional institutional mechanisms, processes, and activities designed to promote the development and implementation of a more comprehensive regional approach to the management of the BOBLME.

The project's **principal outcomes** will include: (i) the establishment of permanent, financially sustainable institutional arrangements that will support the continued development and broadening of commitment to a regional approach to BOBLME issues; one which will be needed to support a longer term and comprehensive effort required for an area as large and complex as the BOBLME; (ii) improved wellbeing of rural fisher communities through incorporating regional approaches to resolving resource issues and barriers affecting their livelihoods into the SAP and future BOBLME Program activities; (iii) support for a number of regional and sub-regional activities designed to promote collaborative approaches leading to changes in sources and underlying causal agents contributing to trans-boundary environmental degradation (defined both as shared and common issues); (iv) development of a better understanding of the BOBLME's large-scale processes and ecological dynamics; (v) establishment and monitoring of basic health indicators in the BOBLME; (vi) increased

capacity; and (vii) processes leading to a long-term commitment from the BOBLME countries needed to address complex situations.

The GEF Alternative will achieve these objectives at a total incremental cost of US\$ 28.5 million (M) including contingencies (US\$ 22.7 M without contingencies), with a proposed GEF contribution of US\$ 12.1 M and co-financing of: (i) US\$ 6.1 M from BOBLME Member States; (ii) US\$ 9.3 M from co-financiers; and (iii) US\$ 0.8 M from FAO.

### **Threats, Underlying Causes and Government Response to BOBLME Environment**

For purposes of the Bay of Bengal Large Marine Ecosystem (BOBLME) Program, the Bay of Bengal (BOB) region is defined as comprising the coastal watersheds, islands, reefs, continental shelves and coastal and marine waters of the Maldives, Sri Lanka, the east coast of India, Bangladesh, Myanmar, the west coast of Thailand, the west coast of Peninsular Malaysia, and the Indonesian provinces of Aceh, Riau, and North and West Sumatra (see Annex 17). This body of water, measuring approximately 3.3 million km<sup>2</sup> in area, together with the coastal drainage systems, has been identified as one of the world's sixty-four Large Marine Ecosystems (LMEs) sharing a distinct bathymetry, hydrography, productivity, and trophically dependent populations.

About one-quarter of the world's population reside in the littoral countries of the BOB of which some 400 million live in the Bay's catchment area alone, many subsisting at or below the poverty level. An average of 65% of the region's urban population live in large coastal cities and migration towards the coastal regions appears to be on the increase.

The BOB supports numerous coastal fisheries, many of which are of significant socio-economic importance to the countries bordering the water body; an estimated 2 million fishers who operate primarily in coastal and inshore waters are directly employed in the sector. Included amongst these fisheries are coastal demersal, shrimp and small pelagic fisheries, as well as offshore fisheries for tuna and similar species.

A key issue facing the region's coastal fishing communities is the unsustainable harvesting of certain species, a result of the open access nature of the resource. Many of the fishery resources in the region are already heavily exploited, and if fishing is allowed to continue unregulated, the situation will likely worsen with significant adverse impacts on the large number of small-scale fishers dependent on these resources for their livelihoods and as a source of food security. The socio-economic implications of non-sustainable exploitation of fish stocks is exacerbated further by the illegal incursion of foreign fleets, increased competition and conflicts between artisanal and large-scale fisherman, encroachment by nationals into the territorial waters of neighboring countries, and an alarming increase in cyanide fishing and other non-sustainable fishing practices.

A second key issue is the continued degradation of highly productive coastal and near-shore marine habitats such as coral reefs, mangroves and estuaries, and marine grass beds, all critical fish spawning and nursery areas. Immediate causes include land conversion and reclamation, direct overexploitation, accelerated sedimentation, and destructive tourism and fishing practices. Sea-based sources of pollution include oil pollution and offshore oil and gas exploration. There are also the potential adverse impacts related to the future development of seabed minerals.

Finally and closely related to the two issues described above, are the accumulative effects associated with land-based sources of pollution that are contributing to the disruption of basic processes and functioning of the marine ecosystem. These include degradation and loss of fish spawning and nursery areas, fish kills and possible changes in trophic structure. The fate and effect of pollutants has not been studied extensively but there is a growing body of evidence to support the conclusion that most are deposited as estuarine sediments, while a smaller portion is flushed out to deeper waters. It is argued by some that the ecosystem's assimilative capacity on the whole has not been exceeded and that pollution problems are localized in nature, however, there remain many uncertainties about the Bay's status and ecological functioning, much of it attributable to the lack of comprehensive, reliable data.

Major root causes underlying these issues include population growth and changing demographics, unabated pressure on the primary sector to feed exports due to continued demand for increased foreign exchange, a growing and diversifying industrial sector, and the undervaluing of the natural resources and the environmental “goods and services” provided by the coastal and near-shore marine ecosystems.

One of several major barriers to resolving these issues is the lack of regional institutional arrangements to facilitate a coordinated approach among the BOBLME countries to address the previously identified issues. A second major barrier is the weak and/or inappropriate policies, strategies and legal measures that characterize much of the region. Where these do exist, they are rarely enforced. Other major constraints include lack of alternative livelihoods, weak institutional capacity, insufficient budgetary commitments, and lack of community stakeholder consultation and empowerment.

The BOBLME countries are well aware of these issues, underlying causal factors and barriers to their resolution. In response they have demonstrated significant levels of commitment to address many of the aforementioned problems both in terms of national actions as well as including their participation in a number of conventions and other legal instruments which address one or more of the aforementioned problems (see Annex 1). The substantial national participation among the 8 BOBLME countries during the project preparation process indicates that their commitment remains strong.

As noted above, there already exist a number of international, regional and sub-regional institutions and programs operating in the Bay (Annex 1). Despite their large number, none appear to have the mandate, geographical scope and/or capacity to support an initiative based on an LME approach; particularly one that addresses the shared and common issues and barriers characteristic of the BOB. However, it is equally clear that the proposed BOBLME Program cannot resolve the aforementioned issues in isolation. Rather it must build on past experience and existing institutions and activities in the region, including the exchange of data and information collected through the numerous national and regional initiatives addressing the coastal and marine environment and fisheries issues in the Bay of Bengal to achieve any significant lasting impact.

### **Baseline Scenario**

The calculation of the Baseline was based on an initial screening of on-going regional and national programs and projects (the latter scheduled for implementation over the next 2 - 6 years) relevant to the proposed project objectives. Short profiles have been presented in



Attachments 1a and 1b for regional and national programs/projects, respectively. For regional/sub-regional programs whose objectives were viewed as complementary to the BOBLME Project, baseline calculations were based on the annual national contributions made by participating countries to the respective program (Attachment 2).<sup>16</sup> National sources of assistance vary and consist of national and state/provincial government expenditures, regional and sub-regional organizations, and donor funded projects. Once identified, both regional/sub-regional and national programs/projects were evaluated to the component/activity level and compared with components of the proposed project (Attachments 3a and 3b). Only those components/activities of the previously identified baseline programs/projects relevant to the proposed project component objectives were costed and included as part of the baseline (see Attachment 3).

