UNDP Project Document

United Nations Development Program

International Maritime Organization

Building Partnerships to Assist Developing Countries to Reduce the Transfer of Harmful Aquatic Organisms in Ships' Ballast Water (GloBallast Partnerships)

GloBallast Partnerships will assist developing countries to reduce the risk of aquatic bio-invasions mediated by ships' ballast water and sediments and will expand and build on a successfully completed GEF-UNDP-IMO pilot project (GloBallast Project). With the help of tools developed and lessons learned from the pilot project, the GloBallast Partnerships project will expand government and port management capacities, instigate legal, policy and institutional reforms at the country level, develop mechanisms for sustainability, and drive regional coordination and cooperation. The project will spur global efforts to design and test technology solutions, and will enhance global knowledge management and marine electronic communications to address the issue. The partnership effort is three-tiered, involving global, regional and country-specific partners, representing government, industry and non-governmental organizations. Private sector participation will be achieved through establishing a GloBallast Industry Alliance with partners from major maritime companies. 13 countries, from 6 high priority regions, have agreed to take a lead partnering role focusing especially on legal, policy and institutional reform. All told, more than 70 countries in 14 regions across the globe will participate, including the six pilot countries whose expertise and capacities will be drawn on for this global scaling-up effort

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Acronyms

ACC	Administrative Committee for Coordination (UNDP)
APR	Annual Project Review
AWP	Annual Work Plan
BCLME	Benguela Current Large Marine Ecosystem (GEF project)
BWES	Ballast Water Exchange Standards
BWM	Ballast Water Management
BWMC	Ballast Water Management Convention
BWPS	Ballast Water Performance Standards
ACWA	African Coastal Waters Association
AWP	Annual Work Plans (UNDP)
BL	Budget Line (UNDP)
CAE	Country Assistance Evaluations (UNDP)
CBD	Convention on Biodiversity
CDU	(Train-Sea-Coast) Course Development Unit
CEP	Caribbean Environment Program
CFP	Country Focal Point
CIESM	Mediterranean Science Commission
CMBL	(UNDP) Component and Budget Line
CME	Compliance monitoring & enforcement
COCATRAM	Central American Commission for Marine Transport
COP	Conference of the Parties
CPPS	Permanent Commission of the South Pacific
CTA	Chief Technical Advisor
DL	Distance Learning
DPD	Draft Project Document
DSS	Decision Support System
DWT	Dead Weight Tonnage
EA	(GEF) Executing Agency
EBRD	European Bank for Reconstruction and Development
EEZ	Exclusive Economic Zone
EEG	(UNDP) Energy and Environment Group
EMECS	Environmental Management of Enclosed Coastal Seas
ERP	Enterprise Resource Planning
EU	European Union
FAO	Food and Agriculture Organization
FOEI	Friends of the Earth International
FSP	Full-Sized Project
GBP	GloBallast Partnerships Project
GCLME	Guinea Current Large Marine Ecosystem (GEF Project)
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection
GIA	GloBallast Industry Alliance
GIS	Geographic Information Systems
GISIS	Global Integrated Shipping Information System (IMO)
GISP	Global Invasive Species Program
GIWA	Global International Waters Assessment (GEF project)
GMEIS	GloBallast Marine Electronic Information System
GPA	Global Program of Action (GPA) for the Protection of the Marine Environment from Land-based Sources of Pollution
GPTF	Global Project Task Force (GloBallast)
HCLME	Humboldt Current Large Marine Ecosystem Project
HELCOM	Helsinki Commission

IA	(GEF) Implementing Agency
IAS	Invasive Aquatic Species
IATF	(GEF International Waters) Inter-Agency Task Force
IBRD	(World Bank) International Bank for Reconstruction and Development
IC	Incremental Cost as defined by the GEF
ICZM	Integrated Coastal Zone Management
ICS	International Chamber of Shipping
IFI	International Financial Institution
IMO	International Maritime Organization
ISS	Initial Scoping Study
ITCP	Integrated Technical Co-operation Program (IMO)
IUCN	The World Conservation Union
IW	International Waters (GEF focal area)
IW:LEARN	International Waters Learning Exchange and Resource Network
IW- IMS	(IW:LEARN) International Waters Information Management System
IWRC	(IW:LEARN) International Waters Resource Centre
IWRM	Integrated Water Resource Management
LA	Lead Agency
LF	Logical Framework (Log frame)
LME	Large Marine Ecosystem
LPC	Lead Partner Country
LPIR	Legal, Policy and Institutional reforms
M&E	Monitoring and Evaluation
MAP	Mediterranean Action Plan
MARPOL	International Convention for the Prevention of Pollution by Ships
MDG	Millennium Development Goals
MEH	Marine Electronic Highway
MEPC	Marine Environment Protection Committee (IMO)
MoE	Ministry of Environment
MoFA	Ministry of Foreign Affairs
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSP	Medium-Sized Project
MTE	Mid Term Evaluation
NBWMS	National Ballast Water Management Strategy
NC	National Coordinator
NFP	National Focal Point (GloBallast)
NGO	Non-Governmental Organization
NOAA	(US) National Oceanic and Atmospheric Administration
NPC	National Project Coordinator
NTF	National Task Force
OAS	Organization of American States
OBIC	(subcommittee of CoML)
OFP	(GEF) Operational Focal Point
OP	(GEF) Operational Program
OP10	(GEF) Operational Program 10 (Contaminant Based Operational Program)
OPS2	(GEF) Overall Performance Study 2
PAC	Project Appraisal Committee (of UNDP)
PAL	Partnership Activity Lead (partner within PCT)
P2	Public Participation
PC	Partner Country
PCU	Project Coordination Unit
PDF	Project Preparation and Development Facility
PDF-B	Project Preparation and Development Facility Block B Grant
PERSGA	Regional Organization for the Protection of the Environment of the Red Sea and Gulf of Aden
PIR	Project Implementation Review
PSC	Port State Control

PSO	Port and Shipping Organization
PTA	Principal Technical Advisor
R&D	Research and Development
RAC/REMPEITC - Carib	Regional Activity Center / Regional Marine Pollution Emergency, Information and Training Center – Wider Caribbean
RAP	Regional Action Plan
RCO	Regional Coordinating Organization
REMPEC	Regional Marine Pollution Emergency Centre for the Mediterranean Sea
ROAR	Results-oriented Annual Report (UNDP)
ROPME	Regional Organization for the Protection of the Marine Environment - Kuwait
RTF	Regional Task Force
SAFEMED	Euromed Cooperation on Maritime Safety and Prevention of Pollution from Ships
SAP	Strategic Action Plan
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advise (CBD)
SC	Steering Committee
SEA	South East Asia (region)
SIDS	Small Island Developing States
SIGGTO	Society of International Gas Tankers and Terminal Operators
SIP	Stakeholder Involvement Plan
SOLAS	International Convention for the Safety of Life at Sea (IMO)
SPREP	Secretariat of the Pacific Regional Environment Program
STAP	Scientific and Technical Advisory Panel
STCW	International Convention on Standards of Training, Certification and Watch keeping for Seafarers
TA	Technical Advisor
TDA	Transboundary Diagnostic Analysis
TE	Terminal Evaluation
TOR	Terms of Reference
TPR	Tripartite Review
TSC	UN Train Sea Coast Program
TTPR	Terminal Tripartite Review
TWM	Transboundary Water Management
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Program
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Program
UNEP CAR/RCU	United Nations Environment Program / Carribbean / Regional Coordinating Unit
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDO	United Nations Industrial Development Organization
UNOPS	United Nations Office for Project Services
UNU	United Nations University
UNU-INWEH	United Nations University Institute for Water Education
URI	University of Rhode Island
UV	Ultraviolet (radiation)
WHO	World Health Organization
WACAF	West and Central Africa
WRI	World Resources Institute
WSSD	World Summit on Sustainable Development
WWAP	World Water Assessment Program
WWF	World Wildlife Fund

1 Elaboration of the Narrative

1.1 Situation Analysis

1.1.1 Context and global significance

Shipping moves over 80% of the world's commodities and transfers approximately 3 to 5 billion tons of ballast water internationally each year. A similar volume may also be transferred domestically within countries and regions each year. Ballast water is absolutely essential to the safe and efficient operation of modern shipping, providing balance and stability to un-laden ships.

Unfortunately, ballast water discharge can pose a serious environmental threat, in that more than 10,000 different species of aquatic microbes, plants and animals may be carried globally in ballast water each day. When discharged into new environments, such species may become invasive, disrupt the native ecology and/or have serious impacts on the economy and/or human health. The introduction of aquatic species to new environments, including through ships' ballast water and sediments, is considered to be one of the greatest threats to the world's freshwater, coastal and marine environments. The global economic impacts of invasive aquatic species, including through disruption to fisheries, fouling of coastal industry and infra-structure and interference with human amenity, have been estimated at US $100 billion per year (1 billion = 10^9).

Developing countries are among the largest "importers" of ballast water due to their significant exports of bulk commodities. Exports of oil, ores, phosphates and other raw materials and bulk cargoes are in many cases the primary source of revenue for developing countries and an important component of their national economies. On the other hand, developing countries are frequently dependent on their coastal and marine environments as the main source of living for coastal populations and as a major tourist attraction. Countries where ballast water is loaded, are also under pressure to see that the ballast is safe enough to be discharged at the destination ports.

Invasion of the European Zebra Mussel (*Dreisseina polymorpha*) in the North American Great Lakes in the 1980s, the Asian Golden Mussel (*Limnoperna fortunei*) in the inland waterways of Argentina, Brazil, Paraguay and Uruguay threatening the whole Amazon Basin, the Comb Jelly Fish (*Mnemiopsis leidyi*) in the Black Sea and Caspian Sea and the introduction of toxic dinoflagellate algae in several new areas around the globe are some of the classic examples of ballast water mediated bioinvasions. The severe economic and ecological impacts of these invaders provide some of the starkest case studies of the potential negative effects of ballast water introductions. The list of examples could continue as hundreds of aquatic bio-invasions have been identified around the world.

The transfer of invasive aquatic species in ballast water stands now as the biggest and most vexing environmental challenge facing the global shipping industry. There have been numerous global calls for action at the international level and international law provides a strong mandate for the adoption of relevant responses. The UN Convention on the Law of the Sea requires States to work together "to prevent, reduce and control human caused pollution of the marine environment, including the intentional or accidental introduction of harmful or alien species to a particular part of the marine environment."

Controls on the introduction of alien species that threaten ecosystems are mandated under the Convention on Biological Diversity (1992). The Convention recognizes invasive alien species as being an important threat to biological diversity, and a serious impediment to conservation and sustainable use of global, regional and local biodiversity. Article 8(h) of the Convention states that:

‘ Contracting Parties to the Convention should, as far as possible and appropriate, prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species.’

Adoption of the Ballast Water Management Convention (BWMC) in February 2004 provided a much needed standardized, international regime to address this global threat arising from ballast water transfer of invasive species. The proposed new phase of GloBallast will play a crucial role in providing technical assistance to developing countries to enact legal, policy and institutional reforms to implement the Convention, while the countries themselves will take the burden of implementing the Convention. Although structured in the traditional IMO convention format based on ship safety, cleaner seas and internationally agreed upon standards, the new instrument clearly links with the United Nations Convention on the Law of the Sea (UNCLOS) and UNEP/World Health Organization (WHO) biosecurity concepts and recognizes the sustainable development and integrated management practices advocated at the World Summit on Sustainable Development (WSSD) in the Plan of Implementation[1].

Considering the seriousness of this global threat and responding to the global calls for urgent action, a GEF/UNDP/IMO pilot project was executed from 1 March 2000 until 31 December 2004 focusing at capacity building, institutional strengthening and technical assistance in six pilot countries representing six developing regions (*Removing Barriers to the Effective Implementation of Ballast Water Control and Management Measures in Developing Countries – GloBallast Pilot Project)*. The pilot phase was also designed to culminate in the establishment of cooperative regional arrangements in each of the six pilot regions, and in the development of global tools and systems that can be effectively used in any global scaling up and/or follow-up efforts of the GEF intervention.

To date, an unprecedented momentum of concerted international action has been precipitated by the GloBallast program, including in particular adoption of the Ballast Water Management Convention in February 2004. IMO has received overwhelming demand from developing countries worldwide for programmatic support for replication of GloBallast activities and technical assistance. During its July 2003 session, the Marine Environment Protection Committee (MEPC) of IMO, attended by 88 member States, acknowledged the substantial contribution of GloBallast in addressing ballast water related problems and requested IMO to approach UNDP, GEF and other potential donors and partners to explore the possibilities for up-scaling and replication of the successful activities initiated during the pilot phase.

A result of the GloBallast pilot phase effort has been the continued leadership on ballast water taken by the pilot countries. Brazil has signed the BWM Convention and South Africa has recently taken the Cabinet decision to sign the Convention. The other four pilot countries have not signed but are in the process of assessing impacts of ratification and identifying implementation strategies. The Government of China has completed a study that looked into the implication of ratification as a part of the process. India has progressed considerably in the ratification process and has allocated US$600K for implementing the early activities such as country-wide port base line surveys.

The BWMC was approved at IMO in February 2004. It has so far been signed / ratified by 9 countries. This pace is common for international environmental treaties and in no way suggests problems for eventual entry into force. Even those countries that have been in the forefront of ballast water management and enforcement efforts, including Australia, Canada, the US and New Zealand, have yet to ratify the Convention, although these countries have unilateral requirements for BWM.

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[1] WSSD POI 33 (b) “ Accelerate the development of measures to address invasive alien species in ballast water. Urge IMO International Convention on the Control and Management of Ship’s Ballast Water and Sediments”.

The Convention mentions 2008, 2012 and 2016 as years for phasing in BWM requirements and this was done with a reasonable assurance by the IMO Member Countries that the Convention will get entered into force within this time frame.

One hurdle to ratification is the lack of approved cost effective treatment technologies. The technology review by the IMO countries (MEPC-54 in 2005) concluded that it is reasonable to assume that technologies will be available by 2008, hence this concern shouldn't pose a major long term risk. In the interim, ships can meet the BWMC requirements through ballast water exchange in mid-ocean. IMO has also established a technology review committee as well as an approval mechanism for potential active substances that can be used in ballast water treatment. The basic approval of three or more such active substances in 2005-2006 indicates that the confidence by the shipping industry and therefore the member governments to mandate the requirement is much higher than before. As a consequence of these factors, an early entry into force of the BWMC is distinctly possible, and GloBallast Partnerships can be instrumental in hastening this process.

An extremely important development worldwide has been the major surge in research and development (R&D) efforts to find more effective, technologically based systems for the treatment of ships' ballast water to prevent the transfer of harmful organisms. The GloBallast program, through its pilot phase, was working to assist this process. These efforts included the 1st and 2nd International Ballast Water Treatment R&D Symposia in London in March 2001 and July 2003 respectively, co-organizing the 1st and 2nd International Conference on Ballast Water Management in Singapore in 2002 and 2004 respectively, developing and maintaining the Ballast Water Treatment R&D Directory (http://globallast.imo.org/research/), directly funding R&D activities in some of the GloBallast Pilot Countries and maintaining cooperative links with a number of R&D projects and bodies. GloBallast Partnerships is designed to broaden and deepen this cooperation with the maritime industries to spur development and utilization of cost-effective methodologies and techniques for ballast water treatment, sediment disposal, ship to port communications and to facilitate north-south technology transfer.

The GloBallast R&D Directory lists more than 100 projects worldwide and the list is expanding. The R&D projects are based in countries as far-flung as Australia, Brazil, Canada, China, Germany, India, Japan, New Zealand, Norway, Poland, Singapore, South Africa, the UK, Ukraine and the USA. They comprise government programs, private initiatives, private-public consortiums, local efforts, national programs and international alliances. However, one of the difficulties faced by this diverse global R&D effort is the lack of effective lines of communication between these groups and with governments and the shipping industry. Apart from the efforts of GloBallast in the pilot phase, there is also a general lack of involvement of developing countries. There is an increasing need to facilitate technology transfer towards developing countries and ensure global sustainability through North-South collaboration.

Several North American and European countries have initiated programs and strategic action plans to address the threat posed by invasive aquatic species (IAS) in ships' ballast water. During the initial phase of GloBallast a number of these countries provided substantial support to the six Pilot Countries (e.g. Australia/New Zealand support for risk assessment and port surveys, HELCOM support for eastern Baltic workshop, Singapore subsidizing GloBallast countries at their two Ballast Water R&D Conferences, UK and US support for GloBallast R&D Symposiums, US funding for GloBallast in wider Caribbean through the White Water to Blue Water program). This excellent foundation of collaboration between developed and developing countries firmly established by GloBallast pilot project will be further developed in the implementation of GloBallast Partnerships.

1.1.2 GEF, UNDP, IMO Consultations

During the design and development process for GloBallast Partnership Project (GBP), starting in 2003, a series of consultations have occurred between IMO, UNDP and the GEF Secretariat

(GEFSEC) to evaluate the work of the initial phase of GloBallast, discuss policy issues, analyze the provisions of the newly adopted Ballast Water Management Convention and arrive at a common understanding of the possible approaches to take. The GEFSEC emphasized:

a) The need for national level legal, policy and institutional reforms;

b) Importance to develop financially and institutionally sustainable Ballast Water Management (BWM) strategies at the national level;

c) Incremental and strategic focus of GEF intervention in particularly vulnerable countries;

d) Objective of spurring North-South collaboration;

e) Opportunities for the project to instigate action on marine electronic information system development, and linkages with the Marine Electronic Highway (MEH) development efforts; and,

f) Desire to have the project foster a close partnership with industry.

All of these issues have been taken into account in this Project Document. Legal, policy and institutional reform is the major focus of this coordinated effort with partnering countries (a), financially sustainable strategies are to be a central feature in the development of national Ballast Water Management Strategies (b). The six regions in which the partnering countries reside have been selected for their high vulnerability, high needs and high marine biodiversity (c). Each of the partner countries are GEF eligible developing countries. Their involvement should spur south- north collaboration, recognizing the interest also amongst developing countries to participate, (d). The project includes a series of outputs and activities focused on knowledge management, including the development of a GloBallast Marine Electronic Information System (GMEIS), to enhance communications on ballast water management. The GMEIS should in time link with other marine information systems, including the Marine Electronic Highways (e). The project includes as one of its most significant features a close association with industry, with the GloBallast Industry Alliance (GIA) to be launched, and co-financing of around $ 20 million (f).

It was agreed that IMO and its Member States would take the burden of activities for implementation of the Ballast Water Management Convention with GEF providing support for incremental activities in highly sensitive countries and specific ecosystems that are of particular global value and under serious threat from IAS.

Also, there is a close correlation between the recommendations of GEFSEC and the recommendations provided at the GBP Global Inception Workshop, held in London, during 26-27 July 2005. The key recommendations from the workshop, which have been incorporated into the design and implementation of the full project, are:

- The overriding objective of GBP should be to ultimately establish permanent, self-sustaining legal, policy and institutional (LPI) arrangements in developing countries to ensure uniform application of the international regime.
- The project should seek to catalyze LPIR at the national level and utilize regional structures as a mechanism to bring country representatives together for training and to discuss issues of mutual concern.
- The UNEP-Regional Seas provide logical geographical groupings for differentiating regions, while within these the LMEs should constitute key management units.
- The full-scale project should not only assist a few priority regions but should assist ALL GEF-eligible regions – i.e. take a truly global approach. Within this global approach – different levels and types of GEF assistance might be provided to different regions, based on priority ranking.
- The GloBallast Pilot Phase countries should participate in GloBallast Partnerships, providing their expertise to the new partners, and continuing to push ballast water management efforts in their countries and regions.

1.1.3 Threats, root causes and barriers analysis

Threats

The context and global significance discussion above has served to identify critical threats with respect to ballast water as a vector for marine bio-invasions. As noted, the transfer of alien marine species can pose a severe threat to human health and the environment, and may impose significant economic consequences as well, for fisheries, tourism and industry (hydropower, industrial cooling systems).

The threat is especially difficult because it stems from the performance of an activity that is essential to the safe operation of shipping vessels. Modern shipping cannot operate without ballast water, which provides balance and stability to un-laden ships. When a ship is empty of cargo, it fills with ballast to maintain stability, trim and structural integrity. The ballast is discharged when the ship loads cargo. A potentially serious environmental problem arises when this ballast water contains aquatic life. There are thousands of aquatic species that may be carried in ships' ballast water; basically anything that is small enough to pass through a ship's ballast water intake ports and pumps. These include bacteria and other microbes, micro-algae, small invertebrates and the eggs, spores, seeds, cysts and larvae of various aquatic plant and animal species.

Root Causes

Despite the achievements by the GloBallast Pilot phase in the initial six pilot countries, the knowledge base, legal/policy framework and technical and institutional capacity required to give effect to an international regime for the control and management of ships' ballast water remain severe constraints for most of the developing countries. The root causes associated with these issues can be grouped in six categories as follows:

1. International and cross boundary character of the shipping industry;
2. Institutional and legal arrangements are insufficient or inadequate to address the ballast water problem;
3. Lack of readily available, cost effective and viable treatment technologies to prevent the introduction of unwanted organisms in ships' ballast water;
4. Broad lack of awareness regarding aquatic invasive species;
5. Limited financial resources allocated to address ballast water issues; and,
6. Poor and inconsistent regional cooperation.

If not adequately addressed, the lack of institutional capacities, legal arrangements, coordinated stakeholder actions and technology solutions will continue to remain as major barriers to the effective implementation of ballast water controls and management measures in developing countries.

1.1.4 Institutional, sectoral and policy context

The transfer of invasive aquatic species is a global, trans-boundary problem. IAS do not recognize national borders and the shipping industry crosses jurisdictional boundaries in the conduct of trade. Consequently, international and regional co-operation, in addition to national-level activities, are key elements of the strategy developed to address this issue. GloBallast Partnerships has been designed to span all institutional levels – with coordinated activities at the global, regional and national levels, with attention paid also to ports- and ship-based management.

The impact on biodiversity from shipping and ballast water management necessarily spans the maritime transportation and environmental sectors, and solutions require a coordinated effort

between government, industry and interest groups across these sectors. GloBallast Partnerships includes a global project task force (GPTF) with representation from the Partner governments, international organizations, industry groups and environmental organizations. In addition, the series of intended workshops and training opportunities will encompass experts from a variety of disciplines and across several governmental agencies (port state control, maritime transportation, ports management, environmental protection, fisheries and human health).

1.1.5 International Policy Context

The project builds from a strong base in international policy, including first and foremost the newly adopted '*International Convention for the Control and Management of Ships' Ballast Water & Sediments*.' This convention was adopted by consensus at a Diplomatic Conference at IMO in London in February 2004. The Conference was attended by representatives of 74 States, one Associate Member of IMO; and observers from two intergovernmental organizations and 18 non-governmental international organizations. The Convention will enter into force 12 months after ratification by 30 States, representing 35 per cent of world merchant shipping tonnage. Section IV Part V includes a summary of the Convention.

Under Article 2 *General Obligations*, Parties to the Convention undertake to give full and complete effect to the provisions of the Convention and the Annex in order to prevent, minimize and ultimately eliminate the transfer of harmful aquatic organisms and pathogens through the control and management of ships' ballast water and sediments.