### **Summary Baseline Costs and Benefits**

**Baseline Costs.** In the absence of additional GEF funding, the implementation of the aforementioned on-going and planned programs/projects will contribute at least in part, to both the PDO and GEO. The estimated costs of baseline activities amount to US\$ 63.5 M (Attachment 4).

**Baseline Benefits.** Activities under the Baseline Scenario will produce predominantly national benefits and contribute only in a limited way to the achievement global benefits due to the many constraints that limit the effectiveness of national actions impact on regional issues. Specific benefits include: sustainable management of trans-boundary fish stocks (within national waters) and critical habitats, (ii) data collection efforts providing limited usefulness to understanding larger scale-processes characteristic of the BOBLME, (iii) creation and management of national marine protected areas and fish refugia, (iii) nation-based monitoring of water quality in coastal waters, and (iv) participation in sub-regional groupings of countries formed to address ad hoc priority issues dependent on national policies and funding.

In view of the need for regional institutional arrangements, collaborative approaches, an agreed on Strategic Action Program (SAP) and long-term financial sustainability to address priority issues and barriers characteristic of the BOBLME, the Baseline Scenario is unlikely to contribute significantly to achieving any global benefits. In recognition of these limitations, the Governments of the BOBLME have requested assistance from the GEF to formulate and implement an Alternative Scenario that will support the achievement of incremental benefits related to the aforementioned programs that comprise the Baseline Scenario.

### **GEF Alternative**

The GEF Alternative will support the achievement of the PDO and GEO through strategic actions addressing key threats and barriers characteristic of the BOBLME. Financing the incremental costs associated with these actions would build on the Baseline Scenario by promoting a regional approach which will result in: (i) reduced pressure on selected trans-boundary fish stocks and critical habitat of global importance; (ii) improved understanding of the large-scale processes characteristic of the BOBLME leading to more informed national

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<sup>16</sup> A similar approach to estimating the project baseline was applied in the GEF-supported South China Sea LME.

and regional efforts to address critical trans-boundary issues; (iii) improved management of trans-boundary fish stocks through more informed use and regional coordination in establishment of fish refugia; (iv) conservation of biodiversity of regional/global importance achieved through regional collaboration in establishing a system of marine protected areas and fish refugia; (v) establishment of a common set of environmental health indicators that will provide a regional basis for assessing and monitoring status of BOBLME; (vi) a pilot water quality monitoring program designed to (a) develop experience in adopting a regional approach, and (b) identify regional “hotspots” to be addressed in subsequent BOBLME Program phases; (vii) regional institutional arrangements established to facilitate a collaborative approach to issues of regional/global concern in the BOBLME; (viii) an agreed to Strategic Action Program identifying critical priorities of regional/global importance to address in the next phase of the BOBLME Program; (ix) a sustainable source of funding to implement priority actions; and (x) improved IW project design through the exchange of “lessons learned” and other relevant experiences with other LME programs.

**Costs.** The total cost of the GEF Alternative is estimated to be US\$ 92.0 M (*GEF financing: US\$ 12.1 M*), detailed as follows (see Matrix 1): (i) US \$ 48.6 M (*GEF financing: US\$ 4.6 M*) to promote regional approaches to the management and sustainable use of coastal/marine natural resources (Component 1); (ii) US\$ 17.6 M (*GEF financing: US\$3.6 M*) to support improved understanding and predictability of the status and process characteristics of the BOBLME (Component 2); (iii) US\$ 15.7M (*GEF financing: US\$0.5 M*) to support a regional approach to addressing issues associated with land-based sources of pollution (Component 3); (iv) US\$ 1.8 M (*GEF financing: US\$ 0.6 M*) to achieve Program sustainability (Component 4); and (v) US\$ 8.2 M (*GEF financing: US\$2.7 M*) to support of Project Management, M&E, and Information Dissemination (Component 5).

**Benefits.** Under the GEF Alternative, the benefits generated from this approach would include both national and global benefits. National benefits include: (i) diversified livelihoods and improved well-being among small-scale fisher communities; (ii) dependable, long-term sustained national production of selected trans-boundary fish stocks for BOBLME countries; (iii) increased understanding and strengthened national programs in BOBLME-relevant sectors; (iv) establishment of national environmental “health” indicators for coastal habitats/waters; (v) preparation of national Strategic Action Programs; (iii) pilot testing of cost-recovery mechanisms applicable to national activities; and (vi) increased national awareness of other BOBLME relevant activities (see complete list of national benefits in the Incremental Cost Matrix below). Global benefits include: (i) removal of barriers to creating a more focused, regionally coordinated effort to address trans-boundary issues in the BOBLME; (ii) resolution of selected priority issues (e.g., management of selected regional fish stocks, pollution, and management of critical habitat whose boundaries extend beyond one or more political jurisdictions); (iii) increasing exchange and application of shared experiences and expertise within the region; (iv) increasing public awareness of the significance and technical knowledge of the status and processes of the BOBLME; (v) developing or enhancing regional and/or local solutions among BOBLME countries; and (vi) achieving economies of scale and cost advantages which accrue from addressing certain problems in a collaborative fashion.

### **Incremental Costs<sup>17</sup>**

The difference between the costs of the Baseline Scenario (US\$ 63.5 M) and the GEF Alternative (US\$ 92.0 M) is an estimated US\$ 28.5 M. The total requested GEF contribution amounts to US\$ 12.1 M, detailed as follows: (i) US \$ 4.6 M to promote regional approaches to the management and sustainable use of coastal/marine natural resources (Component 1); (ii) US\$ 3.6 M to support improved understanding and predictability of the status and process characteristics of the BOBLME (Component 2); (iii) US\$ 0.5 M to support a regional approach to addressing issues associated with land-based sources of pollution (Component 3); (iv) US\$ 0.6 M to achieve Program sustainability (Component 4); and (v) US\$ 2.7 M to support of Project Management, M&E, and Information Dissemination (Component 5). The aforementioned GEF-support would cover incremental costs of technical assistance (US\$ 3.1 M), studies and workshops (US\$ 4.3 M), training (US\$ 0.8 M), publications (US\$ 0.7 M), equipment and furniture (US\$ 0.3 M), and salaries, travel and O&M costs (US\$ 3.0 M). Co-financing of US\$ 16.4 M of the incremental cost has been mobilized as follows: (i) US\$ 5.7 M from the BOBLME governments of which US\$ 2.2 M is in cash; (ii) US\$ 9.3 M in cash from other co-financiers; and (iii) US\$ 0.8 M (in-kind) from FAO. Incremental financing from the BOBLME Governments would include: (i) a cash contribution of US\$ 2.2 M in support of (a) the partial costs of national workshops and meetings, (b) salaries of national technical advisors and support staff, (c) the partial costs of the national task force office O&M, and (d) the salaries of sub-project coordinators and assistants (Myanmar, Thailand, and Sri Lanka only); and (ii) an in-kind contribution of US\$ 3.5 M to finance task force salaries, local travel and travel allowances, and other O&M costs. In addition, the Government of India (GOI), as host country, will contribute US\$ 0.6 M in cash to support the Regional Coordinating Unit (RCU). This contribution will cover the costs of: (a) office space, (b) furniture, (c) salaries of selected staff, and (d) O&M including utilities. The funding from the remaining co-financiers representing US\$ 9.3 M will cover technical assistance (US\$ 2.0 M), studies and workshops (US\$ 3.9 M), training (US\$ 0.5 M), publications (US\$ 0.2 M), equipment and furniture (US\$ 0.2 M), and salaries, travel and O&M costs (US\$ 2.4 M) in support of all project components. The funding from FAO (US\$ 0.8 M) would cover the in-kind costs associated with technical assistance (US\$ 0.7) and training (US\$ 0.1).