While IMO instruments were traditionally focused on flag States, the new global Convention establishes concrete rights and responsibilities for the port and coastal States as well. IMO coordinates Convention processes, reporting, information dissemination, and technical assistance when requested. The responsibility of implementing the conventions lies, however, with IMO member States and the very large majority of the costs related to the implementation process is absorbed by the respective governments, shipping industry and interested donors.

At present, just 9 countries have ratified the Convention, collectively providing less than 3% of the maritime shipping tonnage. While it is common for countries to move slowly when endorsing a new international convention, the other main reasons that more countries have not yet come forward are assumed to be:

- Countries have a lack of institutional capacity, with maritime ministries having insufficient finances and human resources to implement new ballast water management programs.
- The complex and likely expensive technology solutions required for effectively treating ballast water, which await further research and development and globally accepted verification and approval mechanisms
- BWM may be assigned a low priority for some coastal nations whose leadership may not be aware of the significant biodiversity and economic implications.

GloBallast Partnerships is designed to positively impact on all of these reasons, by expanding knowledge of the importance of this issue, building national capacities to achieve legal, policy and institutional reforms and spurring continued private sector R&D efforts to develop cost effective and viable treatment options.

Convention on Biological Diversity (CBD)

International action on invasive species, and the recognition of ships' ballast water as a potential vector, is recognized through the Convention on Biological Diversity (CBD). The CBD recognizes invasive alien species as being an important threat to biological diversity, a serious impediment to conservation and sustainable use of global, regional and local biodiversity, with significant undesirable impacts on the goods and services provided by ecosystems. The CBD also recognizes the urgent need to address the impact of invasive species on native ecosystems. Eradication, control and mitigation of their impacts combined with legislation and guidelines at

national, regional and international levels are some of the ways in which the Convention is addressing this issue.

In the program of work of the Convention, invasive alien species are a key cross-cutting issue of relevance to all five thematic areas; addressing marine and coastal biodiversity, agricultural biodiversity, forest biodiversity, the biodiversity of inland waters, and dry and sub-humid lands.

The program of work of the CBD's 'Jakarta Mandate on Marine and Coastal Biological Diversity' identifies key operational objectives and priority activities within five key program elements, among them 'alien species and genotypes'. The three operational objectives identified under program element five on alien species and genotypes, aim to:

- achieve better understanding of the causes of the introduction of alien species and genotypes and the impact of such introductions on biological diversity;
- identify gaps in existing or proposed legal instruments, guidelines and procedures to counteract the introduction of and the adverse effects exerted by alien species and genotypes; paying particular attention to transboundary effects;
- collect information on national and international actions to address these problems, with a view to prepare for the development of a scientifically-based global strategy for dealing with the prevention, control and eradication of those alien species which threaten marine and coastal ecosystems, habitats and species; and
- establish an 'incident list' on introductions of alien species and genotypes, through the national reporting process or any other appropriate means.

During its 8th meeting, the CBD's Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), reviewed the program of work on marine and coastal biodiversity, and recommended that the Conference of the Parties (COP) confirm that the level of priority of its elements still corresponds to global priorities. SBSTTA also recognized that some refinement to the program of work was needed as a result of recent developments and new priorities, and requested the CBD Executive Secretary to set clear targets for the implementation of activities, taking into account the Plan of Implementation of the World Summit on Sustainable Development and the Strategic Plan of the CBD. In regard to invasive alien species, the target set for marine and coastal ecosystems is:

'All major pathways for potential alien invasive species in the marine and coastal environment controlled'.

Under the CBD 'Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Invasive Alien Species' have been developed.

Parties to the CBD have recognized that there are major gaps in the global regulatory regime for various vectors of invasive aquatic species, including ballast water. The CBD Secretariat, in conjunction with Global Invasive Species Program (GISP) and UNEP Regional Seas, and involvement of World Conservation Union (IUCN), held a workshop of relevant agencies in Montreal in June 2005, to more clearly identify and define these gaps and develop a strategy to address them, including definition of roles and responsibilities for different vectors between UN agencies including IMO and other bodies, and the development of a Joint Global Work Plan on Invasive Marine Species.

Decision VII/5 of the 7th Conference of the parties (COP 7) recognizes the program of work on marine and coastal biological diversity, and encourages parties to the CBD to ratify the Ballast Water Management Convention. The Decision includes Operational objective 5.2, "to put in place mechanisms to control pathways, including shipping, trade and mariculture, for potential alien species in the marine and coastal environment". 5.2 (b) declares "to implement measures to address invasive alien species in ballast water, including through the International Convention for the Control and Management of Ship's Ballast Water and Sediments".

1.1.6 Regional Policy Context

The foundation for a regional approach to ballast water / invasive species issues was laid during the GloBallast pilot phase. As a result of the GloBallast pilot phase, Regional Tasks Forces (RTFs) have been formed in the pilot regions and regional Strategic Action Plans (SAPs) on ballast water control and management have been developed and adopted involving more than 60 countries. The regional SAPs are focussed on the protection of shared coastal and marine environment through policy reforms at national level triggered by the Ballast Water Management Convention.

Five of the six high priority regions identified to receive special attention during the GloBallast Partnerships Project began their involvement during the GloBallast pilot phase. The pilot project assisted the Mediterranean Action Plan (MAP), the Permanent Commission of the South Pacific (CPPS) and the South Pacific Regional Environment Program (SPREP) to develop regional strategies and activities on ballast water/IAS control and management, and had preliminary contacts with the Caribbean Environment Program (CEP). In addition, GloBallast has been assisting GEF International Waters "sister projects" focused on Large Marine Ecosystems (LMEs), to frame their strategies and activities on ballast water/IAS control and management. These include the three LMEs that will be involved in GBP for the West and Central coast of Africa (WACAF): Canary, Benguela and Guinea Currents LMEs. The sixth regional cooperating organization under GBP is the Regional Organization for the Protection of the Environment of the Red Sea and Gulf of Aden Region (PERSGA), also the site of a recent GEF International Waters project.

All six of the high priority regions have continued to develop their strategies for dealing with marine invasive species, and in particular ballast water as a vector, during PDF-B phase of GloBallast Partnerships. In three of the GBP regions (WACAF, PERSGA and SPREP), regional action plans have been developed and Regional Task Forces have been established with a clear mandate to support GloBallast Partnerships Project. In all six of the priority regions, in addition to the 6 pilot country regions and two additional partnering regions (Caspian and Baltic), regional mechanisms are already in place and there are organizations and committees tasked with the responsibility to review regional options for better ballast water management. All six of the regional coordinating organizations have endorsed GloBallast Partnerships (see Section IV part I).

1.1.7 National Policy Context

To date, through the GloBallast initiatives, more than 130 countries and many regional organizations and programs from all of the developing regions of the world have expressed their genuine interest in becoming partners or being associated with GloBallast. Annexed to this DPD are letters of endorsements from GEF Operational Focal points representing 17 countries, with an additional 29 country endorsements from representatives of maritime and environmental authorities.

As a result of the GloBallast pilot phase, the six initial Partner countries are committed to continue and expand their ballast water related activities and have included ballast water management and control in their national development and environment policies. They are also prepared to share their experience and lessons learned with their neighbors and unanimously support the principle that this issue can only be addressed successfully through concerted multi-lateral action (refer to support letters from pilot countries in Section IV part I).

1.1.8 Stakeholder analysis

Ballast water problems are inter-disciplinary in nature, so the success of the project depends on the full involvement of a broad group of stakeholders. Experience from the pilot phase has provided a good indication of the main actors involved in the issue. Without precluding the

participation of additional partners, the following institutions and organizations are likely to be involved and interact:

- Maritime administrations
- Environmental agencies
- Ministries of agriculture (fisheries)
- Ministries of health (quarantine and sanitary services)
- Coast-guard and navy
- Parliamentary committees for environmental protection
- Shipping and port industry
- Oil and gas industry
- Mining industry
- National and regional marine research institutions
- Technology Developers
- Regional and international organizations involved in ballast water management and control
- Relevant NGOs
- Local government agencies
- Donor community and international financial institutions.

Full consultation with the key players will be ensured at the national level through the establishment of National Task Forces (NTF). The National Focal Points (NFP), who will take responsibility for the implementation of the project in their respective countries, will act as chairpersons of the National Task Forces. In the stakeholder involvement plan the roles, responsibilities and relationships among the stakeholders are outlined, and mechanisms for their optimal involvement in the project activities are suggested. Clear roles and responsibilities can ensure ownership and facilitate smooth implementation. The stakeholders will benefit throughout the project from studies, workshops, training, reviews and legal and institutional analysis. They will be granted access to the GloBallast Marine Electronic Information System (GMEIS) that will be launched under the project, and will be invited to sit on the Global Project Task Force - the steering structure and highest advisory body of the project. (note: consistent with other GEF requirements, a full stakeholder involvement plan is included in Section IV, Part IV).

1.1.9 Baseline analysis

As detailed in the Incremental Cost Analysis (see DPD section 2.1), a financial baseline for the project has been set at just over $ 900 million, over 5 years, established based on a 'business as usual' scenario where most countries are tending to their ship-related environmental management activities with little effective regard for, or progress in, addressing ballast water-borne invasive species issues. The baseline estimate adds up expenditures by Governments to manage ship-based pollutions (spills, wastewater, solid wastes, air pollution etc), but not ballast water. Up until the GloBallast pilot phase activities, and then the IMO BWM Convention, there has been little attention given to the environmental consequences of ships' ballast, especially amongst developing countries. None of the lead partnering countries for the upcoming project has as yet ratified the BWM Convention, nor have they yet developed and/or strengthened their legal, policy and institutional structures for ballast water management.

Despite the general awareness and the international momentum generated by the GloBallast demonstration phase, the knowledge base, legal/policy framework and technical, financial and institutional capacities required of developing countries to establish robust programs for the control and management of ships' ballast water remain challenging. Efforts to date have tended to be fragmented and under-funded. The lack of attention and coordination has been replicated at

the regional level. The absence of an integrated approach means that efforts to address the ballast water problem will prove difficult without focused international assistance.

Because of the enormous technical, scientific, environmental, and economic implications, the ballast water issue is more complex than most other ship-based pollution threats that countries face. Under the baseline scenario, rapid and effective implementation of the Ballast Water Management Convention (BWMC) could be severely restricted by a lack of capacity in developing countries. It is anticipated that without further technical cooperation, and the proper mobilization of existing resources, the BWMC will go through an unnecessarily long process of implementation, leading to the proliferation of detrimental, and sometimes devastating, impacts on coastal and inland populations, the marine environment, and aquatic biodiversity. Such a scenario would also result in wasting the momentum generated by the GloBallast pilot phase.

Even among the group of highly industrialized countries that have at least some expertise in this matter, implementation of BWM strategies has been limited, and under the baseline scenario there is little hope for substantial technology and skills transfer from these countries to the developing world. The much-needed exchange of information and concerted action at the global level has been insufficient, lacking in consistency and internationally agreed standards.

A consequence of the awareness raising campaign conducted during the GloBallast pilot phase has been the growing interest in ballast water issues in an increasing number of developing countries. Encouraging responses have been received from many regional marine environment protection organizations, indicating they plan to include the ballast water issue on their agenda of priorities. UNEP Regional Seas Programs and regional GEF projects dealing with Large Marine Ecosystems (LME) have expressed their interest in including ballast water management and control in their regional strategies. However, these are only expressions of good intentions, and are not likely to generate self-supporting mechanisms to properly address ballast water as a vector for invasive aquatic species without GEF intervention.

The absence of support, and the lack of co-ordination and standardized approaches at regional and global level, will discourage emerging initiatives and bring additional difficulties to the implementation of an international regime for the control and management of ballast water, which means that the transfer of unwanted species with its notorious impacts on the environment, economy and human health will continue.

1.1.10 Alternative Scenario

With GEF providing its catalytic support, the alternative is a global, regional and country-based programmatic framework for the sustainable replication of ballast water management and control measures, ensuring that maximum benefits accrue from the foundation work achieved in the pilot phase.

All of the government actions planned, and co-financing offered under GloBallast Partnerships are considered additional, incremental measures. Likewise, the co-financing support from industry, for research and development, the testing of new equipment and solutions, and the holding of R&D symposia, are considered additional activities, with an expectation that GloBallast Partnerships will help set the legal, policy and institutional framework for countries that will facilitate technology adoption and diffusion among the shipping industry worldwide, in response to the requirements and timetables set out in the BWM Convention. All told, the incremental financing building from the GloBallast partnerships effort should reach just above US $24 million

The aims and objectives of GloBallast Partnerships will be a logical extension of the pilot phase, with a focus on national policy and legal reforms in targeted developing countries and an emphasis on integrated management. The approach envisages:

- Building on the achievements and momentum, and utilising the capacity and talent generated by the pilot phase;
- Replication of best-practices and technical activities in newly identified beneficiary countries with the view to stimulate policy reforms at national level;
- Supporting specially vulnerable and/or environmentally highly sensitive countries in their efforts to enact legal reforms to implement the Ballast Water Management Convention;
- Working towards advanced integration through other interested structures, mechanisms and programs, including where optimal, GEF-IW LME projects and UNEP Regional Seas; and
- Promoting collaboration with industry to facilitate the successful transfer of new technologies from developed to developing countries.

Support for appropriate national institutional arrangements will be granted and regional mechanisms will be used as catalysts for supporting national policy reforms. Compliance Monitoring and Enforcement (CME) systems, which could not be developed due to the delay in the adoption of the Ballast Water Management Convention, will be prepared in accordance with the requirements of the IMO instrument. Formalized global communication systems through identified lead agencies will be developed. Priority software and hardware will be designed and direct logistic support from the more advanced countries will be sought. Standardised protocols and methodology for conducting port biological surveys and risk assessments will be provided with direct assistance from the capacity built in the pilot phase.

Specific training on ballast water management and control will be provided, based on the training courses developed during the pilot phase, with emphasis on various responsibilities under the new Ballast Water Management Convention. Sustainable financial and institutional arrangements for the long-term management of ships' ballast water will be established, including the mobilization of public and private sector funding.

The global information clearing house function established during the pilot phase will be continued and further strengthened, in support of a uniform approach. Strategies to integrate the ballast water programs with existing marine and coastal management schemes will be developed and implemented.

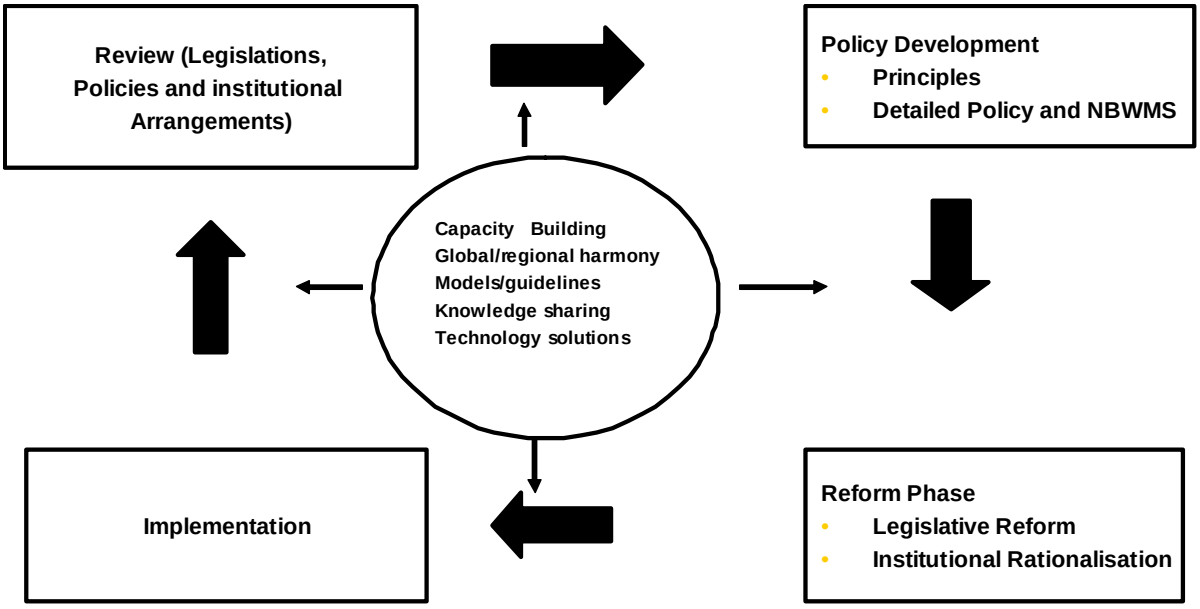
In essence, the proposed GEF project will build on the findings, institutional settings and capacity developed during the pilot phase. The results of this GEF intervention will include a measurable reduction in risk from aquatic bio-invasions with a significant mitigation of the detrimental, sometimes devastating, effects of ballast water transfers, better protection of marine coastal and freshwater ecosystems and habitats and conservation of biodiversity.

Without this GEF intervention, the extremely significant progress achieved in the GloBallast pilot phase will not be capitalized on, and the global benefits may well be lost. GEF support is being sought to build on, optimize benefits from and continue the momentum generated by the GEF investment in the pilot phase. The GEF intervention will demonstrate how GEF financing of some incremental costs can massively catalyse major achievements at national level relating to one of GEF's key strategic priorities.

1.2 Strategy

GloBallast Partnerships represents a continuation, expansion and refinement of the GloBallast pilot phase. It also takes the effort to its logical next step – developing a truly global partnership that spurs government action and industry innovation in order to significantly reduce a major risk to global biodiversity and human welfare. The strategy is ambitious, yet focused. While the reach is global, other shipping based vectors for IAS have not been added, and all of the intended outcomes, outputs and activities are directly focused towards improved management of ballast water, and improved monitoring and mitigation of its impacts.

The strategy takes its basis from the legal, policy and institutional reform (LPI) roadmap developed during the PDF-B phase which identified the critical milestones along the reform path and associated capacity building needs. The critical elements of this roadmap are shown in figure below. The project strategy also incorporated ways and means of catalyzing global technology developments and better information sharing and communication mechanisms, to go hand in hand with the LPI reform process, to reduce the gap between policy developments and implementation.



The strategy for GBP has been developed using a 3-tired approach:

1. A global component, managed in cooperation with IMO London, providing international coordination and information dissemination, including the development of toolkits and guidelines, and establishing a strong cooperation with industry and NGOs.
2. A regional component, providing regional coordination and harmonization, information sharing, training, and capacity building in the application of ballast water management tools and guidelines.
3. A significant country component, that establishes a fast track (Lead Partner Country-LPC) and partner track (Partner Country-PC) process for GEF-eligible countries in the priority regions. LPCs must commit to develop and implement a National Ballast Water Management Strategy (NBWMS), and to adopt legal, policy and institutional Reforms (LPIR).

The three-tier approach is schematically represented below:

1.2.1 Global Component:

The project will be managed globally through the Project Coordination Unit, based at IMO headquarters in London, UK. As with the GloBallast pilot phase, the decision to house the PCU headquarters in London is based from the synergistic effect of having the PCU in close proximity to the ballast water office within IMO. Given the frequency of IMO member state participation in the regular IMO meetings , in particular the MEPC, the PCU is in an ideal position to stay in contact with member state representatives and to ensure that the momentum for addressing ballast water management issues within the priority regions (and in other regions) continues to build.

Within the global component is included the Global Project Task Force (GPTF), providing overall management advisory support for the project, and including as members regional and country representatives as well as industry and environmental organization representatives. There are also global outputs and activities focused on providing guidance and training to country officials and experts on strategic planning and legal, policy and institutional reform, on the management of risk based compliance systems, and the carrying out of marine biodiversity surveys. In addition, global level activities include public awareness raising and the development of knowledge management systems including the development of a GloBallast Marine Electronic Information System (GMEIS). Of special note, the global component includes a major partnering effort with industry to continue pushing R&D efforts on cost-effective ballast water treatment technology solutions.

1.2.2 Regional Component:

Fourteen regions are involved in the effort. Based on the recommendations from the Global Inception Meeting held in July, 2005, five regions are considered the priority regions, including the Caribbean, Mediterranean, Pacific Coast of South America, Red Sea and Gulf of Aden and West Coast of Africa. In addition, the South Pacific will receive support for its ongoing ballast water strategy development. The next tier of cooperation concerns the regions of the GloBallast Pilot countries, to ensure continuing momentum and to further the development and implementation of regional action plans. These are: Southwest Atlantic coast of South America, South East Asia, South Asia, Persian Gulf, West Indian Ocean (Southern and East Africa).

Additional linkages will be established with the Caspian and Baltic regions where there are existing GEF projects which include Ballast Water Management Programs.

The regional component is first and foremost a mechanism to ensure that all countries in the Partner regions have an opportunity to participate and learn from the activities undertaken by the LPCs. To that end, the regions will play a coordinating role for developing national level strategies, policies and programs. In addition, it is expected that the regional component brings significant value-added to the long term sustainability efforts by bringing the ballast water agenda to the regional convention discussions. The Regional Coordinating Organization (RCO) identified within the existing regional structure has a close access to the key policy makers of the countries and offer significant advantage in terms of achieving the most cost-effective coordination among the regional countries to achieve the objectives of the project.

Selection of Regional Partners

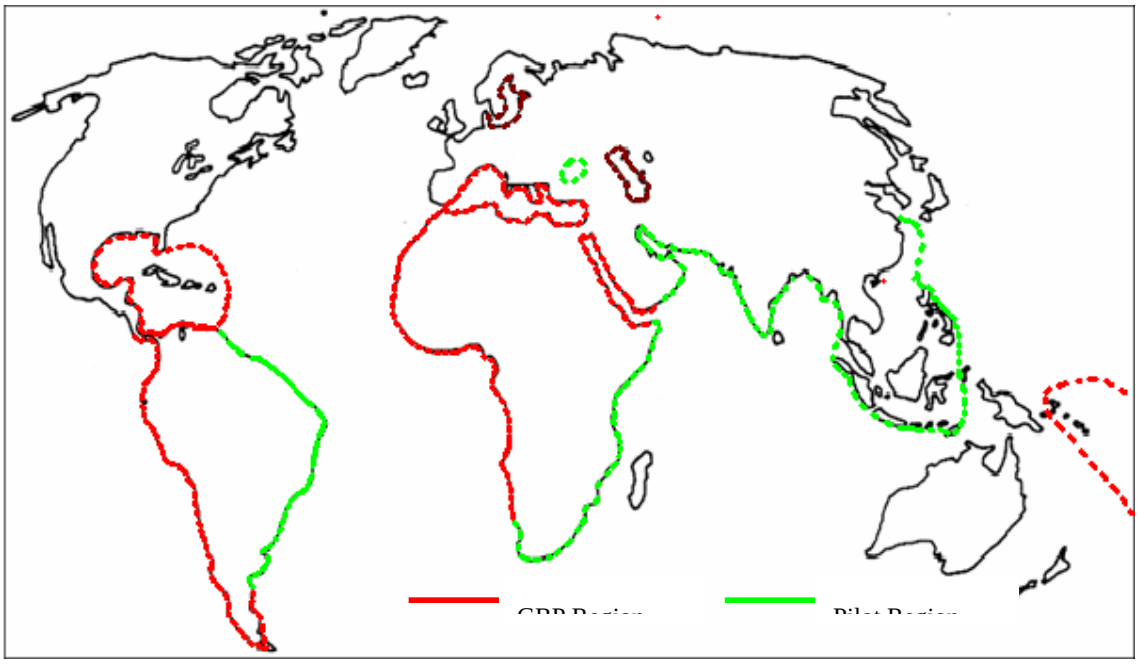
The process of selecting regions and countries to participate in GloBallast Partnership has been deliberate and participatory. The selection process began already at the end of the GloBallast Pilot Phase, with more than 130 nations making inquiries through IMO MEPC how they could participate in GloBallast activities. A consultant report was then commissioned at the start of the PDF-B project, to help in the process of identifying high priority regions and countries based on extensive background information collected. Then, in July 2005, during the PDF-B development period, the issue was actively debated by the GloBallast GPTF. A ranking of regions was carried out, built upon considerations of several criteria, including bio-invasion risk and vulnerability, socioeconomic importance of the marine and coastal resources, and relative global and transboundary significance. Other criteria driving the regional selection process were GEF eligibility, region/country interest, the practicality of implementation, and links to other GEF projects.