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<sup>17</sup> Kindly note minor differences in totals are due to rounding error and the amounts include in contingencies.

## Matrix 1. Incremental Cost Matrix

Component	Cost Category	US\$ Million	Domestic Benefits	Global Benefits
<b>Component 1. Coastal/Marine Natural Resources Management and Sustainable Use</b>	Baseline	US\$ 35.8M	(i) localized and project-driven policies support community-driven integrated coastal management; (ii) selected trans-boundary fish stocks are managed in national waters; (iii) selected trans-boundary fish stock data collected and assessed at a national level; (iv) trans-boundary critical habitat managed within national framework.	Limited global benefit achieved primarily through national efforts directed at managing trans-boundary fish stocks and the conservation of critical natural habitat of global importance.
	With GEF Alternative	US\$ 48.6 M	(i) diversified livelihoods and improved well-being among small-scale fisher communities through policy mainstreaming; (ii) dependable, long-term sustained production of selected trans-boundary fish stocks for BOBLME countries; .	(i) lessons-learned in community-based ICM exchanged throughout the region; (ii) reduced pressure on selected trans-boundary fish stocks and critical habitat of global importance; (iii) sustainability of selected trans-boundary fish stocks ensured through regional/sub-regional management approaches; and (iv) critical trans-boundary habitat conserved through bi-national efforts.
	Incremental	US\$ 12.8 M	<i>Note: Consists of: GEF (US\$ 4.6 million); Governments cash (US\$ 1.2 M); Governments in-kind (US\$ 1.3 M.); Other Co-financiers (US\$ 5.2 M); and FAO (US\$ 0.5 M).</i>	
<b>Comp 2 Improved Understanding and Predictability of the BOBLME Environment</b>	Baseline	US\$ 13.3 M	(i) national data collection efforts and studies provide partial understanding of BOBLME large-scale processes and dynamics; (ii) marine protected areas and fish refugia created and managed in national waters; (iii) existing regional/global programs share information on selected BOBLME characteristics.	Limited global benefits achieved through national efforts contributing to an: (i) improved understanding of local/meso-scale processes, (ii) conservation of biodiversity of global importance, and (iii) sharing data and participating in collaborative <i>ad hoc</i> activities in priority sectors in the BOBLME.
	With GEF Alternative	US\$ 17.6 M	Increased understanding and strengthened national programs in oceanography and conservation of marine biodiversity.	Improved understanding of the large-scale processes characteristic of the BOBLME leading to more informed national and regional decisions and efforts to address critical trans-boundary issues; (ii) improved management of trans-boundary fish stocks through more informed use and regional coordination in management and establishment of MPAs and fish refugia; and (iii) conservation of biodiversity of regional/global importance achieved through regional collaboration in establishing a system of MPAs.
	Incremental	US\$ 4.3 M	<i>Note: Consists of: GEF (US\$ 3.6 million); Governments cash (US\$ 0.1 M); Governments in-kind (US\$ 0.1 M.); Other Co-financiers (US\$ 0.5 M); and FAO (US\$ 0.1 M).</i>	

<b>Comp 3 Maintenance of Ecosystem Health and Management of Pollution</b>	Baseline	US\$ 14.4 M	(i) national monitoring programs assess and monitor status of "health" in coastal habitats/waters.	Limited global benefits achieved through national based coastal habitats/waters assessments.
	With GEF Alternative	US\$ 15.7 M	(i) establishment of national environmental "health" indicators for coastal habitats/waters and (ii) increased understanding and strengthened national al programs in water quality monitoring.	(i) establishment of a common set of environmental health indicators provide regional basis for assessing and monitoring status of BOBLME; (ii) pilot water quality monitoring program provides (a) experience in adopting a regional approach, and (b) identification of regional "hotspots" to be addressed in subsequent BOBLME Program phases.
	Incremental	US\$ 1.3 M	<i>Note: Consists of: GEF (US\$ 0.5 million); Governments cash (US\$ 0.1 M); Governments in-kind (US\$ 0.1 M.); Other Co-financiers (US\$ 0.6M); and FAO (US\$ 0.1 M).</i>	
<b>Comp 4 Project Sustainability</b>	Baseline	US\$ 0.0 M	(i) sub-regional groupings of BOBLME countries collaborate on agreed to priorities through existing institutional mechanisms dependent on national annual funding priorities.	Global benefits limited and dependent on geographic scope, priority and level of funding.
	With GEF Alternative	US\$ 1.8 M	(i) national participating institutions strengthened, (ii) preparation of national Strategic Action Programs will facilitate addressing issues of national importance, and (iii) pilot testing of candidate cost-recovery mechanisms applicable to national activities.	Regional institutional arrangements established to facilitate a collaborative approach to issues of regional/global concern in the BOBLME; (ii) an agreed to Action Program identifying critical priorities of regional/global importance to be addressed in the next phase of the BOBLME Program; and (iii) a sustainable source of funding to implement priority actions.
	Incremental	US\$ 1.8 M	<i>Note: Consists of: GEF (US\$ 0.6 million); Governments cash (US\$ 0.1 M); Governments in-kind (US\$ 0.3M.); Other Co-financiers (US\$ 0.7 M); and FAO (US\$ 0.2 M).</i>	
<b>Comp 5 Project Management</b>	Baseline	US\$ 0.0 M	BOBLME related information provided through existing national programs and sector-specific sub-regional programs	Global benefits limited and dependent on program.
	With GEF Alternative	US\$ 8.2 M	(i) improved project management skills at national levels; (ii) national monitoring and evaluation system put in place and made operational; and (iii) increased national awareness of other BOBLME relevant activities.	(i) establishment of an effective and cost-efficient management unit that, together with BOBLME countries, successfully achieve Project objectives; and (ii) global improved IW LME project design through exchange of "lessons learned" and other relevant experiences.
	Incremental	US\$ 8.2 M	<i>Note: Consists of: GEF (US\$ 2.7 million); Governments cash (US\$ 0.8 M); Governments in-kind (US\$ 1.7 M.) GOI (US\$ 0.6 M); Other Co-financiers (US\$ 2.3 M); and FAO (US\$ 0.1 M).</i>	
<b>Totals</b>	<b>Baseline</b>	<b>US\$ 63.5 M</b>		
	<b>With GEF Alternative</b>	<b>US\$ 92.0 M</b>		
	<b>Incremental</b> <i>(Before contingency)</i>	<b>US\$ 28.5 M</b> <i>(US\$ 22.7)</i>	<i>Note: Consists of: GEF (US\$ 12.1 million); Governments cash (US\$ 2.2 M); Governments in-kind (US\$ 3.5 M.); GOI (US\$ 0.6 M); Other Co-financiers (US\$ 9.3 M); and FAO (US\$ 0.8 M).</i>	

## **Attachment 1a: Baseline Scenario – Descriptive Briefs of Selected Relevant Regional Programs/Projects**

**Indian Ocean Tuna Commission (IOTC).** International Commission established in 1993 with the objective of promoting cooperation among its members for the purpose of conserving and achieving the optimum utilization of tuna and other stocks covered under the Agreement.