As a consequence of these discussions, the GloBallast Partnerships project identified six high priority regions, which are set out in the following table together with their justification note:

Region	**Justification / notes**
Red Sea / Gulf of Aden	Very high biodiversity values. High dependence of human population on coastal and marine resources. Extremely high level of shipping activity. Low level of existing capacity. Representative of enclosed sea.
Wider Caribbean	Very high level of species endemism. High dependence of human population on coastal and marine resources. Extremely high level of shipping activity. High vulnerability to bioinvasions. Low level of existing capacity in small island developing States (SIDS). Representative of SIDS.
Mediterranean Sea	While the Med has a very high level of species endemism, a high dependence of human population on coastal and marine resources and an extremely high level of shipping activity, it is afforded medium priority for GEF funding under GBP due to the significant scope for in-region funding. There is a regional strategy already under development that provides a ready-made vehicle for implementing GBP – increasing chances of success.

South Pacific (Pacific Islands)	While this region has high biodiversity values and an extremely high dependence of human population on coastal and marine resources, it might be afforded a medium priority for GEF funding under GBP due to relatively low levels of shipping activity. There is a regional strategy already under development that provides a ready-made vehicle for implementing GBP – increasing chances of success.
W&C Africa	High biodiversity values, high dependence of human population on coastal and marine resources, moderate shipping activity and low level of existing capacity. There is some funding available for IAS/BW activities under existing GEF projects (BC-LME and GC-LME) and the potential to include IAS/BW in the CC-LME project.
South East Pacific	This region has relatively moderate biodiversity values, moderate dependence of human population on coastal and marine resources and relatively low levels of shipping activity, but a low level of existing capacity, and therefore might be accorded a medium rating.

These 6 regions provide a wide geographic distribution for project activities and allow the project to focus on new region not covered under pilot phase, as can be seen in the global illustration below.



1.2.3 National Component:

The pre-eminent focus of GloBallast Partnerships is at the national level. It is recognized that international measures can set the stage, and regional organizations can help to convene countries, but it is at the national (and industry) levels where the real actions are taken to reduce the risks from ship-borne invasive species. In particular, the national level activities are designed to provide the tools and techniques to enable partnering countries to reform their legal, policy and institutional structures in order to establish a risk-based and cost-effective approach to improved

ballast water management that will reduce the risks of shipping-caused marine bio-invasions. GloBallast Partnerships will help partnering countries by providing a "roadmap" on how to achieve legal, policy and institutional reforms, and then by assisting partnering countries to steer the course.

Within the priority regions, a series of nation level actions will be carried out based on two tracks:

1. The fast track involves Lead Partner Countries (LPCs), which have committed themselves to developing national ballast water management strategies and policy reforms. In order to be an LPC, each country had to provide a letter of endorsement and commitment to the project, and to commit co-financing support. At the time of DPD submission, 13 countries have been identified as Lead Partner Countries (LPCs). This designation has been arrived at based upon the confirmed interest of these 13 states to play a leading role in GloBallast Partnerships. All countries within the priority regions were invited to express their interest in being an LPC. Due to time and financial constraints, a decision was made, and supported by the GPTF, to have no more than 3 countries from any given region serve as LPCs. Each of the LPCs will appoint a National Focal Point (NFP) and National Project Coordinator (NPC).

   Each of the LPCs will play a catalytic role in their regions. While the LPCs will pioneer legal, policy and institutional developments at the national level, the lessons learned and experiences gained will be shared with other Partner Countries (PC) in each of the priority regions. The LPCs will coordinate and host specific training and regional harmonization activities and invite the other countries in the region to participate in these activities, thus extending the benefits to all the other countries in the region.

2. The partner track involves countries in each priority region who are invited to participate in the regional task force and in regional training and workshop activities. Partner countries are required to officially endorse the project. Partner arrangements can and will be established both with GEF and non-GEF eligible countries, on the condition that only GEF-eligible countries are able to benefit from GEF funding. The non-GEF eligible countries in each region will be invited to participate in workshops and will be urged to develop strategies and policy reforms, but these countries are expected to provide all of their own financing. The table below identifies those GEF-eligible countries that have officially endorsed the project and are considered GloBallast Partner Countries. Those countries listed in bold and underlined have submitted endorsements at the level of GEF OFP. It is expected that during the course of the project, all of the countries in each region will become GloBallast partners.

Region	**Current LPCs**	**Current Partners (GEF-eligible & endorsed GBP):**	**Other GEF eligible**	**Non-GEF eligible**
Mediterranean	**Croatia, Turkey**	Algeria, **Libya** Morocco, Serbia & Montenegro, Syria, **Tunisia**	Albania, Bosnia and Herzegovina, Lebanon,	Cyprus, France, Greece, Israel, Italy, Malta, Monaco, Slovenia, Spain, EU

Caribbean	Venezuela, **Jamaica**, Trinidad & Tobago, **Bahamas**	Anguilla, **Antigua & Barbuda,** Barbados, Belize, Costa Rica**,** **Haiti**, Cuba, Dominica, Gautemala, Mexico,	Dominican Republic, Grenada, Guyana, Honduras, Nicaragua, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadines, Suriname	USA, UK, France, Dutch Kingdom
CPPS + Argentina	**Chile, Columbia,** Argentina	**Ecuador**, **Panama, Peru**		
PERSGA	**Egypt**, **Jordan**, **Yemen**	**Djibouti**, **Sudan**	Eritrea, Somalia	Saudi Arabia
WACAF	**Ghana**	Angola, Benin Guinea, Côte d'Ivoire, Sao Tome and Principe, Sierra Leone	Cameroon, Cape Verde, Congo, Democratic Republic of Congo, Equatorial Guinea, Gabon, Gambia, Guinea-Bissau, Liberia, Mauritania, Namibia, Nigeria, Senegal, South Africa and Togo	
SPREP	SPREP countries are developing a regional strategy (with IMO support) and mobilizing resources to implement the strategy. Discussions with SPREP indicated the need for support for certain regional capacity building activities only.		Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Republic of the Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa**,** Solomon Islands, Tonga, Tuvalu and Vanuatu.	Australia, American Samoa, France, French Polynesia, Guam, New Caledonia, New Zealand, Northern Mariana Islands, United States of America and Wallis et Futuna.

The designation of LPCs and PCs is not static. It may be that over the course of the project some LPCs could slide due to less than satisfactory progress, and some Partner Countries may elevate into the fast track based on their demonstrated eagerness to play a key role and the progress achieved in ratification of Ballast Water Management Convention. Criteria, procedures and responsibilities with respect to revising the status of partners will be developed by the PCU during the initial months of project inception, subject to management committee (IMO/UNDP) approval, and then included in Memorandums of Understanding with the lead agencies of each LPC and also the RCO's. The agreements will be tabled for endorsement at the Project Inception meeting of the GPTF.

The LPCs have signalled their interest to play a lead role through project endorsement and also through their co-financing agreements. Current Partner Countries who wish to be considered for escalation to an LPC role would be required also to indicate their co-financing commitment. The limiting factors for additional LPCs will be the overall budget, and the management complexity when more than 3 LPCs are active in a given region. Due to these constraints, it is expected that the number of LPCs will only exceed 15 during the course of the project if additional co-financing is brought to the table.

1.2.4 Project Rationale and Policy Conformity

Oceans cover 70% of our planet and nearly 50% of the world's population live in coastal areas and therefore protection of the marine environment is beyond the scope of one country and has global benefits. This is especially true for a marine environmental issue related to international shipping, which is truly global in nature and any benefits accrued at national level will fully contribute to the global benefits.

The GloBallast Partnership Project will directly support the GEF International Waters (GEF-IW) Strategic Objective 2 (reiterated in GEF-4 IW Strategy to June 2007 Council) - to play a catalytic role in addressing transboundary water concerns by assisting countries to utilize the full range of technical assistance, economic, financial, regulatory and institutional reforms that are needed, including active leveraging of co-financing. The project will significantly contribute to GEF-4 IW Strategic Programme I (SP-1): Restoring and sustaining coastal and marine fish stocks and associated biological diversity reflecting the fact that substances (e.g. invasive species) toxic to fish, biodiversity, and humans (hazardous algal blooms and paralytic shellfish disease) are transferred across borders in ship ballast water (by far the largest vector); it will also directly address SP-1 objective of supporting demonstrations addressing invasive species in ship ballast water. The project will support several indicators of IW SP-1, including: adoption/implementation of regional, national, and local policy/legal/institutional reforms; improvements in fish stock and coastal habitat achieved; multi-agency partnerships for action developed; and regional agreements/protocols enacted. The project will further support IW SP-I GEF objective of engaging the business community to develop and implement solutions. Lastly, the project is the principle vehicle for delivering SP-I programmatic impact of catalyzing State ratifications of the new global ship ballast water management convention on invasive species (Ballast Water Management Convention).

All the current LPCs have committed to take a lead in carrying out legal, policy and institutional reforms and associated capacity building. All the partnering countries have expressed their commitment to participate and contribute to the global endeavour. All the six initial Pilot Countries have expressed their willingness to share their experience and their commitment to foster technical cooperation. However, existing mechanisms to implement these commitments are limited and hindered by a lack of communication and consistency. GEF support can ensure that the growing interest of developing countries in the ballast water problem leads to action. Specifically, with GEF support, sustainable mechanisms to properly address the issue will be established and the often catastrophic effects of aquatic bio-invasions will be minimized and possibly eliminated.

The new project will provide an opportunity for GEF to pursue its mandate related to reduction of depletion of living resources and associated biodiversity caused by invasive species in ballast water and to follow up on its own strategic priorities related to enabling long term policy reforms "on the ground" at country level. Without this GEF intervention, the extremely significant progress achieved in the GloBallast pilot phase will not be capitalized, and the global benefits may well be lost. GEF support is being sought to build on, optimize benefits from and continue the momentum generated by the GEF investment in the pilot phase. The GEF intervention will demonstrate how GEF financing of some incremental costs can massively catalyze major achievements at national, regional and global levels relating to one of GEF's key strategic priorities.

Finally, the project will provide additional confirmation of the catalytic role of GEF in demonstrating ways to overcome the barriers to the adoption of best practices limiting the transfer of invasive species in ships' ballast water and will prove the effectiveness of GEF policy when addressing global problem.

GloBallast Partnerships will provide a programmatic framework for the sustainable replication of ballast water management and control measures, ensuring that maximum benefits accrue from the

foundation work achieved in the pilot phase. The aims and objectives of GloBallast Partnerships will be a logical extension of the pilot phase, with a focus on national policy and legal reforms in targeted developing countries and an emphasis on integrated management. The approach envisaged for the new project would involve:

- Building on the achievements and momentum, and utilizing the capacity and talent generated by the pilot phase;
- Replication of best-practices and technical activities in newly identified beneficiary countries with the view to stimulate legal, policy and institutional reforms at national level;
- Working towards advanced integration through other interested structures, mechanisms and programs, including where optimal, GEF-IW LME projects and UNEP Regional Seas;
- Promoting collaboration to facilitate the successful transfer of new technologies from developed to developing countries.

Support for appropriate national institutional arrangements will be granted and regional mechanisms will be used as catalysts for supporting national policy reforms. Generic Compliance Monitoring and Enforcement (CME) systems will be prepared. Formalized communication systems through identified lead agencies will be developed and early warning systems for invasions and outbreaks will be established. Priority software and hardware will be designed and direct logistic support from the more advanced countries will be sought. Some incremental investments will be supported by the project to support technology development for ballast water treatment and management. Standardized protocols and methodology for conducting port biological surveys and risk assessments will be provided with direct assistance from the capacity built in the pilot phase.

Specific training on ballast water management and control will be provided, based on the training courses developed during the pilot phase, with emphasis on various responsibilities under the new international regulatory frameworks. Sustainable financial and institutional arrangements for the long-term management of ships' ballast water will be established, including the mobilization of public and private sector funding.

The global information clearing house function established during the pilot phase will be continued and further strengthened, in support of a uniform approach. Strategies to integrate the ballast water programs with existing marine and coastal management schemes will be developed and implemented.

In essence, the proposed GEF project will build on the findings, institutional settings and capacity developed during the pilot phase. The results of this GEF intervention will include a measurable reduction in risk of aquatic bio-invasions with a significant mitigation of the detrimental, sometimes devastating, effects of ballast water transfers, better protection of marine and coastal ecosystems and habitats and conservation of biodiversity.

The project will demonstrate practical ways of overcoming barriers to the adoption of best practices that minimise the transfer of invasive species through shipping vectors and will harness involvement of the UN agency specialized in addressing non-indigenous species in ships' ballast water (IMO). Although clearly associated to an IW-4 GEF Strategic Programme (SP-1), the project will help to develop strategic links across operational programs in the biodiversity focal area and will contribute to an integrated approach to marine ecosystems management.

1.2.5 Project Goal, Objective, Outcomes and Outputs/activities

The overall goal of the GloBallast Partnership Project (GBP) is to reduce the risks and impacts of marine bio-invasions caused by international shipping.

The objective of GBP is to assist vulnerable developing states and regions to implement sustainable, risk-based mechanisms for the management and control of ships' ballast water and sediments in order to minimize the adverse impacts of aquatic invasive species transferred by

ships. In the achievement of this objective, 4 outcomes have been identified, each with corresponding outputs and activities, (see the project logical framework, Section IV).

The four key outcomes expected from the project are as follows:

1. Learning, evaluation and adaptive management increased
2. BWM Strategies in place, with legal, policy and institutional reforms developed, implemented and sustained at national level
3. Knowledge management tools and marine monitoring systems are effectively utilized to expand global public awareness and stakeholder support, improve understanding of ballast water impacts on marine ecology, and enhance maritime sector communications.
4. Public-private partnerships developed to spur the development of cost-effective ballast water technology solutions

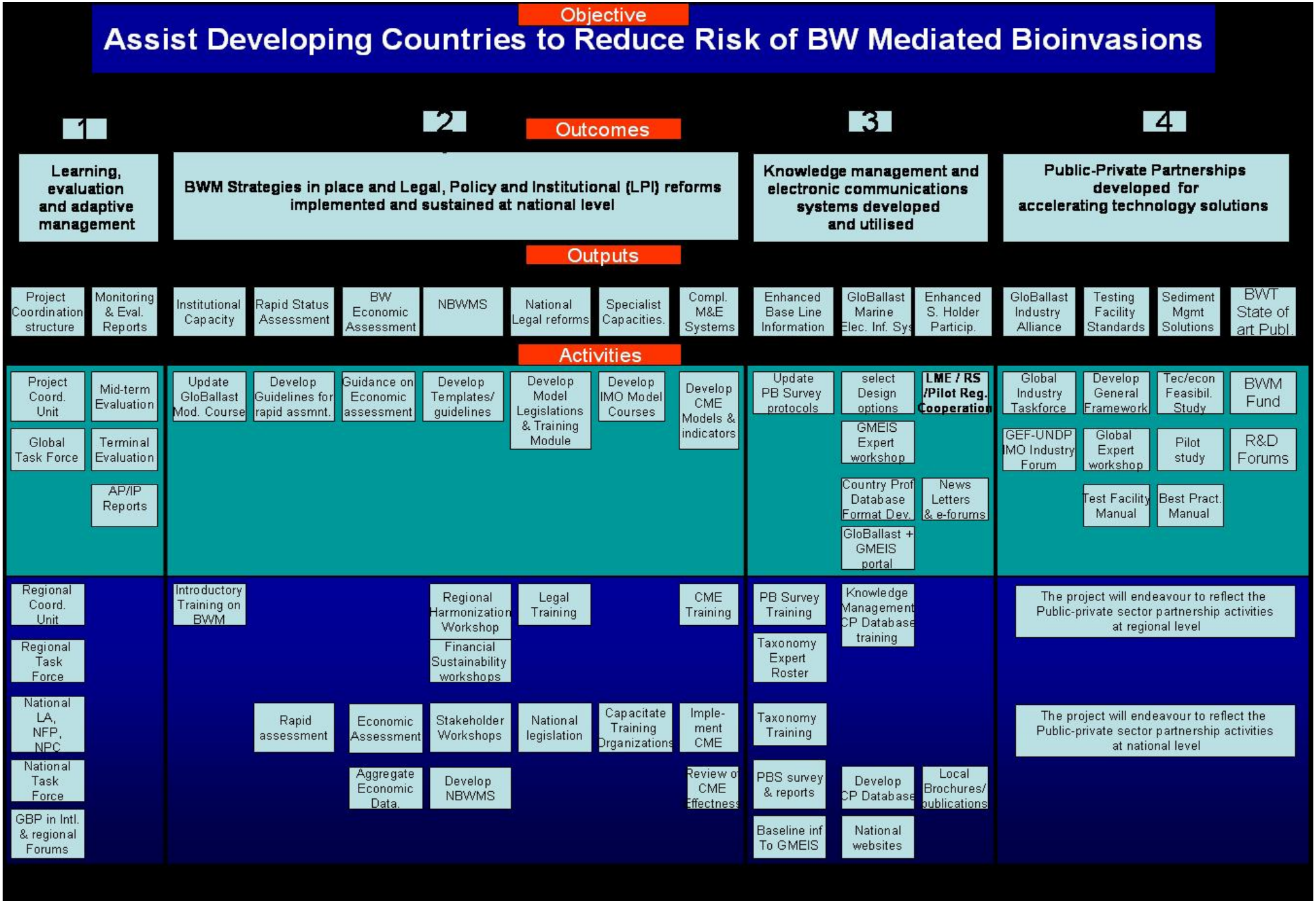
It is expected that by the end of the project, all partnering countries can demonstrate significant improvement in their legal, policy and institutional structures, with corresponding reduced risks from ballast water borne marine bio-invasions. Such improvements in ballast water management will require that each of the 13 Lead Partner countries (LPCs) establish institutional mechanisms for carrying out the project (e.g. identifying a lead agency and establishing a national task force (NTF), and that each NTF will take responsibility to develop a National Ballast Water Management Strategy (NBWMS), which lays out the mechanisms the government intends to use, including funding, to establish an effective and sustainable ballast water management program. Within its national program, each LPC will ensure that all necessary legal instruments are in place, a risk-based compliance monitoring and enforcement (CME) system is in operation, and a financing scheme has been devised based on the "polluter pays" principal.

This GEF supported project coincides with IMO's continuing push for member states to ratify the Ballast Water Convention so it can enter into force. Accordingly, one of the indicators of success for the project's legal, policy and institutional reform process will be that during the course of the project, all Lead Partner countries are expected to push for ratification of the IMO ballast water management convention, with at least 10 LPCs having ratified and implementing the Convention before the project has concluded. In addition, it is expected that in addition to the 13 LPCs, three or more additional partner countries in each of the five priority regions will develop draft NBWMS during the project, ensuring that at least 28 countries are implementing national strategies for ballast water management.

A further indication of project success will be that member states of the Regional Seas conventions and Large Marine Ecosystem programs will indicate their collective support, by approving regional strategies and protocols on ballast water management.

The Project recognizes that technology solutions must go hand in hand with legal, policy and institutional reforms in order to substantially reduce the risks of ballast borne invasive species. As a consequence, the project includes a series of activities (see Outcome 4), designed to join with industry in pursuit of cost-effective technology solutions for ballast water treatment and sediments management. It is important to note that a successful conclusion of the project assumes that during the 5 years of project implementation, research and development by industry will escalate and effective technology solutions for ballast water treatment and sediment management will be made available to shipping companies.

The following diagram graphically depicts the outcomes, outputs and activities to be carried out. These are then further discussed as a narrative in the pages below, and then provided in Part II using a Log Frame approach.


Objective
Assist Developing Countries to Reduce Risk of BW Mediated Bioinvasions
1
2
3
4
Outcomes
Learning, evaluation and adaptive management
BWM Strategies in place and Legal, Policy and Institutional (LPI) reforms implemented and sustained at national level
Knowledge management and electronic communications systems developed and utilised
Public-Private Partnerships developed for accelerating technology solutions
Outputs
Project Coordination structure
Monitoring & Eval. Reports
Institutional Capacity
Rapid Status Assessment
BW Economic Assessment
NBWMS
National Legal reforms
Specialist Capacities.
Compl. M&E Systems
Enhanced Base Line Information
GloBallast Marine Elec. Inf. Sys
Enhanced S. Holder Particip.
GloBallast Industry Alliance
Testing Facility Standards
Sediment Mgmt Solutions
BWT State of art Publ.
Activities
Project Coord. Unit
Mid-term Evaluation
Global Task Force
Terminal Evaluation
AP/IP Reports
Update GloBallast Mod. Course
Develop Guidelines for rapid assmnt.
Guidance on Economic assessment
Develop Templates/ guidelines
Develop Model Legislations & Training Module
Develop IMO Model Courses
Develop CME Models & indicators
Update PB Survey protocols
select Design options
LME / RS /Pilot Reg. Cooperation
GMEIS Expert workshop
Country Prof Database Format Dev.
News Letters & e-forums
GloBallast + GMEIS portal
Global Industry Taskforce
Develop General Framework
Tec/econ Feasibil. Study
BWM Fund
GEF-UNDP IMO Industry Forum
Global Expert workshop
Pilot study
R&D Forums
Test Facility Manual
Best Pract. Manual
Regional Coord. Unit
Regional Task Force
National LA, NFP, NPC
National Task Force
GBP in Intl. & regional Forums
Introductory Training on BWM
Regional Harmonization Workshop
Financial Sustainability workshops
Legal Training
CME Training
Rapid assessment
Economic Assessment
Stakeholder Workshops
National legislation
Capacitate Training Organizations
Imple-ment CME
Aggregate Economic Data.
Develop NBWMS
Review of CME Effectness
PB Survey Training
Taxonomy Expert Roster
Taxonomy Training
PBS survey & reports
Baseline inf To GMEIS
Knowledge Management CP Database training
Develop CP Database
National websites
Local Brochures/ publications
The project will endeavour to reflect the Public-private sector partnership activities at regional level
The project will endeavour to reflect the Public-private sector partnership activities at national level

1.2.6 Elaboration of Project Outcomes, Outputs and Activities

The elaboration of outcomes, outputs and activities in this DPD have been developed consistent with the initial concept note, taking into account the recommendations of the GEF Secretariat, and also in response to the comments and recommendations of the GloBallast Project Task Force (GPTF). Part IV, Section VI includes a table that identifies the original project concept note outcomes and activities and how these have been fully taken into account in this DPD.

Outcome 1. Learning, evaluation and adaptive management increased

At the conclusion of GBP, it is expected that learning, evaluation and adaptive management will be increased for all Partner countries. Within this outcome, the coordination and management aspects of the project are established, and mechanisms are established for reporting and external evaluation.

Output 1.1 Project Management and coordination structures in place at global, regional and local level

During the inception phase project management and coordination structures will be set in place at global, regional and local levels.

Activity 1.1.1 Establish and manage a Project Coordination Unit

A Project Coordination Unit (PCU) will be established at the London HQ of IMO, staffed by a Chief Technical Advisor (P5), a Technical Advisor (P3), and an Administrative Assistant (G6). Job descriptions will be prepared and agreed to with UNDP prior to project contract approval. This three person PCU constitutes a lean organizational structure for a global project. It is possible to operate effectively as a small coordination unit because of the regional and national structures the project has established, and because of the administrative and technical backstopping of IMO. The expectation is that the PCU can be quickly established and will be fully functioning during the 2nd quarter of the 1st project year.

The PCU will be responsible for the day to day management of the project, including ensuring that deadlines are met, financial and reporting requirements are adhered to, consultants are effectively utilized, and the Partner countries are ably supported.

Activity 1.1.2 Global Project Task Force

GloBallast Partnerships will be managed through a Global Project Task Force, building on the successful approach taken during the GloBallast pilot project. The GPTF has already functioned during the PDF-B phase. During its planning workshop on July 6-7 2006, the GPTF included participants from IMO, UNDP and the Regional Coordinating Organizations in 5 of the 6 priority regions (SPREP was not represented). It also included representatives from other international organizations and NGOs, and from the shipping industry. It is planned that this wide cross section of stakeholders will be continued during GloBallast Partnerships, and will also include representatives from the 13 Lead Partner countries. The following are the expected GPTF members:

- UNDP/GEF (1)
- IMO (2)
- GloBallast PCU (1)
- RCOs (6)
- LPCs (5 – in rotation - one from each region)
- Industry (2)
- Environmental organizations / NGOs (2)
- GBP pilot country representative (1-in rotation)

There are significant financial implications in establishing a large (20 member) GPTF, yet it is imperative that the key project participants have an opportunity to periodically come together to consider project status and operational aspects. To resolve these conflicting aspects, the GPTF will meet on a biennial basis (e.g. 3 times, during yrs 1, 3 & 5). These three meetings will be built around the three key operational events:

- **Inception meeting**: agreeing on a detailed work plan and preparation of an inception report
- **Mid-term meeting:** providing implementation status and an external mid term evaluation
- **Final meeting**: discussing achievements, lessons learned and next steps / sustainability.

During the project years 2 & 4, an Executive Committee, composed of UNDP/GEF, IMO and the PCU will convene to discuss project implementation, focusing on feedback from issues raised in the annual APR/PIR reports.

Activity 1.1.3 Regional Coordinating Organizations

GloBallast Partnerships includes a close partnership with regional coordinating organizations (RCO) from the targeted priority regions. These organizations have been identified based upon their involvement in the UNEP-Regional Seas and Large Marine Ecosystems Programs. In some regions, (Mediterranean and Caribbean), there are also direct financial and reporting relationships to IMO. It is important to note that the linkage to regional organizations is in order to expand the number of countries that can directly participate in GloBallast Partnerships. In addition to the 13 Lead Partner countries, it is anticipated that an additional 40 or more countries can participate in and benefit from GloBallast Partnerships by utilizing the assistance of these regional organizations.

During the 1st six months of the Inception Phase, formal arrangements, including as necessary the development of Memorandums of Agreement will be established with each Regional Coordinating Organization. These RCOs will each identify a coordinator responsible for GBP activities during the 5 year project cycle.

Activity 1.1.4 Regional Task Force

The RCOs will each establish a Regional Task Force (RTF) comprised of each of the Partner country representatives. It is planned that the RTFs will meet three times during the project, prior to the three GPTF meetings. The RTFs will be open to all partnering countries in the regions, who will each nominate the representatives. It is anticipated that the three RTF meetings will be hosted jointly by the RCOs together with the LPCs from the region.

The aims of creating RTFs are:

- To serve as a mechanism to expand Partner Country interest and involvement in GloBallast Partnerships.
- To raise issues and concerns, and generate regional status reports, for consideration at the GPTF meetings.
- To provide an opportunity for partnering countries to gather knowledge on the status of IMO ballast water management issues, including guidance on implementing the Ballast Water Management Convention
- To develop recommendations for regional coordination on ballast water management issues (for instance to agree on intra-regional ballast management requirements).
- To identify mechanisms for national and regional sustainability on ballast water management issues after the conclusion of GloBallast Partnerships.

Activity 1.1.5 LPC Coordination

The LPCs each will appoint a National Focal Point (NFP) representing the Government's Lead Agency for ballast water management. It is assumed that the Lead Agency will most likely be from the Government Maritime Authority. The NFP is expected to be a senior government official who can speak on behalf of the lead agency, and who will serve on the GPTF. It is further expected that each LPC will identify a National Coordinator (NC), who will provide day to day management for GloBallast Partnerships, on behalf of the NFP. National Coordinators can be specifically hired, or they can be current government officials, providing that at least 50% of their time is designated to coordinate activities under GloBallast Partnerships.

The project plan envisions frequent contact between the NCOs & NFPs, RCO's and the PCU. In addition to the opportunities afforded by workshops and task force meetings, there will be a project management teleconference every 6 months, and a dedicated, password-protected project management section of the GloBallast Partnerships website, to facilitate regular interventions.

Activity 1.1.6 National Task Forces

GloBallast Partnerships includes an additional governing task force at the national level. All of the 13 LPCs will either develop new task forces or utilize appropriate existing task forces to ensure:

- Other pertinent government agencies (e.g. port state control, ports management, transportation, environment and health) have an opportunity to express their views to the Lead Agency regarding the implementation of GloBallast Partnerships, and can be called upon to support legal, policy and institutional reforms.
- Interested stakeholders from industry and the environmental community have an opportunity to stay abreast of the strategies and actions being devised under GloBallast Partnerships.

The NTF meetings are expected to occur every year, and especially prior to the RTF and GPTF meetings. In this way, the LPCs have an opportunity to formulate their positions and recommendations prior to regional and then global decision-making meetings.

Activity 1.1.7 International and Regional Conventions and Forums

Based upon the experience from the GloBallast Pilot Phase, and the escalating requests to IMO from international and regional organizations to know more about ballast water and invasives issues, GloBallast Partnerships has been designed to include a specific budget to present GloBallast Partnerships at international and regional conventions and forums. Usually in GEF projects, this type of activity is channelled to the PCU management, and the travel demands become overwhelming. For GloBallast Partnerships, the effort will be shared between the PCU and experts within its regional and national partners. A budget has been set aside for GBP representatives to attend 3 forums per year, including the GEF International Waters Conference, COP 9&10 of the Convention on Biodiversity, and annual meetings of the UNEP-Regional Seas.

Output 1.2 Project monitoring, evaluation and reporting systems established and implemented

The second set of outputs and activities within Outcome 1 involve monitoring and reporting procedures during the project; (for a detailed discussion on the monitoring and reporting plan see Section IV). Project monitoring, evaluation and reporting systems will be established and implemented, to include mid term and final evaluations and the submission of Annual Project Reviews (APR)/Project Implementation Review (PIR)s and other GEF/UNDP project monitoring reports as required.

Activity 1.2.1 Mid term evaluation

The main focus of the mid term evaluation will be on the progress made to date, and whether changing circumstances merit revisions in the work plans.

Activity 1.2.2 Final evaluation

The final evaluation will address project successes and shortcomings, lessons learned and recommended next steps.

Activity 1.2.3 APR/IPR

The PCU will be responsible for the submission of APR/IPR and other progress reports.

Outcome 2. BWM Strategies in place, with legal, policy and institutional reforms developed, implemented and sustained at national level

The project is designed to assist all of the Partner countries to develop, implement and enforce legal, policy and institutional reforms (LPIR) in order to reduce the risk of bio-invasions from ship ballasting activities. At project conclusion, each LPC is expected to be implementing a National Ballast Water Management strategy (NBWMS), with revised legislation that conforms to the Ballast Water Management Convention, and an enhanced compliance monitoring and enforcement system. The NBWMS is expected to usher in a risk-based management approach in each LPC, and to include measures that ensure financial sustainability under the "polluter pays" principle.

The role of the RCOs will be to facilitate the participation of other partner countries in capacity building activities, hosted by the LPCs.

Output 2.1 Institutional capacities are enhanced through a comprehensive training program on Ballast water management

Institutional capacities will be increased amongst the Lead Partner and Partner Countries through a globally developed, and locally executed training program, using the GloBallast Introductory Modular Course for Ballast Water Management. This course was successfully developed, with several trail runs, during the GloBallast pilot phase.

Activity 2.1.1 Update GloBallast Introductory Modular Course for Ballast Water Management

During the GloBallast pilot phase, the project joined forces with the United Nations' Train-Sea-Coast (TSC) Program to develop a specific training package suitable to train large numbers of port, shipping personnel and other relevant stakeholders. The rationale behind this partnership was in the advantages provided by the expertise and training methodology used by the TSC Program, which were highly suitable for the GloBallast Program requirements.

The GloBallast training package was developed according to the UN Train-X methodology. The training package contains 10 training modules and includes instructions on the application of ballast water and sediment management procedures and maintenance of appropriate records and logs in accordance with the IMO Guidelines. Each of the six GloBallast Pilot Countries carried out training using the modular course, and each training event was externally evaluated in order to identify opportunities for improvement and refinement. The training deliveries in all the six countries and the feedback from the participants clearly indicated that the methodology was highly suitable in achieving the objectives initially set out by the GloBallast Program. The recent deliveries also highlighted the need for updating the modular course (developed in 2001), with latest information and inclusion of a new module on BWMC.

Significant interest in the training package was expressed by neighboring countries in at least three pilot regions (namely Africa, East Asia and South America), who were contemplating the possibility of regional deliveries as part of their regional SAPs. Accordingly, a series of three regional training offerings were carried out. These regional training concepts were well in line with what GloBallast envisioned in the beginning, i.e., regional replication and multiplication of GloBallast activities including training with the expertise developed in the Pilot countries under the GloBallast project

During the training delivery several countries suggested that the Train-X course could serve as the foundation for a future IMO model course on Ballast Water Management. It is expected that during GloBallast Partnerships, the IMO model course will be developed, including an electronic-module for distance learning.

The course manual will be completed during the project implementation phase (2nd Q, yr 1), and the e-learning package, developed with industry support, will be completed by the end of the 1st

quarter, year 2. The e-module is planned to be developed and offered through GloBallast and the IW: LEARN website.

Activity 2.1.2 Hold training courses on BWM using updated Modular Training Package

As soon as the modular training package has been updated, the course will be used to train more than 250 stakeholders from pertinent ministries in 9 regions on the basics of ballast water management. This aspect of the project includes a strong measure of co-financing from international, regional and local partners. During the implementation stages there will be consultations carried out with the Global Invasive Species Program (GISP) to consider possible close linkages with their activities, including a planned GEF supported Global IAS capacity building project.

A total of 9 training programs will be carried out. GEF financing will be used for 4 Training Programs (CPPS, MED, PERSGA & SPREP). One Training Program, in the WACAF region, will be funded jointly by IMO and the Guinea Current LME; one Training Program in the CAR region will be funded by IMO using ITCP funding. Three additional training programs in the Black, Baltic and Caspian Seas will be funded by EBRD.

Recognizing the expertise that was established during the GloBallast pilot phase, a number of the course offerings will be carried out by pilot country experts.

Output 2.2 Risk-based, rapid status assessment reports are developed and used to guide country activities

Status assessment reports will be developed by each of the 13 LPCs and used to guide country activities. The expectation is that early in project year 2, all 13 LPCs will have identified their key Ballast water Management issues, in the context of marine and coastal protection. Each will have developed an action plan for their activities during GloBallast Partnerships. Also during this early period, the LPCs will share their results and lessons learned with the other Partner countries, during the first RTF meeting.

Activity 2.2.1 Develop template and guidelines for rapid assessments

A global template and guidelines for reporting will first be developed. The countries will then develop their rapid assessments. The detailed guidance for aspects to include in the assessments will be developed early in the inception phase, and are likely to include:

- General Information on coastal marine ecology and native species.
- Number and location of international maritime ports and their traffic mix (e.g. oil, minerals, containers, tourists, etc.)
- Information on quantity and source of ballast water received by the country
- Incidences, known locations and impacts of past marine bio-invasions
- Policies and legislation governing ballast water management
- Review of the implications of BWMC ratification
- Review of related marine policies and legislation (including UNCLOS and the CBD)
- Analysis of current port state control practices and the compliance monitoring and enforcement regime in place
- A review of key stakeholders
- Identification and listing of country-based ballast water, maritime and marine biology experts and consultants, as well as technical and training institutes.

GloBallast pilot phase experts will assist in the development of the template based on their experience from the pilot effort.

Activity 2.2.2 Develop rapid status assessments

It is expected that all 13 LPCs will have identified their key national issues for BW management, their top priorities and plans for reforms within the Rapid Assessment Reports, and that all of the reports will be completed by the end of 1st Q, yr 2

It is important to note that the assessments are not designed to be at the level of detail provided for in GEF transboundary diagnostic analyses (TDAs). The emphasis is not to move through an extensive set of stakeholder discussions in order to arrive at an understanding of root causes, but rather to set the stage for the strategic planning exercise by determining key issues and current status.

Output 2.3 Economic aspects of marine bio-invasions factored into national strategic planning

In addition to being perceived as a major ecological problem, invasive aquatic species (IAS) cause significant economic impacts through, *inter alia*, disruption to fisheries, fouling of coastal industry and infra-structure, interference with human amenity and the costs of research, monitoring and control and mitigation measures. Globally, such economic impacts are only starting to be quantified, but are likely to exceed tens of billions of US dollars per year.

In late 2004 the GloBallast Pilot Project Coordination Unit (PCU) undertook an initial scoping study (ISS) on the global economic impacts of invasive aquatic species. The ISS identified the current state of knowledge in relation to both direct economic impacts, as well as the costs of responding to IAS (response costs), as follows:

Direct economic impacts

Direct economic impacts are the actual monetary costs caused by the species in their invaded environments, including any costs from, *inter alia*:

- reductions in fisheries production,
- closure / reductions in aquaculture,
- physical impacts on coastal infrastructure (fouling),
- reduction in economy of shipping (fouling), and
- impacts / closure of recreational/tourism beaches.

The ISS identified seven specific aquatic bio-invasions that have relatively reasonable supporting economic data. The data indicate that the direct economic impacts of these seven species alone, are more than US $10 billion per year (1 billion = 10^9). It was estimated that the direct economic impacts from all the current marine bioinvasions may be an order of magnitude higher (US$ 100 billion per year).

Response costs

Response costs are the costs incurred by society in responding to the problem, including any costs of, *inter alia:*

- prevention,
- control & eradication,
- research & monitoring,
- education & communication,
- regulation and compliance monitoring and enforcement,
- the costs associated with the IMO Ballast Water Management Convention, and
- the global effort to develop new ballast water treatment technologies

Overall, the projected costs for governments to respond globally are estimated at up to around US $4 billion per year, or 4 % of the total global economic impacts

In order to provide a more informed basis for governments and industry to respond more effectively to this problem, a comprehensive assessment and quantification of the global economic impacts of aquatic bio-invasions is needed. Within GloBallast Partnerships, the intention is to work in concert with other actors to carry out a comprehensive, longer-term, global review of economic impacts. To this end, GloBallast Partnerships will especially focus its attention on Response Costs, in particular the cost to governments to administer national ballast water management programs, to carry through regulatory and institutional reforms, to implement the relevant international conventions especially the BWMC, and to operate enhanced monitoring and enforcement programs.

In addition to calculating response costs, each of the LPCs will be tasked with identifying mechanisms to finance their programs in light of these costs. It is expected that the 'polluter pays' principal will guide the determination of funding schemes. These may include fee for service arrangements that cover the cost of administering national ballast water management programs. The results will be taken into account in the development of each NBWMS.

Activity 2.3.1 Develop guidance for economic assessments

The Global Invasive Species Program (GISP) is currently reviewing and testing methodologies for assessing the economic impacts of bio-invasions in general. GloBallast Partnerships will coordinate with the GISP efforts, and will ensure that cost assessment methodologies used are consistent across the LPCs, allowing for comparisons and collating of results.

The guidance to be developed will be carried out using external consultants with economic expertise. The Guidance will be available to the countries by the 2nd quarter, project yr 2. It will provide step by step instructions on the use of models and calculations.

Activity 2.3.2 Develop national economic impact and response cost assessments, taking into account the need for financial sustainability.

The timetable for LPC completion of their economic assessments is the 3rd quarter of project year 3. This will enable the results to be factored into the NBWM Strategies that each LPC is developing.

It is assumed that there will be difficulties in identifying economic costs, both for direct economic impacts and response costs. Using GEF support, the PCU will provide financial support to the 13 LPCs to help defray the cost of hiring economists to assist. Even with specialist assistance, it is likely that a lack of data will make it difficult to ascertain many economic impacts, for instance on the extent and reasons for reduction of fish species.

Activity 2.3.3 Aggregate economic information

The economic assessments will be compiled and utilized to generate a global report on the economic impacts and management costs associated with ship ballast water transferred invasive species. The report will be commissioned by the PCU, and ideally should involve persons that helped to set the guidance for the economic assessments (2.3.1). In this way, the PCU can utilize an economic team throughout the project, including for initial guidance development, LPC assistance and then final compilation of results. The report, together with the guidance document, will be published by the 2nd quarter, project year 4. It is planned that the report will be published as a GloBallast Monograph and made available via the GloBallast Partnerships web portal.

Output 2.4 National Ballast Water Management Strategy (NBWMS) developed and implemented

Each LPC will adopt a National Ballast Water Management Strategy (NBWMS) and implement it during the course of the project The NBWMS will cover all major facets of ballast water management, including legal and policy issues, institutional strengthening, regional cooperation, port environmental management, port state control enforcement, and flag state requirements. The

NBWMSs should specifically address the steps needed for ratification of the Ballast Water Management Convention. GloBallast Partnerships will provide financial support, training, tools and techniques, to help LPCs design and implement their NBWMSs. The 13 LPCs will have approved Strategies completed by the end of yr 4. It is assumed that the Strategies will need to be approved at cabinet of ministers level, and/or by national legislative bodies.

This outcome will be achieved through a step-wise process that starts from the development of guidelines, then a series of national stakeholder meetings and regional harmonization workshops, leading to the development of the national strategies. In addition, the achievement of outcomes 2.3: economic impacts and response costs, 2.5: legislative reforms and 2.7: compliance monitoring and enforcement, all link directly into strategy development, providing inputs to the Strategy and in turn being directed by the Strategy. This inter-linkage of inputs and outputs suggests that drafts of the economic reports, legislative and financing options will need to be on hand for the development of the NBWMS, and the final reports will then need to be completed once political direction is achieved by approval of the strategy.

As an adjunct to the NBWMS effort, it is expected that the RCOs will spearhead an effort in their respective organizations to achieve member state approvals for regional action plans addressing ballast water and marine invasive species. These RAPs build from the positive momentum achieved during the GloBallast Pilot Phase. Many of the Regional Seas have commenced this process of developing action plans and strategies for ballast water management. (e.g. SPREP draft strategy). All the six pilot regions have already developed a regional action plan. It is expected that all of the new six priority regions will have a regional action plan (RAP) for BWM approved and in place by the end of project year 4.

Activity 2.4.1 Develop guidelines for national BWMS development, including options for financial sustainability

In order for the LPCs to launch their national planning efforts it will be important to provide during the Inception Phase a set of recommended guidelines on the strategic planning process and aspects to include. Such generic guidance will be developed and disseminated during the 1st quarter of project year 2. The PCU will draw upon expertise from the pilot country experts, based on their experience in developing NBWMSs.

Activity 2.4.2 Hold (a) regional harmonization (including regional LPI assessment) and (b) Sustainability workshops

Within this activity, two sets of workshops are envisioned, occurring at the beginning of project years 3 and 5. These workshops will also serve as the 2nd and 3rd (of 3) RTF meetings. All 6 of the priority regions (including SPREP) will receive GEF support.

The first series of workshops is aimed towards regional harmonization, including consideration of common issues and concerns, and progress on development of the Regional Action Plan. The RAPs are expected to be developed and approved at regional conventions before the end of the project.

The workshops will provide an opportunity for the LPCs to present information on their progress to date, and lessons learned, on legal, policy and institutional reform and strategic planning. The expectation is that these presentations will serve to boost the efforts of other Partner countries to follow suit with their own strategies and reforms.

The second workshop in each region is aimed towards issues of sustainability. By the beginning of year 5, the LPCs will have approved NBWMSs, and will be expected to share lessons learned with the other regional Partner countries. The RAP should be either approved or pending member state approvals. The BWM Convention should have been ratified by one or more countries in each region, offering lessons learned on its implementation. Also, there should be results available from some of the economic assessments and port baseline surveys carried out in the

region. All of these issues should be brought to the table, as well as agreement among the parties on how to continue regional processes after the conclusion of GloBallast Partnerships.

Activity 2.4.3 Hold stakeholder workshops

In addition to the expectation that LPCs will develop national task forces, there is also an expectation that there will be opportunities for interested stakeholders and the public to consider and provide comments on the NBWMSs as they are drafted and approved. Public notice and comment procedures are valuable tools for building support among interest groups and the public. LPCs are expected to run at least 3 stakeholder meetings before the end of project year 3, which may be split along geographic lines (e.g., a meeting in several ports with broad participation) or national meetings segmented by interest group (e.g., shipping, environment, ports management). In particular, it is expected that one of the stakeholder meetings will be dedicated to bringing together high level ministry and elected officials – as an aid to awareness raising and to boost support for the legal and policy reform effort and institutional capacity building.

Activity 2.4.4 Develop and Implement National BWMSs

Developing strategies is only the initial step. The key to this activity will be to have the national strategies developed, then approved and then implemented, with a demonstrated institutional and financial commitment from each of the LPC governments. The plan is to have all NBWMSs implemented by the end of year 4.

Flexibility is built into the program with respect to the timing of NBWMS development and passage of new legislation (see outcome 2.5). Countries may take the path of approving strategies that drive legislative change, or may implement new legislation that enables the strategy to be approved and implemented. The rapid assessment should identify the procedure each LPC plans to take. It should be noted that ratification of the BWM Convention will have a bearing on the route LPCs decide to take.

The PCU will provide financial support to the LPCs for technical assistance on the NBWMS effort. Strategies should include a summary of the rapid assessment findings, a set of strategy options considered, the preferred options for government approval, and the means to continue the program after the conclusion of GloBallast Partnerships. It should cover the full array of needed government actions, including:

- overarching institutional controls, coordination and capacities (including lead agency selection, reducing jurisdictional overlaps, and institutional capacity issues)
- current and proposed legislation and regulatory revisions
- new port state control activities, including risk-based compliance monitoring and enforcement mechanisms
- coastal zone and port area environmental and biodiversity monitoring and protection programs
- developing the financial means to administer the ballast water management program, including the use of administrative fees

Output 2.5 National legal reforms instituted

The implementation of effective ballast water management strategies will in most cases entail the need to enhance national legal structures. The GBP project includes development of a generic legal framework for ballast water management, supported by legal training on maritime and ballast water legal issues. The legal instruments will enable countries to implement the Ballast Water Management Convention and more generally to improve ballast water management compliance and enforcement. There will be additional efforts at the regional level to link the Ballast Water Management Convention to regional environmental conventions.