**Asia-Pacific Fishery Commission (APFIC).** Commission established in 1976 evolving out of the Indo-Pacific Fisheries Council with the objective of promoting the full and proper utilization of living aquatic resources by development and management of fishing and culture operations and by .

**Bay of Bengal Inter-governmental Organization (BOB-IGO).** Established as an inter-governmental program in 2003, the main objective is to support regional cooperation among member countries of the region for fisheries development with a major focus on socio-economic improvement of its small scale fisheries and fish farmers.

**Southeast Asia Fishery Development Center (SEAFDEC).** Established through an agreement reached in 1967, SEAFDEC operates through 4 Centers in SE Asia with the objective to promote sustainable development of fisheries in the region through research, training and information dissemination.

**Intergovernmental Organization for Marketing Information and Technical Advisory Services for Fishery Products in the Asia and Pacific Region (INFOFISH).** This IGO established in 1987 has the mandate to provide marketing information and technical advisory services to the fishery industry of the Asia-Pacific region.

**Network of Aquaculture Centres in Asia and the Pacific (NACA).** Initially established through a donor supported project, NACA became an IGO in 1990 with the mandate to promote rural development through sustainable aquaculture focusing on capacity building, research, information dissemination, provision of policy guidance, and addressing aquatic animal health and disease management.

**Asia-Pacific Economic Cooperation (APEC).** A forum created in 1989 to promote economic cooperation in the region, a fisheries working group was established in 1991. The focus of the group is on conservation and sustainable use of fisheries resources and aquaculture, development of solutions to common resource management problems, enhancement of food safety and quality of fish and fisheries products, and sector-specific work relating to trade and investment.

**Association of Southeast Asian Nations (ASEAN).** A political association that was created in 1967 for the purposes of accelerating economic growth and achieving social progress and cultural development. Under ASEAN, a Fisheries Consultative Group (FCG) was created in association with SEAFDEC in 1998 for the purpose of supporting regionalization of the Code of Conduct for Responsible Fisheries, addressing fish-trade and environmental issues, information collection, and development of a 5 year program on sustainable fisheries for food security.

**Bangladesh, India, Myanmar, Sri Lanka, and Thailand Economic Cooperation (BIMSTEC).** Cooperative agreement between participating countries designed to foster socio-economic development and create an enabling environment for cooperation in various fields designed to enhance the livelihoods of the peoples in the region including the strengthening of fisheries development and management.

**South Asian Association for Regional Cooperation (SAARC).** Association created among South Asian countries in 1985 to promote economic cooperation and trade.

**South Asian Co-operative Environment Program (SACEP).** Regional environmental program established in 1982 to promote and support the conservation and management of the environment in the member states of the South Asian region in a co-operative manner.

**South Asian Seas Program (SAS).** UNEP's environmental program for South Asian member countries designed to protect and manage the marine environment and related coastal ecosystems of the region

**IOC Regional Committee for the Central Indian Ocean (IOCINDIO).** A regional subsidiary body of the IOC created in 1982, the objectives of the ICINDIO are to plan, promote, and co-ordinate cooperative regional marine scientific projects among member states, assist in the implementation of regional components of the global ocean science programs, facilitate the transfer of scientific information, promote the exchange of oceanographic data, and identify needs for training, education, and mutual assistance in the marine sciences.

**WorldFish Center (WFC).** An international research center that promotes an ecosystem multidisciplinary partnership approach to fisheries research and development through contributing to improved productivity, environmental protection, saving biodiversity, improving policies and strengthening national institutions.

## **Attachment 1b. Baseline Scenario – Descriptive Briefs of Selected Relevant National/State Programs/Projects**

### Bangladesh

**Projects.** The national baseline is dominated by project support. This consists of the: (i) Coastal and Wetland Biodiversity Management Project; (ii) Biodiversity Conservation, Marine Park Establishment and Ecotourism Development in St. Martin Island Project; and (iii) Empowerment of Coastal Fishing Communities Project.

### India

**State budget.** State budgetary resources are being used to support the following programs: (i) Fish stock Assessment for Capacity Management; (ii) Brackish and Fresh water Fish Culture in Closed Canals and Coastal Areas; (iii) Integrated Fishery and Algae Culture Project for Women Fisheries (in Sundarbans); (iv) Assessing Migratory Routes and Status of Breeding Grounds of Hilsa; and (v) State environmental monitoring.

### Indonesia

**National budget.** National budgetary resources are being used to support: (i) National Fisheries Program (Coordination Forum for Management and Utilization of Marine Fisheries Resources) and (ii) Coastal and Marine Protected Areas. **State programs** consist of: (iii) Community-based Coastal Area Management (Riau Province), and (iv) Land-based Sources of Pollution Project (Nanggroe Aceh Darusalam Province).

### Malaysia

**National budget.** National budgetary resources are being used to support: (i) monitoring, control and surveillance (MCS) and the development of management plans for selected fisheries under the national fisheries management program; (ii) community-based coastal area management activities focused on promoting stakeholder participation in selected projects in the BOBLME project area in Malaysia; and (iii) development, monitoring and management of marine parks.

### Maldives

**National budget.** National budgetary resources are being used to support: (i) basic fisheries management, surveys, and monitoring activities; and (ii) supporting projects related to the IOTC.

### Myanmar

**National budget.** National budgetary resources are being used to support: (i) fisheries research and development, (ii) monitoring of artisanal fishery effort/yield, (iii) mapping of critical habitats, (iv) coral reef monitoring, and (v) near-shore bathymetry.



### Sri Lanka

**National budget.** National budgetary resources are being used to support: (i) national fisheries management, (ii) fisheries research and development, and (iii) community-based coastal resources management. **Project** support consists of: (iv) Coral Reef Monitoring and Conservation Project, and (v) the Protected Area Management and Wildlife Conservation Projects

### Thailand

**National budget.** National budgetary resources are being used to support: (i) fisheries management and assessments (shark and Indian mackerel); (ii) coastal and marine park management and protection (Andaman Sea), and (iii) environmental monitoring to assess status of water quality along the coastal waters (Phang-nga Bay). **Project** support consists of: (iv) Community-based Resources Management Project (CBFM), and (v) Coastal Habitats and Resources Management Project (CHARM).

**Attachment 2. Estimated National Contributions to Selected Regional Bodies by Country (US\$ '000)**

Sub-region	Countries	Type of Regional Institution													
		Regional Fishery Bodies						Economic Development				Environmental Management			
		IOTC	APFIC <sup>1</sup>	BOB-IGO <sup>2</sup>	SEAFDEC	INFOFISH	NACA <sup>3</sup>	APEC <sup>5</sup>	ASEAN	BIMSTEC	SAARC	SACEP	SAS	WFC	IOCINDIO
SE Asia	Indonesia	-	2	-	4	0	40 <sup>4</sup>	2	NA	-	-	-	-	NA	NA
	Malaysia	27	2	-	4	0	30	2	NA	-	-	-	-	NA	NA
	Myanmar	-	2	-	4	0	NA	-	NA	0	-	-	-	NA	NA
	Thailand	27	2	-	4	0	30	2	NA	0	-	-	-	NA	NA
South Asia	Bangladesh	-	2	20	-	0	20	-	-	0	NA	21	13	NA	NA
	India	34	2	60	-	0	60	-	-	0	NA	32	32	NA	NA
	Maldives	-	-	20	-	0	-	-	-	-	NA	15	6	NA	NA
	Sri Lanka	45	2	20	-	0	20	-	-	0	NA	16	13	NA	NA
Total		133	14	120	16	0	200	6	NA	0	NA	84	64	NA	NA

<sup>1</sup>Estimated cost to travel to annual meetings.

<sup>2</sup>Assumes Formula II of the BOB IGO agreement applied.

<sup>3</sup>Based on proposed schedule of contributions.

<sup>4</sup>Participating non-member government.

<sup>5</sup>Consists of percentage of approved project budgets for MRC and Fisheries supported with BOBLME APEC country contributions.

Key:

-: not a member.

NA: information not available.

**Attachment 3a. Relevance of Baseline Activities by Project Component**

<b>Regional Programs/Projects</b>	<b>Proposed Project Components</b>				
	<b>Coastal /marine NRM and Sustainable Use</b>	<b>Improved Understanding and Predictability of the BOBLME Environment</b>	<b>Maintenance of Ecosystem Health and Management of Pollution</b>	<b>Project Sustainability</b>	<b>Project Management, M&amp;E, Information Dissemination</b>
IOTC	133	-	-	-	-
APFIC	14	-	-	-	-
BOB IGO	120	-	-	-	-
SEAFDEC	16	-	-	-	-
INFOFISH	0	-	-	-	-
NACA	200	-	-	-	-
APEC	6	-	-	-	-
ASEAN	NA	-	NA	-	-
BIMSTEC	0	-	-	-	-
SAARC	NA	-	NA	-	-
SACEP	-	-	84	-	-
SAS	-	-	64	-	-
IOCINDIO	-	NA	-	-	-
WFC	NA	-	-	-	-
<b>Total</b>	<b>489</b>	<b>0</b>	<b>148</b>	<b>0</b>	<b>0</b>

### Attachment 3b. Estimate of National Program/Project Baseline Costs by Project Component

National/ State Programs/Projects	Proposed Project Components				Project Management, M&E, Information Dissemination
	Coastal /marine NRM and Sustainable Use	Improved Understanding and Predictability of the BOBLME Environment	Maintenance of Ecosystem Health and Management of Pollution	Project Sustainability	
<b>Bangladesh</b>					
National budget <sup>1</sup>	-	-	-	-	-
Projects	5,169,996	10,389,996	-	-	-
<b>India</b>					
National budget <sup>1,2</sup>	-	-	-	-	-
State budget <sup>1,2,3</sup> (West Bengal, Andhra Pradesh, Orissa Tamil Nadu)	8,323,200	224,400	14,064,000	-	-
Projects	-	-	-	-	-
<b>Indonesia</b>					
National budget <sup>1,2</sup>	866,700	666,666	100,000	-	-
State budget <sup>1,2</sup> (Acha, N Sumatra, Riau)	-	-	-	-	-
Projects	-	-	-	-	-
<b>Malaysia</b>					
National budget <sup>1,2</sup>	10,800,000	430,000	NA	-	-
State	-	-	-	-	-
Projects	-	-	-	-	-
<b>Maldives</b>					
National budget <sup>1</sup>	1,164,282	-	-	-	-
Projects	793,470	-	-	-	-
<b>Myanmar</b>					
National budget <sup>1</sup>	105,000	450,000	-	-	-
Projects	-	-	-	-	-
<b>Sri Lanka</b>					
National budget <sup>1</sup>	1,680,000	66,000	NA	-	-
Projects	618,000	3,000	-	-	-
<b>Thailand</b>					
National budget <sup>1,2</sup>	4,073,436	1,068,288	60,000	-	-
State budget <sup>1,2</sup>	160,974	-	-	-	-
Projects	1,585,365	-	45,000	-	-
<b>Totals</b>	<b>35,340,423</b>	<b>13,298,350</b>	<b>14,269,000</b>		

<sup>1</sup>Figures represent annual budget projected out over 6 year life of project.

<sup>2</sup>Estimated for national area bordering BOBLME only.

<sup>3</sup>Estimates based on extrapolation of data for West Bengal.

Key:

-: no program/project identified.

NA: information not available

#### Attachment 4. Estimate of Total National Baseline Costs by Project Component

National Programs/ Projects	Proposed Project Components					Total
	Coastal /marine NRM and Sustainable Use	Improved Understanding and Predictability of the BOBLME Environment	Maintenance of Ecosystem Health and Management of Pollution	Project Sustainability	Project Management, M&E, Information Dissemination	
National	35,340,423	13,298,350	14,269,000	-	-	-
Regional/ Sub- regional	489,000	0	148,000	-	-	-
<b>Totals</b>	<b>35,829,423</b>	<b>13,298,350</b>	<b>14,417,000</b>	<b>0</b>	<b>0</b>	<b>63,544,773</b>

<sup>1</sup>Figures represent annual budget projected out over 6 year life of project.

<sup>2</sup>Estimated for national area bordering BOBLME only.

<sup>3</sup>Estimates based on extrapolation of data for West Bengal.

Key:

∴ no program/project identified.

## **Annex 16: STAP Roster Review**

### **SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**

*The project team is grateful to the STAP reviewer for comments to strengthen the contents and presentation of this proposal. Presented below are the responses and/or actions taken, where required, taken in response to the STAP comments ( in italic following the STAP comments).*

Project reviewer: Dr. Loke-Ming Chou, Department of Biological Sciences, National University of Singapore.

#### **KEY ISSUES**

##### **Introduction**

The project aims specifically at protecting ecosystem health and managing living resources of the Bay of Bengal Large Marine Ecosystem (BOBLME). The main output is a Strategic Action Program (SAP) detailing activities that should improve sustainable management of BOBLME over the long-term. The SAP will include a comprehensive framework with well-defined institutional and financial arrangements to ensure long-term sustainability of the program itself so that the ultimate goal of a healthy BOBLME can be realized.

Central to regional strengthening of collaborative approaches and co-operation is the establishment of a Regional Coordinating Unit (RCU), considered necessary as none of the existing regional mechanisms is deemed appropriate in terms of mandate, geographical scope, and/or capacity to support an initiative based on a LME approach.

Activities will focus on two major threats which have been identified through preparatory phase consultations. These are living resource overexploitation and continued habitat degradation.

The program is structured into five components, three of which deal specifically with resource management and environmental protection, and the remaining two with project management and sustainability.

##### **Scientific and technical soundness of the project**

The participating countries have, through the extensive regional and national consultations under the Block and Supplemental Block B grants, indicated a common desire for a healthy BOBLME. Its resources help support 400 million people inhabiting the Bay's catchment area. Sustainable exploitation requires a good understanding of the Bay's ecological functions and processes, strengthened national and regional management capacity and efficient coordination.