The intention is to develop effective legislative frameworks in each of the LPCs. This will ideally include ratification of the Ballast Water Management Convention; however ratification is

not the only litmus test for success. Lacking parliamentary support for BWMC ratification, LPCs can still enhance their legal systems and develop strategies that enable a risk-based approach and reduced threat of bio-invasions.

Activity 2.5.1 Develop legal road map, model legislation and training manuals

During the PDF-B phase, effort has commenced on the development of guidance on LPIR reform. This effort to develop a legal roadmap constitutes the starting point from which a robust set of guidance documents will be developed and made available to the LPCs by the end of the 1st project year. The PCU will manage an external consultancy for this assignment; with contributions form the GB pilot country experts who worked on legislative aspects.

Aspects that are likely to be included are:

- designation of lead agencies and their authorities
- BW management responsibilities of flag state carriers.
- content and submissions process for ballast water reporting forms;
- operational requirements for the off loading and handling of ballast water sediments;
- mid ocean exchange and then treatment standard requirements (based on the BWMC), taking into account possible variances for intraregional shipping;
- conditions for port state control authorities to board ships, sample ballast tanks, scrutinize manifests, restrict ship operations and assess fines and penalties for failure to meet ballast water management requirements; and
- demarcation of specially protected areas in the coastal environment, where ballasting operations may be restricted;

As noted in the project log frame, and project budget, the IMO will play a significant role in this activity. In particular, the IMO MEPC will continue its development of technical guidance documents for implementation of the BWM Convention. These guidance documents provide clarification for IMO member states to implement the Convention. There will be a close synergy between the MEPC guidance development activities, and the GloBallast Partnerships legal assistance effort. The guidance documents from MEPC constitute a clarification and articulation of the Convention requirements. The GloBallast Partnerships effort is designed to assist the LPCs make this guidance operational. Whereas IMO-MEPC articulates WHAT to do, GloBallast Partnerships will assist on HOW to do it.

Activity 2.5.2 Train LPC lawyers on developing legal frameworks for BWM

Ballast water management is a specialized field, and the legal aspects straddle maritime and environmental law. Based on the experiences of the GloBallast pilot countries, it has been recognized that some support is needed to acquaint national government lawyers with ballast water management issues. The training will be done on an ad hoc, in-country basis, using as much as possible experts and government lawyers from the pilot countries and other IMO member states that are pioneers in establishing regulatory controls for ballast water management. The involvement of maritime institutes in providing legal expertise will also be considered.

Activity 2.5.3 Develop national legislation

The LPCs are expected to complete their legislative efforts no later than the 1st quarter of project year 4. This is not the deadline for completed drafts, but rather the deadline for enacted / revised legislation. It should be noted that there are differing legal structures in Partner countries. Some may ratify the BWMC and it then immediately becomes national law. Others may need to create national laws that enable the ratification of international conventions.

Output 2.6 Specialist capacities improved for BWM

This outcome is designed to lay the groundwork for national and regional specialist expertise to be available for ballast water techniques. This set of activities builds on the GloBallast pilot

country experience, and is designed to expand on the traditional close association that IMO has had with maritime training institutes globally.

Activity 2.6.1 Develop model BWM (specialist) course

By the end of project year 3, selected maritime institutes in each region and among the LPCs, will be training maritime experts in key aspects of ship-board BWM. IMO will finance this activity and will incorporate the results into its series of Model Courses under the International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW)

Activity 2.6.2 Capacitate Training Institutes for delivery of introductory course and specialized courses

International Maritime Organization does not approve training courses or institutes. This is a privilege and responsibility of Member Governments who are Parties to the STCW Convention. Nevertheless, it is possible under the GloBallast Partnerships to identify and encourage maritime institutes to expand their capacities in order to be prepared for providing training services for ballast water management, once the model courses are developed under STCW. These institutes can also continue to provide the introductory GloBallast modular training course (see activity 2.1.2) as part of the regular curriculum. It is expected that by end of yr 4, there will be at least one maritime institute in each LPC with the capacity to train sailors on BWM and to continue to provide the GloBallast Introductory Course to other stakeholders. Accreditation by the Partner countries will be encouraged, with the PCU providing suggested criteria.

Output 2.7 Compliance monitoring and enforcement indicators are developed and national systems enhanced, with an emphasis on risk-based priority setting, and the use of voluntary approaches

Enforcing ballast water management requirements typically involves port state control authorities communicating with vessels as they come to port, reviewing ballast water reporting forms, boarding selected ships to review documents and inspect equipment, and upon occasion using sanctioning powers to quarantine or fine vessels for failure to meet their legal obligations. During GloBallast Partnerships, effective methodologies and best practices for compliance monitoring and enforcement (CME) will be identified and partnering countries will assess and revise their existing CME systems. It is impractical to scrutinize and board all arriving ships at busy international ports. Risk based approaches will need to be developed which identify and focus attention on arriving ship that pose a higher risk of carrying invasive species.

Particular attention will be paid to the use of voluntary approaches, including certification systems (e.g. ISO standards and 'green award' certification) and other compliance incentives that allow port state control authorities to have confidence that ship-board management systems are functioning correctly so consequently they can reduce port-side inspections and paperwork.

By the end of yr 4, each LPC is expected to have developed an enhanced CME system, based on their NBWMS. These CME systems will be evaluated at the end of project year 5. By the 2nd quarter of project year 2, all shipping companies calling on LPC ports are expected to have received model BWM plans. These model plans are being developed by the private sector, with ICS and INTERTANKO (two industry NGOs) having already drafted their model ship BWM plan. It is expected that by the end of project year 4, at least 35% of the merchant shipping fleet calling on LPC ports indicates that their on-board BWM plans are being implemented. A follow on questionnaire in mid yr 3 will identify shipping companies that are implementing the plans.

Activity 2.7.1 Develop and disseminate model CME framework, including indicators

As with other expected LPC outputs, the CME output will first start with a model framework and guidance from the PCU, based upon lessons learned from the GB pilot phase (scoping study and CME symposium), taking into account the experiences of countries that have been aggressively pushing ballast water management – for instance Australia and the USA, and recognizing the

changed seascape with approval of the BWM Convention and IMO guidelines. Emphasis will be placed on voluntary approaches, streamlined procedures and risk-based priority setting. IMO-MEPC will continue to develop the guidelines for Port State Control and these guidelines will be used by GBP to develop the model CME framework.

A model CME framework, with options and including suggested indicators, will be developed by the 3rd quarter of project year 2. Then, by the start of yr. 3, model CME framework is available for LPCs to develop their revised CME systems.

GEF has been actively pushing project proponents to develop impact and performance indicators following the International Waters Process, Stress Reduction and Environmental Status Results Framework. For ballast water and invasive species, impact indicators pose a difficult challenge, given the large volumes of ballast water being carried, the chance that infestations may have come from hull fouling or other vectors, the microscopic size of many invaders, and the dormant or otherwise unobserved period following dispersal and prior to obvious infestation. Who was at fault, and what to do about it are extremely vexing considerations. Once an infestation has occurred, 'clean up' and eradication is practically impossible. Since impacts are difficult to gauge, and infestations are essentially permanent, indicators need to focus on performance, for example (GEF type in parentheses):

- port state control measures are in place (process),
- risk based approaches are being utilized (process),
- legislation is in place and enforced (process, stress reduction)
- high risk ships are receiving on board inspections (stress reduction)
- sediment dump out facilities are in place and used (stress reduction)
- financial mechanisms for administering BWM programs are established (process)
- countries are ratifying the BWMC (process)
- flagged vessels are installing and using proven treatment equipment and systems (stress reduction)
- flagged vessel are implementing on-ship BWMPs (stress reduction)
- shippers are using certification programs and international standards to demonstrate compliance (stress reduction)

Activity 2.7.2 Hold training workshops on CME

Each of the training programs envisioned under GBP is designed to address the particular agencies and experts that can benefit from the training. In the case of CME, the focus of attention is upon port state control authorities who are empowered to uphold national laws governing the import and export of persons and materials into and out of the country. There are multiple agencies that may be involved in this activity as it relates to ships and the control of ballast water discharge:

- Coast guard and naval authorities are tasked with protecting the coast from illegal entry.
- Customs authorities ensure that the entry of goods and materials is regulated and that duties are levied as required.
- Health authorities enter into the picture if ships may pose a risk to human health through the spread of communicable diseases.
- Environmental authorities may be involved if there is legislation governing the discharge of materials and pollutants into coastal areas and ports.
- Public, parastatal or private port authorities are typically responsible for pollution abatement within commercial port areas.

Depending on the particular BWM strategies and programs planned and in place in each of the Partner Countries, persons will be selected to participate in a training program designed to

provide practical knowledge on CME management and the development of risk-based approaches. It is planned that by the end year 3, at least 100 Port State Control Officers and CME managers in partner countries have been trained.

Activity 2.7.3 Countries implement modified CME systems

Armed with a model CME framework, and CME training for key personnel, Lead and Partner Countries are then expected to develop and implement improved CME systems. These should be in place by the end of Project Year 4. The CME systems should link closely to and build from the NBWM Strategies developed, and ideally should link directly to implementation of the BWM Convention and related IMO Guidelines. In addition, all efforts will be made to harmonize the CME systems at the regional level, using the existing Port State Control MOUs among the regional countries.

Activity 2.7.4 Conduct follow up reviews of modified CME systems and develop lessons learned study

Given that each of the LPCs should have a revised CME system operating for ballast water management at the end of project year 4, GloBallast Partnerships includes a follow up activity one year later to evaluate the extent to which these systems are in place and functioning as intended. The PCU together with the RCOs will identify and hire independent experts to report on progress with the CME reforms. Their findings and recommendations will be submitted back to the LPCs for consideration and response, and will provide the basis for a concluding lessons learned study on CME, and risk-based approaches.

The follow up reviews on CME development will provide the supporting documentation for a study on lessons learned from the implementation of risk based CME systems for ballast water management. In addition to the LPC results, the expert team hired for the effort will consider the lessons from other Partner Countries within GloBallast, countries that have ratified the BWM Convention and also from those IMO member states generally considered to be in the vanguard of ballast water management, such as Australia, New Zealand and the United States. The study report is planned for publication under the GloBallast Monograph Series.

Outcome 3. Knowledge management tools and marine monitoring systems are effectively utilized to expand global public awareness and stakeholder support, improve understanding of ballast water impacts on marine ecology, and enhance maritime sector communications.

The GloBallast pilot phase project received well-deserved praise for its public awareness raising efforts, its port baseline survey activities and the establishment of country profile databases. These three sets of activities are often categorized separately as: public communications, environmental monitoring and data collection. In fact, the three areas share a close affinity within the concept of knowledge management. For GloBallast Partnerships, improved knowledge management is an expected outcome, which will help to increase public awareness, improve understanding of bio-invasion impacts on marine ecosystems, and enable enhanced communication between key stakeholders at national, regional and global levels.

This knowledge management outcome is subdivided into three discreet outputs. The first involves efforts to build a better understanding of the ecological impacts of bio-invasions and likely vectors. This involves continuation, refinement and expansion of the GB pilot phase port baseline survey work. The second output will establish the GloBallast Marine Electronic Information System (GMEIS), designed to provide useful data and information to various stakeholders, including the shipping industry using electronic / internet formats and platforms. The third output involves continuing to build on the GloBallast public awareness success by providing information on ballast water management for public consumption, using especially print and video.

Output 3.1 Baseline information established on biodiversity and alien species presence in major ports

Central to the consideration of marine invasive alien species risks is an understanding of the current presence of invasives, and their environmental impacts. If coastal and port authorities have limited knowledge of invasives problems, they have limited capacity to provide safeguards and deterrents to prevent new invasions. The project will ensure that in each of the Lead Partner countries and across the priority regions, environmental impacts of marine bio-invasions are assessed.

Within this invasives monitoring output are a series of activities designed to establish survey protocols, train persons from the partner regions on surveys and taxonomy, build co-sponsorship support for carrying out port baseline surveys, and then capturing the resulting data and information in formats that allow for this information to influence national and regional strategy development. It is important to stress that GloBallast Partnerships will not directly fund the carrying out of port baseline surveys. It will, however, encourage co-sponsorship from other supporting organizations.

Activity 3.1.1 Update Port baseline survey protocols

The first activity under the port baseline survey output is an updating and enhancement exercise, designed to learn from GloBallast pilot phase surveying efforts, as well as from the continuing survey research carried out through other programs and institutes, (*inter alia*, the National Institute of Water & Atmospheric Research Ltd. in New Zealand has carried out more than 37 port baseline surveys and 66 early detection and delimitation surveys for marine pests in New Zealand and overseas). There is also a strong need to refine protocols and surveying methodology to keep costs down, enable comparisons across port surveys internationally, and stay abreast of technology improvements.

The PCU will utilize external experts to complete the revised protocols during the first quarter of project year 2. Experts for the assignment will include persons who carried out survey training efforts during the GB pilot phase as well as other recognized international experts.

3.1.2 Hold training workshops on port baseline survey design and implementation

During project years 2 & 3, GloBallast Partnerships will set the stage for future survey work by running training workshops. 6 workshops are planned, hosted by one LPC each from CAR, PERSGA, CPPS and WACAF and SPREP. Each of the workshops will include approximately 20 participants (including other Partner countries in the region). For the Mediterranean region, funding will be provided by the SAFEMED Project, which is being implemented by the RCO, REMPEC.

Ideally, port baselines should be done as part of a more wide ranging series of observations along the coastal zone. Taking a snap shot of species presence within ports is useful but ignores the dispersion effects of tides and currents. During GloBallast Partnerships, there will be a concerted effort to link with ongoing companion efforts such as a planned GEF-UNEP-GISP (global) Capacity Building Project on invasive species, as well as a planned GEF/UNEP invasive species project offered by CABI for the Caribbean. Interest has also been indicated by several of the LMEs, to utilize funds for coastal and port marine species surveys.

Activity 3.1.3 Develop country rosters of taxonomy experts

GloBallast Partnerships will provide an important service at the national, regional and global levels in terms of identifying experts with the background for carrying out marine taxonomy activities. This will not be a referral service, merely a database of names and CVs that LPCs and RCOs can utilize to identify potential resources. The roster will also help to identify persons that may be interested to participate in the taxonomy training (2.6.33) activity.

Activity 3.1.4 Train local taxonomists in generic tools and methodologies for marine invasives detection and analysis

One of the major stumbling blocks to completion of the port baseline survey work during the GBP pilot phase was the dearth of trained taxonomists available in the pilot countries to carry out taxonomy work. In each case the results of the surveys were held up for months as taxonomists grappled with the complex effort to identify hundreds of species and then consider their origin. In each instance, taxonomists observed species not previously observed in the area, requiring extensive analysis to determine whether they were native or alien. In many cases, the taxonomic work suffered from a lack of available taxonomists trained for observing marine species. While it takes long time and considerable resources to build a core of well trained taxonomists, a need was identified to provide basic training on generic tools and methodologies for such taxonomy work, related to invasive species. It is expected that content for the training program can utilize existing similar training programs, such as the IOC capacity building program and / or Census of Marine Life Project and both programs have formally expressed their interest to partner with GBP.

Activity 3.1.5 LPCs carry out baseline surveys and develop national marine invasives reports

The pilot phase of GBP included a port baseline survey in one port area within each pilot country. The cost of these surveys continues to escalate, reaching $100,000 or more per survey. With 13 LPCs, and another 20 or more Partner Countries, it has been agreed with the GPTF members that the scale of GloBallast Partnerships precludes setting aside a portion of the GEF allotment to finance baseline surveys in each country. Instead, the PCU will work together with each RCO and the LPCs to identify additional sources of financial support for the survey work. Such discussions have already been initiated during the PDF-B phase. As an example, cooperation agreements have been already discussed with the Mediterranean Science Commission (CIESM) who will raise resources for carrying out port baseline surveys in Mediterranean region. Similarly the regional strategy for South Pacific region includes port baseline surveys and SPREP is currently raising necessary resources to carry out these surveys that can follow the regional training offered by GloBallast Partnerships. Another example is the funds set aside by Venezuela and Jamaica in the Caribbean Region to conduct such surveys.

It is expected that each of the LPCs will succeed to raise sufficient funds for at least two baseline surveys covering their major commercial ports, and that many of the Partner Countries will likewise carry out surveys.

The results of the survey work, in addition to other available information from recent international, regional and national coastal marine biodiversity and fish population assessments, will be utilized by the LPCs to establish their reports on marine bioinvasions. The reports should include the identity and location of known invasions and suspected vectors, impacts of invasions on native marine flora and fauna, and any human health concerns (such as with red tide and cholera). They will be completed by the 2nd quarter of project year 3. This should be viewed as an iterative process, whereby the LPCs first tap any available data to include in their initial rapid assessment (2.2.2). Then, once port baseline surveys have been carried out, the results will be drawn up as a report. The findings should be utilized in the analysis on economic impacts and costs (see Activity 2.3.2) and factored into the development of national ballast water management strategies (see Activity 2.3.4).

Activity 3.1.6 Compile country baseline data and input into GMEIS (see Output 3.2)

During the GloBallast pilot phase, the pilot countries established country profile databases, which among other information, included data compiled during the port baseline surveys, especially including results on the type, number and locations of marine alien species. During GloBallast Partnerships this effort will be continued and further refined, with the data entered into a more robust information storage and retrieval system – dubbed GMEIS (see Output 3.2). The plan

envisages a small amount of data entry assistance during year 5 to load data from the surveys into GMEIS. In fact, data will be entered as it becomes available.

Output 3.2 GloBallast Marine Electronic Information System (GMEIS) established

Information technologies are key to managing the risk of invasives carried by ballast water. Activities during the previous GloBallast Pilot project included the digitisation of hard copy ballast water report forms, enabling data to be compared using a multivariate procedure to determine the relative environmental similarity between ballast water source and destination ports. A customized database was established providing tables and interfaces for storing and managing information including risk species, taxonomic details, and bioregional distribution. Integrated geographic information systems (GIS) were then used to manage and display risk assessment information for the pilot port areas, including areas of high vulnerability and sensitivity to invasive species. These initial steps set GloBallast on a course that under the follow-on project will marshal information technologies and communications systems to improve environmental stewardship in the international maritime community and in this process link GloBallast Partnerships to other similar GEF funded projects such as Marine Electronic Highways (MEH).

A key challenge will be to achieve compatibility and connectivity amongst marine information systems, and to ensure there is quality assured data available. GloBallast Partnerships is well positioned to help drive consistency and coordination within the emerging global marine information infrastructure, through a set of global database and systems functionality activities.

GloBallast Partnerships will include as a major component the GMEIS (GloBallast Marine Electronic Information System). Its objective is to reduce marine environmental risks while enhancing shipping efficiencies, through the rapid communication, analysis and utilization of global information on ballast water management and the marine environment. The effort is designed to significantly reduce the global threat of marine bio-invasions by establishing and linking databases and communications systems for use by the maritime industry, regulatory bodies and the public. The effort is designed to build upon the information management lessons learned during the GloBallast Pilots project, and set the foundation for a global system. The expectation is that at the end of the project, GMEIS will provide the building blocks for an up-to-date GloBallast marine information infrastructure. GMEIS, which will initially take the form of an internet portal, is planned to be launched during yr 3, and by project year 5 should be fully functioning, to include country profile data from each of the LPCs plus updated information from the pilot countries and other partners.

It is expected that the development of GMEIS will in time have wider application within maritime and shipping activities, highlighting options for electronic and internet – based data and communications. These investigations should have resonance with other ongoing investigations, for instance to improve safety and navigational communications in narrow straits, which are the focus of several GEF Marine Electronic Highway (MEH) projects currently being demonstrated (e.g., Malacca Straits) or in the planning stages (West Indian Ocean MEH, Turkish Straits MEH, Mediterranean MEH, etc.). The PCU has established close linkages with the Mediterranean and Turkish Straits MEH projects during the PDF-b phase, including a detailed discussion amongst UNDP, MEH Consultants and the PCU in New York in May, 2006. It is expected that the MEH experts and project managers of all ongoing MEH projects will be involved in the global workshops planned within Activity 3.2.2 and contribute to the design of the GMEIS.

It is important to clarify that GMEIS will be developed initially as a stand alone information system, but will be conceived with a plan that it should dovetail with the existing IMO Global Integrated Shipping Information System, (GISIS). The IMO GISIS provides a series of databases covering:

- Maritime Security: information communicated under the provisions of the International Convention for the Safety of Life at Sea (SOLAS)

- Condition assessment scheme: providing an electronic database for the implementation of the CA Scheme
- Recognized organizations: providing information submitted by Member States
- Maritime casualties and incidences: providing data on casualties and incidences
- Port reception facilities: including available data on facilities for the reception of ship-generated waste.

There are seven key activities within the GMEIS component: a technology review (3.2.1), a series of expert workshops leading to a protocol on systems architecture and functionality (3.2.2), the development of a country profile data base format (3.2.3), training and technical assistance to LPCs, (3.2.4) the development of country profile databases (3.2.5) and the development of a global web portal (3.2.6) and LPC websites (3.2.7).

Activity 3.2.1 Identify GMEIS Design / Architecture Options

It will be important first to determine the current state of the art in maritime information systems for ballast water management and for marine environmental protection in general. Consequently, a review will be commissioned to consider present systems and those under development for:

- monitoring and reporting of on-ship ballast water management;
- port management logistics systems for ballast water reception facilities;
- port control systems for ballast water management compliance;
- data transmission / communication systems from ship to shore;
- systems currently under trial for Marine Electronic Highways (MEH)

The review will conclude with an assessment and set of recommendations concerning the technical and economic feasibility of developing maritime information systems for ballast water management at regional and global scales, and options for the GMEIS architecture and design. The report will be completed by the 1st quarter of Project Year 2.

Activity 3.2.2 Hold GMEIS expert workshop for design / architecture selection

For a global maritime information and communication system to be useful, inter-operability amongst public and private sector users is needed. Also required is an effort to forge consensus on the functionality of the system: what it will be used for, and the logical applications to develop. Through a series of structured workshops, GloBallast Partnerships will bring together leading experts in the fields of information technology, MEH system integration, maritime operations and marine ecosystems protection, to provide a consensus set of recommendations on systems architecture and functionality for the GMEIS.

The systems functionality exercise will also provide recommendations on the optimal ballast water applications for GMEIS, setting out what can be achieved through harnessing spatial information systems, the internet, satellites and other tools, to better manage ballast water and its attendant risks. It is anticipated that a key outcome will be the general design for Marine Bio-Invasion Risk Assessment and Prevention tools. Effective risk-based management approaches should be greatly enhanced by use of GMEIS, as it should enable the rapid dissemination of up to date, and integrated ballast water information, globally, and at country, port, and ship-specific levels. Port state control authorities should be able to access the database to get information on ships, their ballast water treatment systems on board, and environmental compliance track record, and use this information to determine the level of scrutiny required to minimize the chances of improper or illegal ballasting procedures. It is important to note that significant work was done on risk management through the GloBallast Pilot Project and by several countries with active ballast water management programs (Australia, New Zealand, US). This functionality effort will build from the lessons learned from previous and ongoing risk assessment efforts.