##### **Component 1: Coastal/Marine Natural Resources Management and Sustainable Use.**

###### Subcomponent 1.1: Community-based Integrated Coastal Management.

There should be sufficient and varied experience across the region on community-based management with many valuable learning lessons that can be applied and replicated. This subcomponent is important for capturing the wealth of information and synthesizing the information for greater experience sharing. Similar activities in the East Asian Seas region have shown how community-based management of coral reefs and reef-related fisheries have been extended from the Philippines to Indonesia through information sharing and site visit exchanges. Replication of success is certainly to be encouraged and this activity should facilitate it.

#### Subcomponent 1.2: Improved Policy Harmonization

This subcomponent is important to ensure that policy processes and capacity for policy formulation are in place at local, national and regional levels. It will be more effective if the rural coastal community and the research community be given a more direct involvement equal to policy makers so that policy interventions are relevant and more acceptable to the coastal communities whose livelihoods can be improved through these policies. This is pertinent particularly to Objective ‘ii’, which promotes consolidation of selected policy recommendations to facilitate community-based ICM.

***Response by the project team:*** We fully agree with the comments of the reviewer and feel that many of these concerns have been addressed in project design. The proposed policy studies identified under this subcomponent (which are described in more detail in documents in the project file), particularly Study 3 which focuses on community level policy and the respective sociological aspects, are designed to be fully participatory and inclusive in their completion. These studies in turn will provide a major input into identifying and formulating possible policy interventions. Similarly, the national workshops proposed under the subcomponent, both provide and have budgeted for a broad and diverse level of stakeholder participation including from the rural coastal and research communities. National workshops will also be attended by the national Project Steering Committees (PSCs) and National Task Forces (NTFs) members, some of whom will represent rural coastal communities. Workshop invitees will also include representatives from other stakeholder groups identified as appropriate (in terms of making and influencing policy), through the initial policy studies proposed above. It is expected to be particularly important to involve provincial and district officials, community representatives, and NGOs. These workshops will be one of the main means through which the Project will influence policy. Budget support has also been provided to strengthen capacity in local NGOs to work with coastal communities in participating and influencing local formulation of policies that affect their livelihood and wellbeing. Finally, project design has been kept flexible and provides opportunities for the countries to include additional policy studies and the wherewithal to act on policy recommendations if new priorities are identified during implementation.

#### Subcomponent 1.3: Collaborative Regional Fishery Assessments and Management Plans.

It appears that shark fishery management to be addressed on a regional scale, and Hilsa and Indian mackerel fisheries management to be addressed at sub-regional levels have been evaluated as the most important target fisheries in need of collaborative trans-national efforts. This strategy of selecting a few species in urgent need of management is sound and practical. The question arises as to which fishing sector benefits most from the exploitation of these species and whether there are present conflicts between large-scale and small-scale operators at local and national levels that will make it enormously difficult and complicated to deal with at sub-regional and regional scales, keeping in view the PDO of enhanced food security and reduced poverty for coastal communities. The common fishery data/information system to be established will be useful for the management of trans-boundary species, but it is not clear if the intention is to restrict the database to trans-boundary species or to be all encompassing.

**Response by the project team:** *The reviewer is correct in noting that the selected species are taken by both small and large-scale vessels in the BOBLME region. Similarly, the conflict between the small and large – scale operators is one of the main management issues in the region and will be addressed by the Project as it is a transboundary issue (common) in that all countries have the same issue. In light of the complexity of the issue, it was judged to be most practical to address it at a sub-regional level (Hilsa and Indian mackerel, respectively). Many management interventions are possible and the opportunity to learn from others is a major advantage (these could include zoning, gear restrictions, seasonal closures and/or setting up of protected areas or fish refugia). Specific measures will be identified through the establishment of regional and national fishery taskforces to include representatives from both sectors and the subsequent preparation of national and sub-regional fishery management plans. Better management in both sectors would benefit food security both through direct food/nutrition effects and through indirect effects of improved earnings and employment. With respect to the data/information system, the intention is to use the trans-boundary species as an initial means to promote more standardized and consistent data collection systems which can then be built on and applied to all species. The eventual long-term goal is to establish a more generic system for all countries in the future.*

#### Subcomponent 1.4: Collaborative Critical Habitat Management.

Activities of this subcomponent are broad and similar to establishing ICM programs at two pilot sites, each involving two countries. The activities include development of a systematic monitoring program but do not indicate specifically what is to be monitored. If monitoring focuses on critical habitats, then what aspects are to be included? It is assumed that the critical habitats will be monitored to track the effectiveness of public awareness raising, alternative livelihood creation and improved planning capacity. The two proposed pilot sites will make excellent case studies on the management of shared/migratory stocks and be well-connected to Subcomponent 1.3.

**Response by the project team:** *Again the team agrees with the reviewer's observations. During project preparation there was not sufficient time to inventory all relevant data, sources and current monitoring programs, including in the latter case, national monitoring programs which might be adapted to the specific sites. However, major data gaps that were identified that need to be addressed to complete an environmental baseline at the sites include basic oceanographic parameters, fish larval patterns, presence and status of selected rare and endangered species,*



*and the current regime under differing monsoonal conditions. However, while representatives from the countries' relevant main line technical agencies and marine laboratories participated actively in the preparation of this subcomponent, time constraints prevented a larger technical workshop with other stakeholders which will be needed to finalize a number of aspects of the subcomponent including the monitoring program. Moreover, given the likelihood that the recent tsunami has adversely affected a number of coastal/near-shore marine habitats in the proposed sites, there may be a need to adjust both baseline priorities (e.g., a need to resurvey selected critical habitat) and monitoring parameters and activities. Project design has provided the flexibility to adjust to any changes in the baseline and monitoring program resulting from wider consultation and/or a change in circumstances. Under the subcomponent, support has been provided for the creation and periodic meeting of technical bi-national operations task forces that will provide the means to address and finalize these issues. In addition, a series of data workshops have been budgeted for in the subcomponent to allow for researchers to coordinate, exchange, and interpret data from the participating sites. Regardless of possible changes needed to complete an environmental baseline and establish a monitoring program, which will be finalized in Project Year 1, the monitoring of status and change of critical habitats (primarily, coral reefs, marine grass beds, and mangroves) will likely be parameters to be included in any monitoring plan supported under this subcomponent.*

## **Component 2: Improved Understanding and Predictability of the BOBLME Environment.**

### Subcomponent 2.1: Improved Understanding of Large-scale Processes and Dynamics affecting the BOBLME.

This activity is relevant and useful to a better understanding of large-scale environmental processes and does not take much of the total project cost. The identification of information gaps will help to steer future efforts that will synergize existing information.

### Subcomponent 2.2: Marine Protected Areas in the Conservation of Regional Fish Stocks

The activities proposed in this Subcomponent are directed at a more comprehensive approach to the establishment of Marine Protected Areas (MPAs) for more effective management of fisheries stocks, particularly migratory species. They are straightforward and consistent with similar initiatives to create MPA networks that are known to me. The previous Subcomponent will complement this to a large extent.

### Subcomponent 2.3: Improved Regional Collaboration.

While participation in relevant activities and processes of the listed programs/initiatives are to be supported, it is not clear what the level of involvement will be in order to ensure improved collaboration. Too often, participation is reduced to attendance at meetings of the other institutions, with collaboration restricted at best to mere information sharing. The budget for this component suggests that this is the proposed mode of collaboration for greater effectiveness; collaboration should extend to joint activities that capitalize on the expertise/resources of different institutions so that limitation of funds becomes less of an obstacle to moving ahead.

**Response by the project team:** *Again the team agrees with the observation. It is the view of the team that the only way to achieve any significant impact on the “health” of a body of water as large and complex as the Bay of Bengal, will be to work in a close and collaborative fashion with other regional and global programs and projects in the Bay. That being said, identifying and negotiating these collaborative arrangements at the onset of project effectiveness, in the absence of well-established and recognized BOBLME institutional arrangements, constrains making substantial commitments in terms of resources at this time. Moreover, most of the project resources in Phase 1 are oriented towards foundation building with more substantial field activities likely to take place in the second and subsequent phases of the BOBLME Program. Furthermore, based on an initial evaluation of other relevant initiatives in the region, there remains a certain level of uncertainty with respect to their own status and next steps (e.g., GIWA). Finally, it was felt that there would be some difficulty in justifying the blocking of resources during this phase of the BOBLME Program for use in collaborative activities to be defined later in Project implementation. Despite these considerations, there have been a number of informal discussions with regional institutions with respect to possible roles in support of project implementation (ref. regional sub-contractors in the institutional arrangements proposed under the Project). These will be further defined in Project Year 1. In short, as the reviewer has correctly said, the focus of the 1<sup>st</sup> phase is to establish a permanent institutional arrangement in support of BOBLME objectives. In light of this priority, the team felt it was logical to provide the wherewithal to enable the regional coordinating unit (RCU) to reach out initially through attending of meetings and other similar mechanisms to more fully understand the range and nature of existing initiatives during the foundation building process. This in turn will provide a basis for building a more substantive collaborative approach in subsequent phases of the Program where field activities will become a much more significant part of project supported activities..*

#### Subcomponent 2.4: Establishment of a Geo-reference Data Base.

This activity is essential to permanently archive the huge quantity of information to be generated from the program. Information retrieval will be facilitated and the production of regional data products will give participating countries a good sense of ownership and the benefits of participation.

### **Component 3: Maintenance of Ecosystem Health and Management of Pollution.**

#### Subcomponent 3.1: Establishment of an Agreed to Ecosystem Indicator Framework.

Environmental health indicators are important tools for managers. While water quality indicators are much established, ecological indicators that measure habitat quality are comparatively less defined or accepted. Still it will be a useful exercise if such indicators are developed for the region. Water quality criteria have been developed and adopted by the Association of South East Asian Nations (ASEAN) and can be considered by BOBLME nations, four of which belong to ASEAN.

#### Subcomponent 3.2: Coastal Pollution Loading and Water Quality Criteria.

This Subcomponent is timely and necessary to the SAP. A strong regional capacity to address marine pollution will contribute to a healthy BOBLME.

#### **Component 4: Project Sustainability.**

##### Subcomponent 4.1: BOBLME Institutional Arrangements.

A properly defined institutional mechanism should be established in the early phases of the project so that accountability can be maintained from the start. Participating countries should agree to a permanent institutional arrangement as early as possible, rather than have this developed halfway or towards the end of the first phase.

**Response by the project team:** *The project preparation team fully agrees with the recommendation. This has been an issue that has been discussed with and among the participating countries since the early stages of project preparation. To be honest, there was a lack of consensus on the exact nature and location of a permanent institutional mechanism to implement the Project. As a result, agreement was reached among the 8 participating countries that an “interim” regional coordination unit (RCU) responsible for project implementation should be established at the onset of the Project. It was also agreed that project resources would be provided to support a much more detailed institutional analysis as well as promote a series of national and regional consultative workshops designed to achieve the needed consensus prior to the establishment of BOBLME permanent institutional arrangements. The participating countries have agreed to a timetable calling for a decision no later than the end of Project Year 3. Depending on the nature of that decision and the potential budgetary implications, the possibility may exist of replacing the RCU with a permanent arrangement prior to the end of Project’s 1<sup>st</sup> phase. Finally, the existing situation provides an opportunity to allow for the emergence of other possible solutions which could facilitate reaching consensus among the participating countries (e.g., in the broadening of geographical representation and deepening of the mandate of the BOB Inter-governmental Organization).*

##### Subcomponent 4.2: SAP Preparation.

The processes identified for developing the SAP are suitable; use of TDA and consultations with government, public stakeholders and partners to formulate the SAP should result in a product that addresses most needs.

##### Subcomponent 4.3: Financial Sustainability.

This is crucial to long-term sustainability of any program and any effort devoted to this aspect will be worthwhile. A sustainable financing mechanism should be agreed to and be able to sustain program coordination at least, to ensure continuity and interest that can withstand the pulsating nature of aid agency funding.

**Response by the project team:** *The team feels that this is a very important issue. Project subcomponent 4.3 specifically supports the establishment of a financially viable BOBLME. This subcomponent will support the: (i) design and establishment of a financing mechanism to fund*

*the annual recurrent costs of the agreed BOBLME management structure ensuring the continued beneficial impact of the BOBLME program; and (ii) assist BOBLME countries to prepare for the mobilization of financial resources and development of financial mechanism for implementing specific actions that will be developed, agreed, and included under SAP.*

## **Component 5: Project Management.**

### Subcomponent 5.1: Establishment of the RCU.

This Subcomponent is estimated to take up 22.5% of the project funding. It is a major expenditure and should be considered carefully. Various alternatives to the establishment of an entirely new RCU were considered but analyzed to be unsuitable. There are advantages and disadvantages to setting up a new coordinating structure. These will have to be examined in greater detail and the final decision should be supported with stronger and more convincing justifications, including a cost-benefit analysis.

**Response by the project team:** *The team has been highly sensitive to this issue throughout the preparation process. As might be expected from a Program encompassing activities in eight countries with a considerable emphasis on, monitoring, evaluation and information dissemination, the cost of the project management component is significant (over 20% of the total). One factor which contributed to increased cost was a decision to increase project implementation from 5 to 6 years. Nevertheless, this is viewed as both warranted and realistic for a Program as complex as the BOBLME. Another factor contributing to cost is the inclusion of national counterpart management and coordination costs. In terms of the costs themselves, salaries and travel make up the greatest percentage. The number of expatriates (which may all be recruited from the region) has been cut to the minimum needed to ensure a technically sound RCU and still be able to call the BOBLME a regional project (3). Similarly, the travel budgeted for an 8 country regional project is not viewed as excessive. Finally, it should be noted that the countries have contributed significantly in both cash and in-kind, particularly India as host country, in covering the partial costs of the subcomponent. Although careful attention was given to assessing alternative management structures, it should be stressed that there is no existing institutional structure within the region capable of taking on this role. The structure established for the purposes of implementing the PDF-B retains only a single national staff member at this time. Among the alternatives evaluated were: (i) incorporating BOBLME management within the Chennai-based BOBIGO; (ii) basing the management unit at FAO Regional headquarters in Bangkok; and (iii) basing the management unit within one of the regional fisheries or coastal research organizations. It was concluded that although the BOBIGO might offer a long term sustainable solution to BOBLME management, the current restricted membership (only three of the eight participating countries) render it infeasible as a host at this time. The utilization of FAO offices, while reducing initial investment costs, would do little to cut annual operating budgets and would risk significantly reducing the role of participating national countries in management and hence long term sustainability.*

### Subcomponent 5.2: Monitoring and Evaluation System.

This is certainly necessary to ensure that project targets are met and progress is as planned. The proposed activities are relevant.