It is planned that by mid project year 2, the expert meeting has occurred and a recommended GMEIS architecture has been detailed.

Activity 3.2.3 Develop country profile database format and disseminate to Partner countries

At the beginning of the 2nd Project Year, the PCU will disseminate to the LPCs and other Partner Countries a set of reference documents on how they should establish their country BWM profiles and begin to set up national databases. The guidance will spring from the results of the experts workshop (3.2.2) and are likely to be commissioned from experts who participated in that workshop. The key is to establish user friendly formats that are adaptable to continuing refinement, and which can be used with widely varying amounts of data. The formats should enable entry of data concerning:

Ports compliance: providing country & port specific information on the regulatory requirements governing ballast water management in each participating region, country and port.

Ballast water treatment technologies: enabling shipping companies to report, and port state control managers to verify, the presence, type and performance parameters of treatment systems on board each ship visiting LPC ports. In time, this information should enable the harnessing of information on all recognized ballast water treatment system technologies in commercial use.

Marine Bio-Invasions: as previously noted in section 3.1.6, the aim is that in time information can be entered that will enable the tracking and linking of marine bio-invasions globally. This should include historical evidence and information on marine bio-invasions and their sources. The database should enable alerts for significant risks, such as red tide and cholera outbreaks, as well as the presence of known successful invaders (e.g. mussels). It should help to solidify the evidence of higher invasion risks between ports with similar climactic and hydrological conditions. Several marine bionvasion databases are currently operational and the aim of the activity will be not to reinvent this, but rather make use of such databases in the GMEIS system. Furthermore, this database effort will be linked to the information collection and dissemination efforts of the Global Invasive Species Program (GISP) and the OBIS sub-component of the Census of Marine Life Project.

Activity 3.2.4 Provide training and technical assistance on knowledge management and database development for LPCs

In 3.2.6 there is mentioned the expectation that GloBallast Partnerships will outsource to obtain web portal development and management assistance. It is intended that the company or organization selected will also have the capacity to assist with training and technical assistance to the LPCs and other partner countries on web and database development. Assistance will include:

- detailed on-line instructions,
- web-based and telephone hotlines for installation,
- service and software use questions,
- the availability of (duly licensed / proprietary) software downloads on a password protected site,
- limited on-site assistance in the event of major calamities, and
- options for the use of offsite servers for data storage.

Training and technical assistance has been slated for project years 3 & 4, however the service contract will be drawn up already by the beginning of project Year 2, enabling assistance earlier for LPCs that are moving rapidly on their web and database activities.

Activity 3.2.5 Develop country profile databases

Activity 3.2.3 delineated the three database subsets envisioned. Each LPC is expected to develop a database no later than the beginning of project year 4, using internal or outsourced local data service providers. The LPCs are expected to fund their own basic hardware needs. A limited use

of GEF funds is envisioned for licensing proprietary software packages, especially if GIS-based systems are used.

All assistance to LPCs and partner countries will be made contingent upon pre-agreements being signed by the national lead agencies allowing for information sharing.

Activity 3.2.6 Develop and maintain GloBallast GMEIS web portal

GloBallast Partnerships will launch the GMEIS portal, which will integrate and make available data collected during the course of the project. It will utilize some GIS and spatial formats to enable rapid review of data for decision-making. It is likely that some portal sections will be password protected, to enable its use for segments of the maritime community requiring detailed and potentially sensitive information (i.e. which may include proprietary, patented and copyrighted information). As possible, information developed within GMEIS will be provided to a wider audience using multiple channels. In addition to the GloBallast Partnerships website, the project will utilize GEF IW:Learn.

GloBallast has an existing web site (http://globallast.imo.org) that was used extensively during the GloBallast pilot phase, (its e-forum site continues to be used daily by experts and officials). During project year 1, the existing web site will be updated, and during the course of the project will evolve into the GMEIS portal as new data and information is made available. Sustainability of these efforts will be achieved when the GMEIS migrates into the IMO GISIS. Planned new features of this website are:

- a linked map providing regional and national information,
- dedicated sub-sites for technology R&D and government management issues
- a password protected sub site for regional and national partners, to include a chat space for questions and answers, a section where the PCU and partners can post files, templates and reports, and
- a section for the above mentioned database and web installation and trouble shooting services (3.2.4).

Activity 3.2.7 Launch and maintain national BWM websites

Each LPC is expected to have its GloBallast Partnerships national web site up and running early in Yr 2. The purpose is not to impress an international audience, but rather to serve as a vehicle for local participants, including national task force members, key stakeholders and local experts / consultants, to gain access to up to date information on project progress, ballast water issues and management aspects. It is expected that the web site will be launched in the national language, with an option for posting some materials in English. The site should be up and running by the 1st quarter of project year 2. The LPCs are expected to provide their own financial and human resources to establish the web sites, however the PCU will provide web page templates, based on the Global site, which the LPCs can modify for their national use. All the national web sites will be cross-linked with the global GloBallast web site to facilitate information exchange. Again, cooperation will be sought with GEF IW:LEARN project in this aspect.

Activity 3.3 Stakeholder and public awareness of ballast water management and marine bio-invasion issues is raised and sustained

This outcome is designed to ensure that interested stakeholders and the general public in all partner regions and countries stay informed of the issues and project status. The outcome serves to capture all project activities designed to create and disseminate printed and visual media, including newsletters, pamphlets, posters and videos. In particular, the outcome is designed to provide wide exposure for the GloBallast BBC documentary, produced and launched during the PDF-B Phase, with generous backing from IMO and industry partners.

Activity 3.3.1 Stakeholder outreach to GB pilot regions, LMEs and Regional Seas

Even as the GloBallast Partnerships project is putting most emphasis on the development of programs and strategies amongst the high priority regions and their countries, there is need to extend the networking outside of these immediate partners, to ensure that the momentum for improvement in ballast water management builds globally. In particular, there is a need to continue contacts and information flow with the GB pilot countries and the regional environmental organizations they are party to. So for instance, Ukraine, as a pilot country, and a member of the Black Sea Convention, is expected to sustain its ballast water program development during the pilot phase. GloBallast Partnerships will support these efforts by having Ukraine and the Black Sea Commission as additional partners, sending them regular reports, newsletters and information, and seeking co-sponsorship for their direct inclusion into GloBallast Partnership events and activities. An example already developed during the PDF-B process has been an agreement reached with EBRD to sponsor and host the GloBallast Model Training Course in three regions: the Caspian, Black and Baltic Seas ($360,000 co-financing): also ROPME, a regional organization in another pilot region, will allocate $225,000 for training programs and regional and international cooperation in partnership with IMO and GloBallast and I.R. Iran within the region providing its expertise developed during pilot phase.

As noted in several of the activities under the project, the GB Pilot countries will provide a source of expertise for many GloBallast partnership training events and study exercises, including for port baseline surveys, economic analyzes and CME development. As noted in the subsequent discussion of activities under outcome 4 below, some of the pilot countries are also expected to play important roles in R&D development for treatment technology testing and sediment management facility design.

This activity assumes a mix of tools to build and sustain stakeholder momentum, including direct contact, literature, participation in events, review of strategies and resolutions and in the case of the pilot regions, some small scale financial support for the inclusion of pilot country experts in regional workshops. Any direct support will be limited to use by and for GEF-eligible countries.

With respect to outreach to Regional Seas and LMEs that are not identified as partners for this project, the expectation is to provide a steady stream of information and direct contacts, as well as tools and guidance, and to urge that each take the initiative to address ballast water borne invasives issues. It is expected that before the end of the project, all Regional Seas and LMEs will include convention and protocol language supporting GloBallast Partnerships and urging their member states to ratify the BWM Convention.

Activity 3.3.2 Publish and post quarterly newsletters

The PCU will take responsibility to publish the GloBallast newsletter on a quarterly basis (20 in total). The newsletters will provide updates and features, with each issue spotlighting different partner regions and countries, and highlighting breaking issues, such as R&D developments, and features on countries that are ratifying and implementing the BWM convention.

A mailing list will be developed, with a push to have most mailings electronic, through email, to minimize printing costs. The newsletters will be posted on the GloBallast website. The newsletters will also be made available to interested persons through the GEF IW: LEARN website. The newsletters will be sent to regional and local partners with a request that they make additional translated and printed copies available through their mailing lists.

Activity 3.3.3 Develop, update and translate GloBallast brochures and publications

Visit any maritime or environmental protection office in the pilot countries, and many other nations, and one will inevitably see tacked up on a wall a poster signaling the “10 of the most unwanted” marine invasive species. This is just one example of the very successful printed publicity campaign during the GloBallast pilot phase, which will continue during GloBallast

Partnerships. In particular, it is planned that many of the existing publications will be updated and translated into additional languages.

Most notably, the plan is to disseminate widely the acclaimed IMO-BBC documentary "Invaders from the Seas", launched in March 2006. Efforts will be made to get the documentary translated. During the PDF-B discussions, the UNDP agreed to distribute the documentary to TV networks in all developing countries in the GBP regions. Additionally, during GloBallast Partnerships, 600 copies of the documentary will be ordered and disseminated to the LPCs, RCOs and other partners. The PCU plans to make the documentary, or at least excerpts, stream-able from the GloBallast website.

Outcome 4. Public-private partnerships developed to spur the development of cost-effective ballast water technology solutions

A crucial part of the effort to reduce the threat of invasive alien species carried by ballast water is in the area of research and development into cost effective treatment solutions and the proper disposal of ballast water tank sediments. GBP is planned to commence early in 2007, running until 2012. As indicated in the BWM Convention, ships less than 5000 metric tons (inclusive) will be required to have on-board treatment systems in place by 2009, with larger ships having an extended deadline until 2012. This means that during the period of GBP, it is essential that the current technology hurdles are overcome, and effective treatment solutions have been scale tested and installed.

Past market studies (Royal Haskoning, Netherlands) have estimated that the total market for ballast treatment technologies for the next 10 to 15 years may reach $ 15 billion or more as a result of the BWM Convention requirements. This suggests that there is ample room for market forces to drive innovation, and it strongly suggests that a close partnership with industry is crucial if treatment solutions are to be achieved in the near term. Although several R&D efforts are currently underway, one of the difficulties faced by this diverse global R&D effort is the lack of effective lines of communication between these groups and with governments and the shipping industry. Apart from the efforts of GloBallast in pilot phase, there is also a general lack of involvement of developing countries. There is an increasing need to facilitate technology transfer towards developing countries and ensure global sustainability through North-South collaboration.

The financing of outputs and activities under outcome 4 will be mostly financed by industry partners.

Output 4.1 Strategic partnership forged with shipping industry

Technology development represents an aspect of the ballast water issue that is ideally suited to industry involvement and leadership. The project will work with leading shipping and maritime companies and organizations to establish the GloBallast Industry Alliance (GIA), to stimulate continued R&D research, publicize advances in technology development and consider treatment technology testing and test facility standards.

The GIA will include maritime industry leaders working together with GEF-UNDP-IMO to create opportunities for the Project to positively influence industry practices while benefiting from private sector strengths, including R&D knowledge and practical experience.

Engagement of industry in GloBallast Partnerships will contribute significantly to:

- Replication of successful activities;
- Sustainability of global environmental benefits;
- Leveraging (human, technological and financial) resources;
- Facilitating Industry input into policy developments and a positive pull for reform processes;
- Development and dissemination of technological solutions to ballast water problems; and
- Acceleration of research and development.

The Project has been identifying appropriate private sector entities for partnerships on the basis of the following criteria:

- Environmental performance and stewardship
- Cost-effectiveness of partnership
- Transparency
- Industry drivenness
- Catalytic role and leveraging financial and human resources and/or appropriate technology
- Sustainability and replicability

During a joint-industry round-table organized by GloBallast and Lloyds in November 2005, opportunities for partnerships between GloBallast and Industry were discussed. Recommendations included:

1. Development of tailor-made training programs targeted at maritime industry / sea farers
2. Co-organizing global conferences/symposia etc focusing on technology developments, and sharing of best practices by the industries
3. Establishing and facilitating a GloBallast-GEF-industry dialogue process at the global level to identify emerging issues and opportunities for partnerships.
4. Activities that accelerate technology transfer and technology diffusion within industry
5. Activities aimed at accelerating technology verification and approval processes
6. Activities that accelerate development of globally uniform compliance monitoring and enforcement practices through the development of guidelines/tool kits including electronic information exchange systems for CME and, inter-regional cooperation

These recommendations have been taken up in the development of this set of outcomes under GloBallast Partnerships.

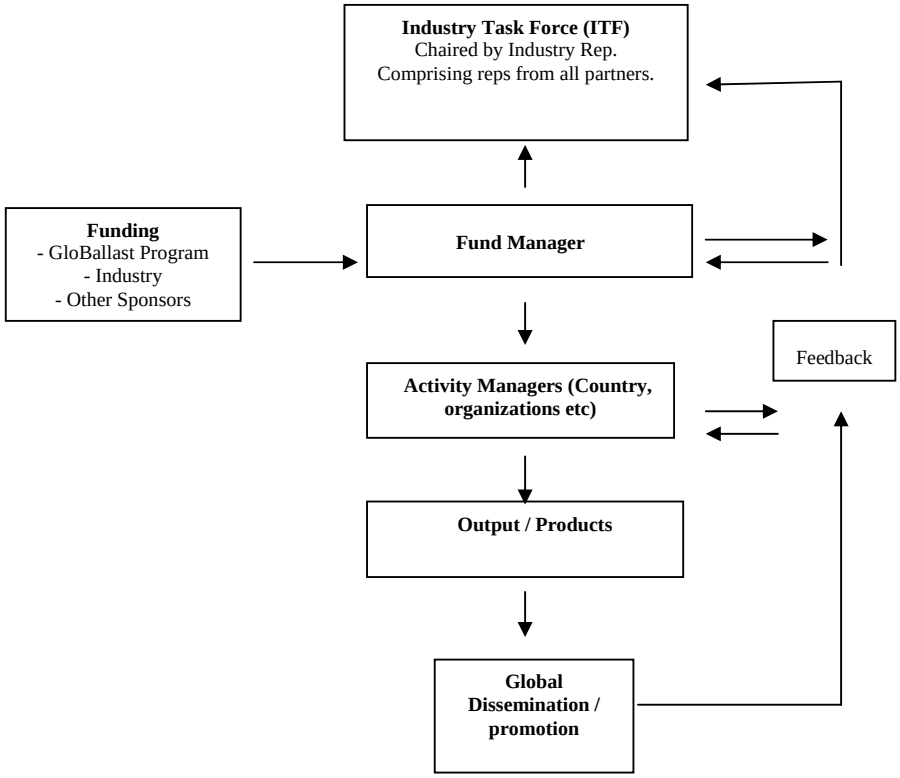
GloBallast Industry Alliance Fund (GIA Fund)

The Strategic Partnership between GloBallast Partnerships and industry will be funded through:

- The GloBallast Industry Alliance Fund, built up through annual subscriptions. So far, each of the four founding industry partners: APL shipping, BP Shipping, British Maritime Technologies and Vela Marine International, have committed to an annual $50,000 direct cash contribution for the next five years, ensuring that even before the project has commenced, one million dollars has already been committed to form the Fund. It is anticipated that at least another 2 or more founding members will join by the end of 2007.
- In-kind support through independent technology development efforts by GIA-Associate Members who have agreed to share the results of these developments with GloBallast Partnerships and to support technology diffusion and North-South technology transfer. Based on the support letters provided by the GIA-Associate members, it is expected that significant co-financing/parallel financing resources from industry will be leveraged during the implementation of the project. The current such committed support amounts to $19 million, 10% of which has been identified as project co-financing..
- Activity-specific partnership arrangements will also be established (such as was done for the BBC documentary development during PDF-B phase) which will be negotiated and concluded during the course of the Project. Such partnerships could be at the global, regional or even national level depending on the activity and geographic locations. Contributions from the industry in the form of expertise, direct financial support and other in-kind contributions can form the basis of such partnerships.

The GIA Fund will be managed by GloBallast Partnerships with the advice of the Global Industry Task Force, consisting of representatives from the industry partners, GEF and UNDP (see

Activity 4.1.1 below). The funds will be utilized over the course of the Project duration and will also be used to leverage substantial co-financing from other co-sponsors, such as International Financial Institutions. An organogram for the management of the GIA Fund is given in the figure below:



It is expected that a number of industry relevant activities that will also benefit the developing regions would be undertaken using the fund. It is expected that GIA partners would contribute financially and non-financially to undertake the pre-agreed activities.

Activity 4.1.1 The GIA will meet periodically to provide input to GloBallast Partnerships

Once the GIA is in operation, the members can decide how frequently they intend to meet. At a minimum, it is expected that the industry members will meet during project years 1, 3 and 5, with meetings held back to back with the Global Project Task Force Meetings. The Chair of the GIA will be from one of the industry members on a rotational basis. The industry will also have representation on the Global Project Task Force.

Activity 4.1.2 Hold biannual industry dialogues between GIA and the GloBallast Steering Committee

The purpose of holding back to back GIA and GPTF meetings is so that an overlapping day can be spent in joint session. These will constitute industry dialogues to enable discussions on the convergence of industry and government interests, and the progress being made on solving BWM technical hurdles.

Output 4.2 Globally agreed standards developed for ballast water technology test facilities

Industry agreed standards will be developed for ballast water technology testing facilities. The aim is to set in place quality assurance / quality control procedures so that the shipping industry

and port state control authorities will have confidence in the testing results from facilities that utilize these standards and procedures. Ballast water treatment equipment test facility standards and inter-calibration procedures will be developed with the aid of a new testing facility to be fully financed and developed by one of the Partner GBP countries. Preliminary discussions have been held with India (GB Pilot country) to sponsor this exercise.

It is expected that by the end of yr 3, test facility standards and procedures for endorsement by the several testing facilities will be under development (by the US, Australia, Norway, Singapore, India). Based on this endorsement, it is anticipated that the standards and procedures can be developed into IMO BWMC guidelines.

The process of facility standards development will follow the usual framework proposition, workshop review and then standards development format.

Activity 4.2.1 Develop framework for ballast water treatment equipment test facility standards and inter-calibration procedures

An expert assistance effort, midway through the second project year will draw up an initial framework for the standards and procedures, identifying key issues and options for expert agreement.

Activity 4.2.2 Hold expert's workshop to propose test facility standards and procedures

At the beginning of project year 3, an expert's workshop will be held, to include representation from countries that are establishing treatment testing facilities. As it is intended for the GIA to sponsor this initiative, there are no limitations on the participation of non-GEF eligible countries. The workshop is expected to be held in India, as India offered to host this workshop.

Activity 4.2.3 Develop and disseminate standards and procedures manual for ballast water treatment equipment test facility standards

Based on the resulting agreements reached at the experts workshop, a manual will then be developed and all IMO member states will subsequently receive notice of the recommended testing facility standards. This notice is expected to go out by the end of Project Year 3.

Output 4.3 Solutions devised and best practices publicised on port-based reception facilities for ballast water tank sediments

It has been documented that sediments from ballast water tanks pose an additional threat of bio-invasion. Consequently the BWMC requires the proper handling of sediments at all ports and terminals where ballast tank cleaning occurs, (Article 5). While there has been significant efforts put into developing treatment technologies since approval of the BWMC, relatively little has been done to appraise member states of their options with respect to meeting sediment facility requirements.

GloBallast Partnerships will facilitate a pilot study on ballast water sediment management. The effort will be fully underwritten by the GIA Fund. An initial assessment will be carried out to review engineering and facility options for sediment removal and disposal from ballast tanks. A dry dock site in one of the partnering countries will then be selected for a pilot sediment facility, with the results documented and made available to all government and industry partners and IMO member states. The pilot site is planned for project year 4, with results made available during year 5.

Activity 4.3.1 Identify dry dock site and conduct feasibility study for pilot sediment facility

The PCU, based on advice from the GIA will organize a techno-economic feasibility study to be carried out on options for constructing a pilot sediment facility in one of the LPCs. The feasibility study should be completed towards the end of project year 3.

Activity 4.3.2 Construct and manage pilot sediment facility

The pilot site should be constructed midway through project year 4, and made operational. A start-up report will be required. It is assumed that in addition to GIA financial support, the host country will provide in-kind support, including facility management.

Activity 4.3.3 Assess pilot facility operation and disseminate lessons learned

One year on after the pilot sediment facility has been made operational, the performance will be reviewed and the resulting report disseminated to all partners. The PCU will hire an expert to do the evaluation and reporting, to be competed by the 3rd quarter of project year 5, and available for consideration at the final GPTF meeting. It is anticipated that the resulting report will then be submitted for IMO MEPC review for consideration to include as BWM Convention guidance.

Output 4.4 State of the art in Ballast water treatment technology solutions identified and publicized

With strong support from industry partners involved in the GloBallast Industry Alliance, the GBP will set up a Ballast Water Management Innovation Fund (as a sub-set of the GIA Fund) to support and promote cost effective technology solutions. An opportunity will be given for countries within each priority region, and the pilot countries, to propose special projects dealing with technical issues specific to ballast water management. The special projects fund will be competitive, with countries required to submit proposals that will be screened by an expert review panel convened by the PCU. Recognizing the quite advanced research into ballast water treatment technologies, the awards selection criteria will favor other innovations, especially in IT and communications systems, the design of risk-management tools and techniques as well as comparative evaluations of technologies to establish best practices. A biennial R&D forum as well as a global technology forum will be held to showcase technologies under development and to disseminate results from work of the scientific community.

Activity 4.4.1 Establish Ballast Water Innovation Fund and support innovative projects

The Fund can be used to back innovative technology projects, and also to support on-board testing of best currently available technologies for technology transfer/training purpose. The PCU, together with the GIA-ITF, will send out request for proposals (RFPs). Once received, the proposals will be reviewed by an independent expert panel. The Fund should be in place by the end of the first Project year, with the awards made by the 3rd quarter of project year 2. Depending on available funding, a second RFP can be considered during project year 4.

Activity 4.4.2 Hold biennial global R&D forums and biennial technology conferences

The PCU is set to establish, together with the GIA, a series of R&D conferences, timed to coincide with the GIA / GPTF meetings during project years 3 & 5. It is planned for the GIA to underwrite the costs of the conference and attendance from the LPCs. In addition, during Project Years 2 &4, Singapore expressed its commitment to continue hosting the biennial Ballast Water Technology Conferences, with the GBP PCU offering technical assistance.

1.2.7 Project Indicators, Risks and Assumptions

The project is intended to assist vulnerable developing states and regions to implement sustainable, risk-based mechanisms for the management and control of ships' ballast water and sediments in order to minimize the adverse impacts of aquatic invasive species transferred by ships. Indications that this project objective has been met will be that by project completion, all LPCs can demonstrate significant improvements in legal, policy and institutional structures, with corresponding reduced risk of ballast water borne marine bio-invasions. Verification will be through evidence that in all LPCs, there is a National Task Force in place with clearly designated responsibilities of the Task Force Members and that there are approved NBWMSs in place, with

revised legal instruments and compliance monitoring and enforcement (CME) systems. In addition, at least two thirds of the LPCs, will have ratified the Ballast Water Management Convention during the course of the project. It is also expected that the Partnering Countries, using the expertise developed and with the support of LPCs will, at the minimum, develop a draft NBWMS during the course of the project. In order to achieving these indicators, it is assumed there will be strong country buy-in amongst the LPCs, and significant industry support. Major risks revolve around the critical need to identify cost effective technology solutions for ballast water treatment.

With respect to each expected outcome, the risks and assumptions include:

- The project team at global, regional and local levels will effectively coordinate the project, and accomplish objectives in a timely fashion and within budget. Verification will be provided through the monitoring and evaluation procedures and evidence of sustainability at project completion.
- Each LPC and priority region will be implementing an effective program of ballast water management; evidenced by each LPC having a government approved NBWMS in place, and all LPCs with revised legal structures, improved CME systems and a cadre of trained experts.
- Cost effective technology solutions and standards will be developed, tested and promoted through a successful partnership with industry, evidenced by testing facility standards developed, sediment facility options piloted, R&D symposiums held, and a ballast water management innovation fund launched.
- Each LPC will be able to identify the significant environmental and economic impacts and threats to biodiversity in their major port areas, verified through port baseline surveys and economic impact assessments conducted, as well as training provided for more than 250 experts on surveys and taxonomy.
- Sufficient information will be made available for countries to implement risk-based ballast water management programs. Verification will be through evidence that a web portal is operating as intended, a global database has been established, and the public awareness program is in place. By the end of the project, the backbone for a Global Marine Electronic Information Systems will be functional.

Indicators for the project have been set out in the Logical Framework (Section II Part II)

1.2.8 Expected global, national and local benefits

GloBallast Partnerships represents a unique example and a model of GEF assistance being used during the early stages of implementation of an international regime related to GEF aims and objectives with most of the burden associated with Convention Implementation activities shared by the responsible UN Agency (IMO) together with the respective developing countries. The new project will provide an opportunity for GEF to continue to catalytically pursue its priorities related to IAS and to follow up on its own strategic priorities related to enabling long term policy reforms “on the ground” at country level contributing to significant global environmental benefits due to the very global nature of international shipping. The project will optimize benefits from and continue the momentum generated by the GEF investment in the pilot phase. The GEF intervention will demonstrate how GEF financing of some incremental costs can massively catalyze major achievements at the national level relating to one of GEF’s key strategic priorities.

Global, regional, national and local benefits will all derive from a successful reduction in the risk of IAS carried by ships’ ballast water.

1.2.9 Country Ownership: Country Eligibility and Country Drivenness

Country Eligibility:

The project will mainly fund participation of the developing countries with particularly vulnerable or highly sensitive marine environments eligible for GEF support under paragraph 9(b) of the GEF Instrument. Non-eligible countries will be expected to finance their participation in project activities

Country Drivenness

It was made clear to all potential LPCs that ratification was a high expectation for their efforts during the project. All of the LPCs have indicated they intend to initiate legal, institutional and policy reforms, and many have directly linked this to intended ratification of the BWMC.

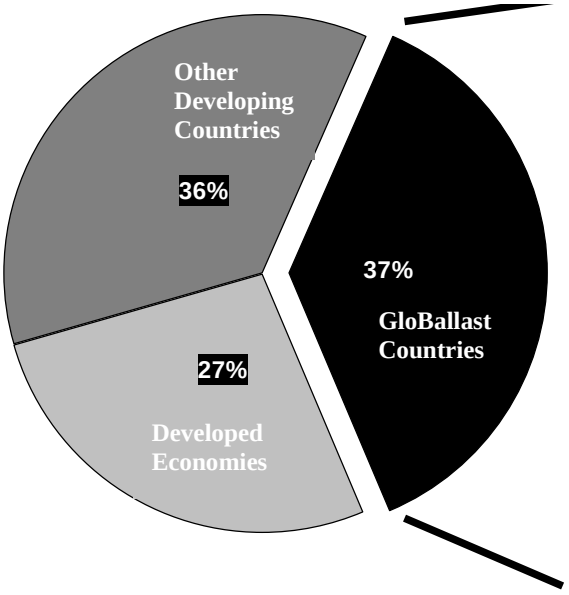
Some partner countries have also indicated they intend to ratify, and one (Syria) has already ratified. From the GloBallast Pilot Phase, Brazil has ratified and South Africa is on the verge. Indications to IMO are that several other participating countries are currently working to ratify and several countries, Iran for example, have taken it into their parliamentary process. In addition, the Government of China has completed a study that looked into the implication of ratification and has recommended to the Parliament to ratify the Convention. India has progressed considerably in the ratification process and has allocated US $600K for implementing initial activities such as country-wide port base line surveys.

The LPCs also comprise 13 of the 130 states that have requested assistance from GloBallast to consider ballast water management issues in light of the convention being approved. Many of these countries have included the issue of IAS and ballast water control and management in their national priorities. All LPCs have been partcipating in the IMO-MEPC discussions for developing the new ballast Water Management Convention and continue their involvement in the development of associated technical guidelines through the MEPC process. The significant priority assigned to ballast water issues by the member countries is evident from the fact that the partcipation in IMO MEPC Ballast Water Working group has increased from around 14 member States and organizations at the commencement of the GloBallast pilot phase in 2000, to 53 in 2003 and reached around 80 In 2006. Many developing countries are also party to the Convention on Biological Diversity (CBD), the United Nations Convention on the Law of the Sea (UNCLOS) and other international and regional instruments that have elements relating to IAS in ships' ballast water.

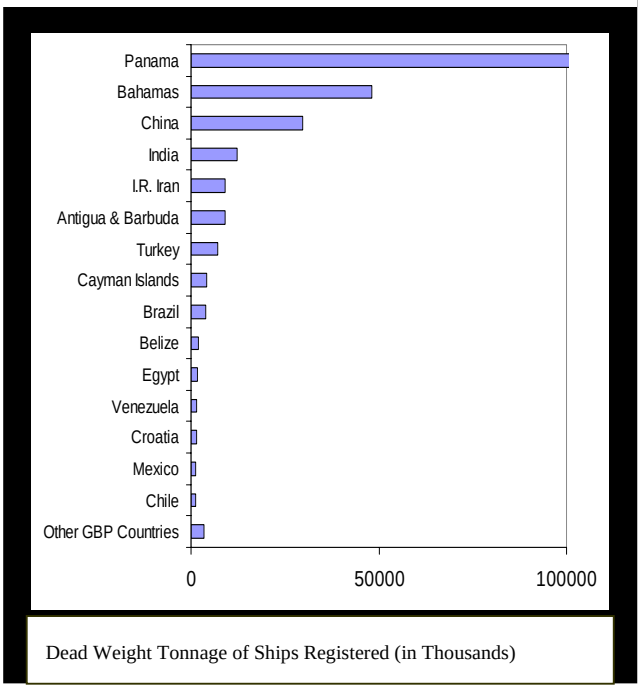
The project has been endorsed and is supported by over 40 Partner Countries, all the regional coordinating organizations and all the initial Pilot Countries. Formal agreements (MoUs) will be concluded between GloBallast and the LPCs and RCOs. Signatures from most of these partners are included in Section IV. The strong interest expressed by over 40 partnering countries, also signals the high chances of the project making a significant global impact, especially since 37% of the global merchant fleet are registered in these partnering countries as shown in the chart below. It is expected that this percentage will be significantly higher once the remaining countries join the partnership during the course of the project.

Chart 1.2.9 (1): Merchant fleet size of countries who provided official endorsement and commitment to participate in GloBallast Partnership Project (in 000's of Dead Weight Tonnage, DWT)

Note: Only countries that endorsed the project by the relevant ministry and expressed keen interest to participate and contribute in GBP are accounted for. A number of GBP countries who have endorsed the project, but with small number of registered ships (dwt) are grouped into "Other GBP Countries" for ease of presentation in the graph. The chart represents over 40 countries that endorsed and supported the project



Merchant Fleet registered under GBP countries, other developing countries and developed countries as a percentage of world maritime fleet (expressed as % of total Dead Weight Tonnage)



*S*ource: Review of Maritime Transport 2005, ***UNCTAD***

Each of the RCOs has demonstrated their support for measures to address marine invasive species and the threat posed by invasives transferred through ballast water. The following table lists each of the 6 priority regions included under the project a listing of current actions specific to marine invasives and ballast water management, and the co-financing commitments from each region reflecting the very high level of interest from contracting parties of the regional conventions.

Region	***GBP Financial Commitment by RCO***	Plans, Protocols and Activities
South East Pacific	$168,120	Plan Of Action for the Protection of the Marine Environment and Coastal Areas of the Southeast Pacific (Chile, Colombia, Ecuador, Peru and Panama) BWM relevant conventions and agreements: ▪ Convention for the Protection of the Marine Environment and Coastal Areas in the South East Pacific (1981) ▪ Agreement on Regional Cooperation in Combating Pollution of the South East Pacific by Hydrocarbons or other Harmful Substances in Case of Emergency (1981) ▪ Supplementary Protocol to the Agreement on Regional Cooperation in Combating Pollution of the South East Pacific

		by Hydrocarbons or other Harmful Substances (1983) ▪ Protocol for the Conservation and Management of Protected Marine and Coastal Areas of the South East Pacific ▪ Protocol for the Protection of the South East Pacific Against Radioactive Pollution (1989) Key activities and meetings relevant to BWM: ▪ Meeting of Experts to Analyze the Impacts of the Alien Species in the Southeast Pacific held in 1998 in Viña del Mar Chile (CBD/CPPS). ▪ Meeting of Experts on the Impacts of Alien Species in the Southeast Pacific; the ballast water problem, held on July 2003 in Panama. ▪ Meeting for the implementation of the GloBallast Partnership Project (GEF/UNDP/IMO) in the Southeast Pacific countries, held on February 2006 in Guayaquil, Ecuador.
Wider Caribbean	$735, 800	Passage of Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena convention), includes Article 5 POLLUTION FROM SHIPS, and Article 10, Specially Protected Areas Cartagena convention includes SPAW (Specially Protected Areas and Wildlife) protocol, with general obligation to take necessary measures to protect, preserve and manage areas with special value and threatened or endangered species. Article 12 includes measures regulating the introduction of non-indigenous or genetically altered species. Decision X during the Eleventh Intergovernmental Meeting on the Action Plan for the Caribbean Environment Program (2004) was to "Request that the Secretariat further explore, in collaboration with the International Maritime Organization, the RAC/REMPEITC-Carib and other relevant agencies, the development of project proposals and activities to address the problem of Ballast Water Management and the associated threats of invasive species in the Region, and Encourage member governments to become actively involved in the GloBallast Program that is developed in the region." UNEP CAR/RCU provided funds to support a regional meeting February 2006 hosted by Venezuela: purpose consultation meeting to identify the high priorities and needs for ballast water management and opportunities to partner with GloBallast
Mediterranean	$305,000	Convention for the Protection of the Mediterranean Sea Against Pollution (1976) Amended in 1995 Convention fort the Protection of the Marine Environment and the Coastal Region of the Mediterranean.: Amendments entered in force in July 2004 Protocols to the Barcelona Convention: ▪ Dumping Protocol, 1976 (AM 1995) ▪ Prevention and Emergency » Protocol, 2002, entered in force in

		2004 ▪ Land-based Sources » Protocol, 1980 (AM 1996) ▪ Specially Protected Areas » Protocol, 1995 (IF) ▪ Offshore Protocol, 1994 (NIF) ▪ Hazardous Wastes » Protocol, 1996 (NIF) ▪ Integrated Coastal Zones Management Protocol ▪ Action Plan concerning Species Introductions and Invasive Species in the Mediterranean Sea (2003) Plans and programs: ▪ Guidelines for controlling the vectors of introduction into the Mediterranean of non-indigenous species and invasive marine species ▪ A guide for risk analysis assessing the impacts of the introduction of non-indigenous species. ▪ The convening of a scientific workshop on non-indigenous species in the Mediterranean (Rome, 6-7 December 2005). ▪ The setting-up of a regional mechanism for collecting, compiling and circulating information on invasive non-indigenous species ▪ Regional project on fouling and ballast water and sediments ▪ Develop and implement a regional project to overcome gaps for the Mediterranean countries, and strengthen the capacities of the countries to reduce the transfer of aquatic organisms via ships' ballast water and sediments and hull fouling, in close consultation with the IMO and GloBallast Partnerships. ▪ 14th Ordinary meeting of the Contracting parties to the Barcelona Convention, 8-11 November, Slovenia for 2006-2007 requested the Convention Secretariat to participate in the GEF GloBallast project to assist developing countries to address the transfer of harmful aquatic organisms in ships' ballast water Training A regional training session to be organised (December 2007), dealing with legislative and institutional aspects related to controlling the introduction of non-indigenous marine species.
Red Sea and Gulf of Aden	$807,750	PERSGA is the Secretariat of the Jeddah Convention., which includes: ▪ Protocol on combating oil pollution- Feb, 1982 ▪ Protocol on pollution of land base sources - Sep, 2005 ▪ Protocol on marine biodiversity and marine protected areas-Dec, 2005 Regional Action Plan for Ballast Water Management was adopted and regional task force was formed in a regional meeting held in Jeddah, November 2005, participated by all PERSGA member countries.
West and Central		Abidjan Convention recognizes invasive species as an issue ▪ GCLME TDA/SAP included ballast water/invasive species as a

Africa		priority area ▪ GCLME developed a regional task force and regional action plan for ballast water management in a regional workshop held in Ghana in January 2005. ▪ GCLME organising a regional training program on ballast water management in early 2007, with funds committed. ▪ BCLME is organizing a national training workshop on ballast water management in Angola in 2006.
South Pacific	$592,000	Currently developing a regional strategy on Shipping-related Introduced Marine Pests In the Pacific Islands. Development of the Strategy is an activity under SPREP's Pacific Ocean Pollution Prevention Program (PACPOL), and is funded by the International Maritime Organization (IMO).

In addition, each of the 13 LPCs have indicated their incremental financial commitment to the project, as identified in the following table.

Region	***LPC***	***Financial Commitment($)***
SOUTH EAST PACIFIC	Argentina	857,000
	Chile	628,000
	Colombia	223,629
CARIBBEAN	Venezuela	1,110,000
	Jamaica	339,000
	Trinidad& Tobago	413,000
	Bahamas	418,600
MEDITERRANEAN	Turkey	410,000
	Croatia	443,500
RED SEA & GULF OF ADEN	Egypt	337,500
	Yemen	337,500
	Sudan	298,000
	Jordan	337,500
WEST & CENTRAL AFRICA	Ghana	501,400
Total		**$6,654,629**

1.2.10 Sustainability

Environmental Sustainability

Conserving marine biodiversity is clearly agreed as one of the world's environmental issues of greatest concern, and a reduction in the transfer of IAS through Ballast Water will help to protect marine and freshwater biodiversity. The project will enable LPC to improve their ballast water management systems, will help to stimulate research and development on treatment technologies and sediment handling, and will enable improvements in global communications and information on ballast water movements, which should drive improved risk management globally. The key to environmental sustainability then is to have these activities continue on beyond project closure. The best mechanism to ensure this sustainability is widespread ratification of the Ballast Water Management Convention, amongst the 130 countries in the Partner regions. Convention ratification will compel these States to develop the necessary national legislation that will drive environmental management improvements at commercial ports and amongst flagged vessels.

Environmental sustainability will also be enhanced through the widespread training of persons in Partner Countries on the techniques for carrying out port baseline surveys and handling the related taxonomy issues. This training program will ensure that there exists a cadre of experts in each country with the skills to continue carrying out surveys after the project has ended. This aspect of sustainability is logical given evidence from the GloBallast pilot phase, where South Africa and India, in particular, utilized the training from the one port survey under GloBallast and then initiated an independent program to survey each of the other national maritime ports.

Social Sustainability

Social sustainability is less of an issue for the GloBallast Partnerships project as it might be for more community based efforts tied to health, job creation or the provision of basic utility services. In the case of GloBallast, social aspects primarily relate to maintaining the health of coastal fisheries by protecting against invasives, which in turn sustains human health and livelihoods. The promotion of public awareness through publications, the internet and documentaries, will help to build public support for sustained, long term controls on ballast water discharges.

Financial Sustainability

The project will move aggressively to loosen the financial constraints that so often make capacity building projects difficult to sustain. So for example, the activities to be carried out under output 2.3, on the economic aspects of marine bio-invasions, will include efforts to calculate the cost of administering national ballast water programs and will provide recommendations on how to cover these costs. The guidance will emphasize the "polluter pays" principle, recognizing that the costs of administering environmental programs should be supported by those whose actions are responsible for the pollution problem. A brief discussion of the types of financing mechanisms that will be analyzed under output 2.3 are discussed in the following section on financing mechanisms.

Regional sustainability workshops will expand the financial support effort, providing lessons learned and important funding information to partnering countries.

Strategic partnerships that have already been initiated with the Global Invasive Species Program (GISP), the World Conservation Union (IUCN) and the United Nations Environment Program (UNEP) will be expanded for the funding of specific activities of common interest. IUCN has provided an endorsement of GloBallast (see Annex 3.1), and plans to allocate $400,000 to marine invasive species prevention during the 5 year period of GloBallast Partnerships. Such alliances will provide an extremely powerful mechanism to address invasive aquatic species from a regional and global perspective in an integrated and meaningful way.

Expert advice and support to ensure the financial sustainability of the project will be sought from International Financial Institutions (IFIs) (e.g. World Bank, Regional Development Banks, etc.) or specialized international consultants. As an example, the European Bank for Reconstruction and Development (EBRD) has committed significant resources to support BWM related capacity building activities in the Black Sea, Baltic Sea and Caspian Sea countries, during the course of the Project. As part of the financial strategy, incentives to stimulate investment into ballast water related activities will be explored and barriers to private sector funding will be assessed and measures implemented for their removal. Informal meetings will be held in line with resource mobilization strategies to channel additional co-funding towards implementation of GloBallast Partnerships activities. Financial sustainability for further technology development efforts beyond the project duration will be ensured by expanding the Global Industry Alliance with an aim to set up a revolving fund based on corporate annual memberships.

Financing Mechanisms

A major consideration in the financing discussion relates to who will bear most of the costs associated with addressing the issue of ballast water mediated bioinvasions. It is reasonable to assume that most of the burden related to preventing ballast water mediated bioinvasions will be borne by the shipping industry as a direct result of the entry into force of the ballast water management convention, and associated requirements for effective ballast water management. The convention stipulates that ballast water has to be either exchanged at mid-sea or treated onboard. In a very unlikely scenario, ballast water may be required to be discharged in a designated ballast water discharge zone. Ship owners are expected to share most of the responsibility of managing the issue – and this is enforced through requirements to have treatment equipment or BWM systems (such as exchange) in place. This way, they are already bearing more than 99% of the costs associated with prevention of the IAS.

It is expected that ballast water exchange will cost ships 0.02 $ to 0.05 $ per ton of BW. Similarly indications are that BW treatment cost will also be in the similar range (including capital costs amortized over a life span of 20 years). If 5 cents per ton is taken as the average, then to treat the 5 billion tons of BW being transferred an year globally – will cost 250 million per year for around 40,000 ships (international) – each ship on average spending 6000$ per year. These are relatively small costs for the shipping industry, especially taking into consideration the $100 million price tag for new large vessel construction. Accordingly, the shipping industry is not expected to vigorously oppose the BWM convention entering into force, and several ship owners are already doing mid ocean ballast water exchange, as mandated by the US.

The GIA is a good indication that the industry is coming onboard to manage the issue. The GIA is just a start and such initiatives have the potential to grow into a mechanism similar to the oil spill compensation fund, which could then look into some of the incursion management.

Port/flag/coastal state efforts will be limited to the institutional infrastructure for CME, regular environmental monitoring of the ports and very rarely, activities related to incursion management. Most IMO member countries have a port state control regime in place, and an institutional infrastructure for port state inspections, (wide variability in capacity and effectiveness notwithstanding).

Ballast water management imposes relatively minor infrastructure requirements on ports. They do not need to have huge BW reception facilities (unlike oily waste etc). If a sediment reception facility is required, (very small infrastructure costs expected), this could be operated in a commercial manner by a shipyard. Again, the project will develop guidelines for sediment reception facilities.

The responsibility of port states and flag states are basically limited to monitoring, enforcement and incursion management (if at all incursion is possible) – what this entails is inspection of perhaps less than 1% of the ships coming to the ports (risk assessment will keep these numbers

very low) and port states have already a port state control (PSC) regime in place. There are regional port state control MOUs and regional mechanisms in place to assist the process. These existing arrangements are therefore expected to bring significant sustainability even without spending any significant additional resources to include BWM in the PSC regime.

The resources required for such activities will vary greatly between ports and countries depending on the types of cargos handled, number of ship calls, port state control capacities, etc., however it is reasonable to expect that the funds required for such activities will be much less than the costs associated with implementing other marine environmental protection requirements (such as MARPOL).

In order to ensure sustainability it is important to ensure the funding for these activities and there are a variety of approaches for countries to consider in financing the post-GBP activities:

- Fees for port services, such as discharge of unmanaged ballast water in designated areas, reception facilities for ballast water and/or sediments etc
- Port fees directly levied to support BWM activities. This could be based on a per vessel basis, or, based on cargo tonnage
- Penalties in the event of accidental discharges and non-compliance.
- Partnerships with in-kind and monetary contributions from major stakeholders who are benefited from BWM (e.g., fishing, tourism, mariculture industries), other private and non-governmental organizations
- Money from the national budget for each country

Current fee structures in some of the ports in LPCs and PCs include fees for environmental services, such as oily bilge water treatment and garbage disposal. Once services are provided, the money generated through a fee-for-service system is likely to be fairly small, and specifically designated for the costs of the services.

Another option is to levy special port fees on ships, earmarked for BWM activities. The levying of port fees is common in the industry for a wide variety of purposes. For example, Guatemala assesses fees on incoming ships to support its contribution to the Central American Commission for Marine Transport [COCATRAM] and its port security program (Programa Seguridad Portuaria). There is also precedent for assessing fees earmarked for BWM activities. Australia has charged ships based on their tonnage of cargo to fund ongoing ballast water research activities. The State of California in USA is charging such a levy to ships to fund activities related to BWM. Special port fees have the potential to generate a significant amount of money; however the across the board nature of this option departs from the polluter pay's concept, since complying ship owners who are not harming the environment are assessed fees along with ship owners in non-compliance.

Applying the polluter pay principle, there is a significant potential for governments to collect fines and reimbursements from ship owners responsible for non-compliance and illegal discharge of BW. However, the litigation process may take several years and hence, it is somewhat doubtful that, in the event of a non-compliance, significant funds would be available to contribute to a steady funding stream initially, until a revolving fund eventually offer a buffering capacity to sustain cash-flow.

Partnerships with major stakeholders who may significantly benefit from preventing invasive species (e.g. tourism industry, mariculture/aquaculture industries) as well as with other private entities, such as oil companies working in the region, and nongovernmental organizations, such as environmental groups, can provide in-kind and monetary contributions to BWM activities. The GloBallast Industry Alliance (GIA) is an excellent start in this direction and based on lessons learned from this pioneering initiative, such collaborations might be extended between national governments and private entities to support special funding mechanisms, for example national marine biosecurity revolving funds. The exact nature of any contributions would clearly depend

on the NBWMS of the country. Nevertheless, the interest displayed to date, suggests that countries in several regions are likely to find willing partners in activities to protect shared freshwater and coastal marine resources.