### Subcomponent 5.3: Project Information Dissemination System.

This Subcomponent is as important as the previous.

#### **Identification of the global environmental benefits and/or drawbacks of the project.**

The benefits will be a healthier and better managed BOBLME where improved sustainability will contribute to poverty alleviation of rural coastal communities and enhanced food security. The drawbacks include the lengthy process to develop an effective regional mechanism and acceptance by various stakeholders, but it has to start sometime. The project brief (p.2, 3<sup>rd</sup> paragraph) states that a critical barrier to addressing the key issues of unsustainable harvesting and habitat degradation is the weak and/or inappropriate policies, strategies and legal measures that characterize much of the region. “Where these do exist, they are rarely enforced”. How confident can we be of situation improvement resulting from better policy formulation when the present weakness of enforcement and/or surveillance remains unaddressed?

***Response by the project team:** It is the team’s view that sound policies are a prerequisite to improved surveillance and enforcement. It makes little sense to support increased enforcement capacity if what is being enforced is non-sustainable. It is felt, with strong support from the countries, that project support for a thorough review of “lessons learned” in the region, coupled with increased awareness among decision-makers and rural fisher communities alike, provides a sound basis for beginning to get the policies “right.” This will be further supported, by the establishment of a data portal designed to facilitate information exchange within the region, initially focusing on fishery legislation and policies and, dependent on its success, broadening the portal to include information and data relevant to other Project-relevant themes. Finally, project resources have been provided to promote the pilot the implementation of new policies where opportunities arise and the countries are in agreement. Once the “right” policy framework is in place, greater emphasis can be focused on increasing the efficacy of their implementation, most likely in the Program’s 2<sup>nd</sup> phase where field activities are more likely to predominate. Finally, despite the emphasis on foundation building in this initial phase of the Program, there are a number of field oriented pilot activities (e.g., preparation and implementation of regional and sub-regional fishery management plans, sub-regional management of transboundary critical habitat, and pollution “hotspot” monitoring). Where monitoring and enforcement are identified as major constraints in these activities, it is expected that project resources would address these issues as warranted.*

**How the project fits within the context of the goals of GEF, as well as its operational strategies, program priorities, GEF Council guidance and the provisions of the relevant conventions.**

The project is highly relevant to GEF goals. The performance indicators have been selected to reflect environmental quality improvement, enhanced capacity of participating countries, an effective collaborative mechanism and poverty alleviation.

**Regional context.**

The project includes all the countries around the large marine ecosystem of the Bay of Bengal and the regional context is relevant and well defined.

**Replicability of the project (added value for the global environment beyond the project itself.**

The institutional framework model that will be developed can certainly be replicated and applied to other LMEs. The project itself has pilot sites for the demonstration of sub-regional and bilateral arrangements and these in themselves can be replicated across BOB.

**Sustainability of the project itself.**

The development of the collaborative mechanism is a confidence-building measure that will increase resolve among participating countries to manage and improve the environmental quality of the Bay. Progress and success of initial activities will help to maintain interest that should contribute to project sustainability.

**SECONDARY ISSUES**

**Linkages to other focal areas.**

The project covers many of the main issues linked to ICM and LME management. It should help countries to meet with commitments to international conventions and agreements dealing with the marine environment.

**Linkages to other programs and action plans at regional or subregional levels.**

There are many programs and initiatives operating in the Bay of Bengal and functional linkages with these are important if action is to be synergized and overlapping activities minimized.

***Response by the project team:** We fully agree and have attempted to reflect that in project philosophy and design. See remarks under subcomponent 2.3, above.*

**Other beneficial or damaging environmental effects.**

The project has only beneficial effects to the environment. No damaging effects on the environment are apparent except for delays in project implementation.

**Degree of involvement of stakeholders in the project.**

There is a high degree of engagement with various stakeholders and a consultative approach is adopted in the project. There is a lot of consensus building involving stakeholders.

### **Capacity-building aspects.**

When adopted and established by participating nations, the regional mechanism will increase the capacity of these countries to manage the marine environment more effectively and improve capability to address transboundary issues.

### **Innovativeness of the project.**

**There is not much in the way of innovation.** Models exist elsewhere on the process of developing a regional mechanism for improved management of a large marine ecosystem. None is in place for the BOBLME.

***Response by the project team:** We fully agree. A major factor which influenced project design, supported with very explicit guidance from the participating countries, was not to place the focus and budget of the Project on promoting new, innovative approaches to manage the BOBLME and its resources. Rather it was to consolidate the already large and diverse experiential data base that exists throughout the region, distill relevant “lessons learned” and support its further replication and deepening in the BOB area. Further, while the creation of a regional approach to managing the BOBLME in itself may not be considered particularly innovative, the establishment of a well-recognized and appropriate institutional arrangements to facilitate a regional approach among the countries to address transboundary issues was felt by most to be the highest priority. Finally, while arguably not particularly novel, Project support for the promotion of collaborative approaches among two or more countries to address critical protected areas, transboundary fish stock management, common environmental health protocols and pollution monitoring will be new to the region.*

### **ADDITIONAL REMARKS**

It is already accepted that regional approaches are necessary for the management of the marine environment and to cope with its open and interconnected nature. Regional collaboration not only improves capacity to address transboundary issues, but also enhances management at national and local levels. Effective regional mechanisms can help to facilitate sharing of responsibilities and improve surveillance and enforcement across territorial boundaries, reducing helplessness at national levels against, for example, foreign poachers. Such a network will strengthen management throughout the region.

The recent Asian tsunami disaster provides a clarion call for the strengthening of regional co-operation. If already established, the regional institutional set-up can help to rehabilitate the thousands of displaced and affected fishers who survived the calamity. Even without natural disasters of such unprecedented magnitude, the rates of habitat degradation and fisheries resource depletion are sufficiently serious to warrant immediate attention.

***Response by the project team:*** We fully appreciate the magnitude and gravity of the recent tsunami on the peoples of the region and spent a good deal of time, given the project objectives, potential funding source, and status of project preparation, on how best to respond. We agree fully that if the RCU had been established and operating the project with its linkages fully developed in the region with the country counter-part institutions and other regional projects and programs, it would have been in a position to respond more effectively. It was decided that, rather than attempt to introduce “last-minute” changes to project design without prior consultation with the countries, it would be preferable to prepare and submit a short concept paper for consideration by the Council. The thrust of the concept paper is to work with governments and other key stakeholders in the region to promote increased capacity to disseminate information provided to national governments from the proposed established of a regional Early Warning System (EWS) to small fisher communities. If this concept is viewed as useful, it can be further developed during the first phase, in parallel to the likely establishment of the EWS itself, and implemented through the BOBLME and/or other appropriate set of institutional arrangements..

### **Project implementation.**

The process and mechanism are clearly outlined. Support from the participating countries is important to the successful implementation of the project and this has already been demonstrated in the project’s preparatory phase.

### **Project future.**

Much depends on the commitment of participating countries. This again has already been demonstrated in the preparatory phase with countries contributing in cash and kind to the development of the project proposal.



## **Annex 17: Maps**

### **SOUTH ASIA: Bay of Bengal Large Marine Ecosystem**