Money from the national budget is a potentially significant funding source, though it has the caveat that funding may not be stable, because of competing budgetary needs. An encouraging example, however, is the significant amount of funds allocated by the former pilot countries (e.g., India, I.R. Iran, South Africa and Brazil) to support post-GloBallast efforts, such as the replication of port surveys and development of electronic systems for ballast water reporting.

Analyzing Financing Mechanisms

The funding of post-project activities could be a mix of funding mechanisms, with each of the LPC countries choosing to use variety of funding mechanisms. Below is an analysis of each of the funding mechanisms based on a range of characteristics, with a summary of the analysis presented in the table below:

Table 1.2.10 (1): Funding Mechanisms and characteristics

(L- Low, M-Medium, H-High)

Financing Mechanism	Fund Size	Stability	Exclusivity for BWM	Effectiveness of collection	Polluter pay principle	Political feasibility
Fines and Penalties	H	L	H	M	H	H
Fees for Services	L	L-M	H	M	H	H
Special port fees	H	H	L-M	H	L	L
Government funds	H	M-H	L	H	L	M
Partnerships with private sector, NGOS	M-H	M-H	H	M-H	H	H

Fund size considers the extent to which the mechanism can generate a significant amount of the finding needed for BWM. Four of the above financing mechanisms have the potential to generate large sums of money:

1. fees based on the tons of imports and exports from each port,
2. money from the government general fund,
3. fines and penalties (considering that the penalties will be severe enough to prevent non-compliance) and,
4. partnership with major industry and other stakeholders.

Fines and penalties, in the case of non-compliance could generate significant funds (depending on the level of penalties that a country decides upon), but there are significant risks that funds could be tied up in lengthy litigation procedures. Fees for environmental services, such as the treatment of ballast water sediments, are not significant generators of income, and shippers may avoid these

services if they become prohibitively expensive. Partnerships with private and non-governmental organizations have an important role, with the potential for moderate to high contributions, particularly of in-kind support.

In addition to the ability to generate significant funds, the stability of the funding sources from year to year is an important criterion. Fees on imports and exports are relatively stable, as historically the amount of shipping worldwide has steadily increased over the years. The general fund is likely to be a stable funding source, assuming that the political will exists each year to appropriate the necessary funding. Fines and penalties are *not* a stable source of funding, as they are based on events that are difficult to predict. Fees on environmental sources are a relatively stable source, though the ships in the region may not avail themselves of the offered services if the costs are too high, and/or there are no compelling requirements to do so. Finally, partnerships with private, non-governmental, and international organizations have the potential to be stable, though this will depend on their own funding resources and whether they perceive the benefits to justify the costs.

The criterion of exclusivity is linked to the stability of the funding source, and considers whether the mechanism is likely to generate financing devoted exclusively to the project, or may be more susceptible to funds being diverted to other competing needs. Any funding shared by multiple activities has this potential weakness. Financing for BWM activities from the government's general fund would presumably have to compete with a variety of other needs. However it is expected that the GBP will raise sufficient political awareness of the issue and it is expected that the governments would allocate sufficient resources to support the CME activities. On the other hand, fees on imports and exports, and partnerships, can be designed so that they exclusively link to the needs identified in the NBWMS. Similarly, fines/penalties and fees for environmental services, such as treatment of sediments, would be linked directly to paying for the environmental service.

In terms of effectiveness, this explores the complexity of mechanisms and the demand on institutions to implement them. Most of the mechanisms involve working through institutions already in place, including port and maritime authorities. Fees for environmental services, and fees on imports and exports could be relatively easily collected through existing institutions at the ports. Fines and reimbursements in the event of non-compliance have to date been difficult to implement.

The polluter-pays principle is widely cited as a desirable criterion for paying for environmental mitigation measures, first getting worldwide attention at the United Nations Conference on Environment and Development held in Rio de Janeiro of Brazil in June 1992. For most of the financing mechanisms described here, there is a strong connection between the source of funds and the cause of the environmental problem. An exception is the special port fee which is applied to all ships visiting the port. Also, fairing low in the polluter pay principle is the governmental general funds, for which there is little connection between the need for BWM activities and the source of the funds.

Political feasibility of any given financing mechanism is a critical factor. In practice, political feasibility is difficult to specify in advance, as it depends on many factors. Generally, the larger the funding required, the lower the political feasibility. And the more closely tied a funding mechanism is to a particular entity or group of entities (in this case shipping industry may have strong lobbying powers within the government), then the more likely there will be significant resistance. Financing from the general fund may likely find less political resistance, at least in the short-run, compared to fees on imports and exports. Fees for environmental services are generally less contentious, in part because they have been voluntary to date, and rarely collected.

Money from the general fund is often desirable as it imposes fewer conflicts with specific external; stakeholders, who might otherwise be required to pay a significant fraction of the costs, as may occur under other financing mechanisms. Money from the general fund is also desirable

because it is potentially a large funding source. On the other hand, general fund budgets are very rarely sufficient to meet all demands on government, so competition is high, and long term financing is difficult to sustain.

In summary, the polluter pay principle applies to most of the above mechanisms except the port fees and government funds. Most of the above mechanisms would have the potential to raise enough funds to cover the expenditure on the government side, especially since most of the costs associated with managing the issue will be borne by the ship owner.

Special Fee Based on Tons of Imports and Exports

Although there are several limitations in applying port fees, an analysis was conducted to ascertain if port fees can generate sufficient funding. A special fee based on tons of imports and exports has a number of variations, and has already been used for a variety of purposes in several regions. The following table gives an idea of the import and export cargo volume handled by ports in developing regions, to assess the feasibility of generating enough funds for BWM activities through a special fee assessment.

Table 1.2.10 (2): Import and export statistics, for the ports in the Developing regions (year 2004, millions of tons) Source: Review of maritime Transport, 2005, UNCTAD

Region	Total goods loaded	Total good unloaded	Total goods handled
Developing countries in Africa	415.9	210.6	626.5
Developing Countries in America	913.5	378.7	1292.2
Developing Countries in Asia	1974.4	1448.1	3422.5
Developing Countries in Europe	19.1	20.2	39.3
Developing Countries in Oceania	6.4	11.6	18
Total	3329.3	2069.2	5398.5

Based on the import and export data in Table 2, the revenue that could be generated with a fee ranging from $0.01 to $0.10 per ton can be estimated. A fee in this range would generate from $54 million to $540 million annually, although with significant variation between the countries. Competitive concerns should be expected with any proposal to raise port fees. It will, for instance, be necessary to examine the size of the fee relative to the average cost per ton charged to ships in some of the regions. As it turns out, a fee in the range discussed here, between $0.01 and $0.10, would likely represent a small percentage of the cost per ton that ports typically charge for the use of their facilities (ranging from $1 per bulk liquid cargo to $20 for certain general cargo). However concerns about competition between ports in the region, as well as with ports outside the region, are an important consideration in the design of this type of funding mechanism. There is likely to be high resistance from the ports for implementing a financing mechanism that raises the cost of doing business, even if the percentage increase is quite small.

Decision-making on financial mechanisms

Decisions on the optimal set of financing mechanisms to sustain post-GBP activities for management of ballast water in developing countries depends on a) identifying the required budget to sustain BWM activities, especially including implementation of the BWM Convention; and b) the country-specific feasibility of using various funding mechanisms to implement BWM

programs. It is premature at this juncture to suggest which financial models will work to sustain country-based ballast water management efforts after 2011. The optimal set of mechanisms will depend on the country, the NBWM Strategy, the industry-government relationships, political support, and financial conditions. As a consequence, GloBallast is designed to assist the partner countries to identify their requirements, resource needs and local strategies so they can identify a suitable and sustainable financing strategy.

There are a number of approaches that countries participating in GBP may consider to provide financing for BWM activities over the longer term. Generating money from Government general funds, partnership with major stakeholders benefiting from BWM activities as well as imposing penalties for non-compliance are some of the most feasible approaches that can provide a significant core of funding for BWM activities. All these funding mechanisms support the polluter pay principle.

Regardless of the types of funding mechanisms used, it is critical that all aspects of financing are transparent. Stakeholders need to see how the money is collected, how much is collected, and that it gets used as intended.

To reduce concerns over competition between ports, it may be desirable for countries in a region to strive for a uniform approach on funding schemes. Regional cooperation and support of regional conventions will play a key role in reducing port competition, and several GBP activities are directed to bring in such a regional cooperation. If competitive concerns can be overcome, and stakeholders see value in the BWM activities, then long-term financing of BWM activities is achievable, and well within the capability of the developing countries participating in the GloBallast Partnerships Project

Institutional Sustainability

Sustained governmental commitment is essential during and after GloBallast Partnerships. The use of government-paid National Focal Points will help to ensure a long-term self-sustaining basis. Long-term policy reforms at national level will be encouraged and integrated within regional mechanisms. Specific provisions regarding ballast water management and control will be included in the existing government cooperation mechanisms to ensure long-term governmental commitment and continuation of ballast water activities after GEF's intervention. Integrating GloBallast Partnerships with existing regional mechanisms will significantly help to reduce administration costs and create inter-program synergies.

At the regional level, sustainability will be enhanced through the opportunities provided for non-lead country participation, enabling all countries in the regions to receive basic tools and mechanisms that can help improve port environmental management and reduce IAS threats. The regional organizations will also be expected to actively promote regional cooperation on ballast water management, including agreements on restricted ballast exchange areas and inter-regional exemptions to ballast treatment and exchange requirements, providing a regional impetus for continuation of activities after the project. In addition, it is expected that the regional task force function will be institutionalized under the regional convention frameworks, thus sustaining the regional cooperation efforts.

At the global level, as a result of the pilot phase of the project, IMO has created a strong institutional basis by establishing the "Office for Ballast Water Management" and funding a senior technical position and associated secretarial support. This, together with the adoption of ballast water management as a new thematic priority of IMO's Integrated Technical Cooperation Program will ensure the necessary sustainability at the global level during and beyond the proposed period of the GloBallast Partnerships Project. In addition, IMO member States are committed to an ongoing process of guidance development for the implementation of the BWM Convention.

The project will encourage involvement of national/international non-governmental networks in the implementation process to allow independent "watchdog" feedback and to maintain pressure on the governments.

Partnership and participation are important for the successful implementation of GloBallast activities in developing countries. The stakeholder analysis has indicated that key partners would include relevant government agencies (maritime administrations, environment agencies, etc.), scientific community, industry representatives, financial community (private and other donors), GEF and its Implementing Agencies (IAs) and GEF "sister" projects. The active participation of all the stakeholders will be ensured through the establishment of the National Task Forces (NTF) and the roles and responsibilities of all partners will be stipulated in the DPDs. The following institutional elements of the project will contribute to its sustainability beyond the end of the project:

- Increased awareness and commitment at political and decision-making levels regarding the value of shared resources and the transboundary management issues affecting them,
- The information base, tools, and models for management decision-making will have been substantially increased
- The project will focus on enhancing existing networks and institutions rather than creating new ones,
- The project will have a major emphasis on capacity building,
- The project duration should contribute to the establishment and sustainability of the proposed processes and mechanisms,
- The project will seek to establish a culture of cooperation and networking among countries in their respective regions and the mechanism to do so.

Replicability

Replication is a key feature of the three-tier implementation modality for GloBallast Partnerships. This globally directed, regionally coordinated and country-based project is ideally suited to replication and the sharing of best practices. Replication will be enabled through the following mechanisms:

- The work done by the LPCs will be shared regionally with other partner countries (PCs) and replicated. As described in Section II on strategies for the national component of the project, there is a fluid nature to the designation of LPCs and other partner countries in each region. All countries that endorse the project in the priority regions will be treated as an active partner and provided with information. The difference is only in the significantly higher level of expected support, activity and outcomes by the LPCs. This set up should enable a strong degree of replicability as well as pressure for the LPCs to perform. Initially designated LPCs cannot assume that they will remain so unless they achieve expected outcomes, and ambitious partnering countries will find themselves moving into LPC status, with resulting financial and technical assistance being provided.
- The training approach taken for LPI and CME development is a train-the trainers approach, with project mechanisms in place to ensure that trained experts can in turn train other regional and national colleagues; and
- The close linkages being established with the Regional Seas and LMEs will ensure the replication of project activities on a much broader scale.
- Replication will be further enhanced through the networking efforts of the PCU and partners. While the main focus is on 6 regions, there are 8 additional regions directly involved (from the pilot phase countries and through the EBRD supported training workshops). This wide level of inclusion should help with replication of lessons learned ands best practices. Further opportunities to share knowledge will be achieved via the R&D forums (4.4.2) and

participation of GB partners in regional conventions (see activity 1.1.7). What's more, through the GloBallast website / GMEIS portal, the GBP quarterly newsletters and the several reports to be prepared as IMO monographs, there will be opportunities for other interested countries to learn from the GBP efforts and replicate them

- The project will provide useful lessons that can be adapted to other countries and regions. GloBallast Partnerships will share its experience and findings with other GEF International Waters projects involved in marine and coastal management (ICZM and LME) and will provide the necessary tools to address the ballast water issue in an integrated manner.

The project will promote dissemination and replication of its best practices and lessons learnt through the Globallast Marine Electronic Information System (GMEIS) and GloBallast Web Portal, and through specialized communication projects such as GEF IW: LEARN. The training package designed using Train-X methodology in the pilot phase will be enhanced and delivered at new locations and will be made available worldwide through the maritime training institute networks as well as through an e-learning module..

1.3 Management Arrangements

The project will be implemented by UNDP in cooperation with the International Maritime Organization (IMO). IMO is the regulatory body of the United Nations responsible for the development of rules and regulations regarding the safety and security of shipping and the prevention of pollution from ships and has provided significant "added-value" during the GloBallast Pilot Phase. As with most maritime instruments, IMO provides Secretariat support for the Ballast Water Management Convention.

A GloBallast Project task Force (GPTF) will be established and will consist of representatives of the LPCs, RCOs , UNDP/GEF, IMO, and other donors. The GPTF will approve the Project Implementation Plan, SAPs and major project outputs.

GloBallast Partnerships will be managed by a Project Coordination Unit (PCU), consisting of a Chief Technical Advisor (CTA), Technical Advisor (TA) and Administrative Assistant (AA). The PCU will be housed at IMOs London Headquarters or at a suitable alternative location, and will operate in close proximity and cooperation with the Office of Ballast Water Management, at the IMO Secretariat which will offer significant technical and administrative backstopping to the project. The PCU will consist of technical experts in ballast water management and the major responsibility of these personnel will be to deliver the technical outcomes of the project including training activities. Extensive use of technical expertise existing within PCU would ensure the much needed cost-efficiency required by the tight budgets. External expertise will be hired only to augment the technical expertise within PCU. The PCU will also assume day to day operational control of the project, and will directly liaise with counterparts at the regional and country levels, although such coordination/ administration will only take roughly 10 % of the PCU efforts.

The Regional Coordinating Organizations have been brought on board to serve as a coordinating mechanisms for the more than 40 countries directly involved and in order to organise regional workshops and seminars. In addition, the RCOs will serve as the financial conduit to the participating countries, thus providing administrative support to the PCU and enabling the PCU to effectively manage a global program with three staff.

Financial management will be through established procedures between UNDP and its co-financing partner, IMO, and between IMO and other co-funders, such as the EBRD. In turn, the IMO will enter into contractual arrangements with the regional coordinating organizations for the dispensation of funds for LPC and partner country activities. This arrangement enables GloBallast Partnerships to utilize existing financial arrangements and agreements established between IMO and some of the RCOs (for instance REMPEC in the Mediterranean & REMPEITC in the Caribbean). It also reduces some of the financial burdens on the PCU and IMO, as it

means, for example, that the RCOs will make the arrangements for the attendance at regional workshops and training programs of representatives from partnering countries.

As indicated in the earlier section describing project outcomes, outputs and activities (see Outcome 4), GloBallast Partnerships brings to the table a new dynamic partnership with industry. Building from the strong relationships made during the pilot phase, the project will include formation of the GloBallast Industry Alliance (GIA). Agreements will be established between IMO and the GIA members, governing the use of funds, promotional credit, proprietary rights, etc.

The existing cooperation with the Friends of the Earth International (FOEI), World Conservation Union (IUCN) and other major environmental organizations with an interest in ballast water and invasive species will continue and enhanced by inviting representation at the GPTF, and through joint efforts to better identify and monitor bioinvasions in the coastal and port environments. Since the GloBallast pilot phase, the World Wildlife Fund (WWF) has also indicated its support for GloBallast Partnerships.

Various international guidelines on the management of invasive species produced by GISP, IUCN and technical groups under the Convention on Biological Diversity (CBD) have adopted an integrated approach. GloBallast Partnerships will follow this trend, while retaining its technical focus on ballast water management. This will be achieved by liaising and collaborating more closely with other international groups involved in matters related to invasive aquatic species, such as GISP, IUCN, the United Nations Environment Program and its Regional Seas Programs, the Convention on Biological Diversity, the International Council for the Exploration of the Seas (ICES), the Intergovernmental Oceanographic Commission (IOC), the UN Food and Agriculture Organization (FAO) and the World Health Organization (WHO). The successful integration of GloBallast will rely on good coordination amongst the GEF, IMO and the above organizations. To ensure this, the IMO and the relevant organizations, as described above, will be involved from the outset through the implementation process and will be invited to the steering committees. Several of these organizations have endorsed the project and agreed to cooperate in various areas of common interest (see endorsement letters in part IV)

Note: in order to accord proper acknowledgement to GEF for providing funding, a GEF logo will appear on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. In addition, citation on publications funded by GEF under GloBallast Partnerships will accord proper acknowledgment to GEF. The UNDP logo will be made more prominent -- and separated from the GEF logo where possible, as UN visibility is important for security purposes.

1.3.1 Monitoring and Evaluation Plan and Budget

Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and IMO, with support from UNDP/GEF. The Logical Framework Matrix in Annex 1 provides *performance* and *impact* indicators for project implementation along with their corresponding *means of verification*. The Logical Framework Matrix in Annex B also identifies the indicators in GEF Process (P), Stress Reduction (SR) and Environmental Status (ES) framework for reporting in Annual APR/PIRs. These will form the basis on which the project's Monitoring and Evaluation system will be built.

The following sections outline the principle components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities. The project's Monitoring and Evaluation Plan will be presented and finalized as part of the Project's Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

1.3.2 Project Monitoring

Project Inception Phase

A Project Inception Workshop will be conducted with the full Global Project Task Force (GPTF) including the project team, coordinators from the Regional Coordinating Organizations (RCOs), the National Project Coordinators (NPCs) from the Lead Partner Countries (LPCs), representatives from co-financing partners within the Global Industry Alliance and NGOs. The GPTF includes representation from UNDP-GEF (HQs).

A fundamental objective of this Inception Workshop will be to assist the project team to understand and take ownership of the project's goals and objectives, as well as finalize preparation of the project's first annual work plan on the basis of the project's Log frame matrix. This will include reviewing the log frame (indicators, means of verification, assumptions), imparting additional detail as needed, and on the basis of this exercise finalize the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project.

Additionally, the purpose and objective of the Inception Workshop (IW) will be to: (i) introduce project staff with the UNDP-GEF *HQ* staff; (ii) detail the roles, support services and complementary responsibilities of UNDP-GEF vis à vis the project team; (iii) provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), Tripartite Review Meetings, as well as mid-term and final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews, and mandatory budget re-phasings.

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

Monitoring responsibilities and events

A detailed schedule of project review meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Tripartite Reviews, Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

Day to day monitoring of implementation progress will be the responsibility of the CTA based on the project's Annual Work Plan and its indicators. The Project Team will inform the UNDP- GEF IW Principal Technical Advisor (PTA) of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

The CTA and the PTA will fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the Inception Workshop. Specific targets for the first year implementation progress indicators together with their means of verification will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. The regional coordinators and Lead Partner country coordinators will also take part in the Inception Workshop in which a common vision of overall project goals will be established. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

Measurement of impact indicators related to global benefits will occur according to the schedules defined in the GPTF Inception Workshop and tentatively outlined in the indicative Impact Measurement Template at the end of this section. The measurement, of these will be undertaken through specific studies that are part of the project activities (e.g. baseline assessments in each LPC during project inception and LPC concluding reports).

Periodic monitoring of implementation progress will be undertaken by UNDP and IMO through quarterly meetings with the CTA. In addition, the PTA will meet with IMO designated officials and the project CTA during the three GPTF meetings (Inception, one interim and final meeting) and the two executive management meeting in the second and fourth years. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

Annual Monitoring will occur through the Tripartite Review (TPR). This is the highest policy-level meeting of the parties directly involved in the implementation of a project. It is envisioned that the TPRs will be held concurrent to the GPTF meetings. The first TPR will be held during the GPTF Inception Meeting, which is scheduled for the beginning of the third quarter of project year 1. The PCU (CTA) will prepare an Annual Project Report (APR) and submit it to IMO and the UNDP-GEF IW PTA at least two weeks prior to the TPR for review and comments.

The APRs will be used as one of the basic documents for discussions in the TPR meetings. The PCU (CTA) will present the APR to the TPR, highlighting policy issues and recommendations for the decision of the TPR participants. The PCU (CTA) will also inform the participants of any agreement reached by stakeholders during the APR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary.

Terminal Tripartite Review (TTPR)

The terminal tripartite review will be held during the last month of project operations. This will be additional to the GPTF terminal meeting, and will involve IMO and the UNDP-GEF PTA. The PCU (CTA) is responsible for preparing the Terminal Report and submitting it to IMO and the PTA in draft form at least two months in advance of the TTPR in order to allow review. The draft Terminal Report will serve as the basis for discussions in the TTPR. The terminal tripartite review will consider the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It will decide whether any actions are still necessary, particularly in relation to sustainability of project results, and will act as a vehicle through which lessons learnt can be captured to feed into other projects being formulated or under implementation.

The TPR has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks will be developed at the Inception Workshop, based on delivery rates, and qualitative assessments of achievements of outputs.

1.3.3 Project Reporting

The CTA in conjunction with IMO and the PTA will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a) through (f) are mandatory and strictly related to monitoring, while (g) through (h) have a broader function and the frequency and nature will be defined throughout implementation.

Inception Report (IR)

A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/ Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan will include the dates of specific workshops, activity completion deadlines, country visits from the PCU and consultants, as well as time-frames for meetings of

the GPTF. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation.

When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the GloBallast project manager and the UNDP-GEF IW PTA will review the document.

Annual Project Report (APR) & Project Implementation Review (PIR)

The (merged) APR / PIR development process will be managed by the PCU. The APR / PIRs will provide input to the GEF-UNDP IW reporting process and the Results Oriented Annual Report (ROAR), as well as forming a key input to the Tripartite Project Review. The APR / PIRs will be prepared prior to the Tripartite Project Review, to reflect progress achieved in meeting the project's Annual Work Plan and to assess performance of the project in contributing to intended outcomes through outputs and partnership work.

The format for the APR / PIRs will include the following:

- An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome
- The constraints experienced in the progress towards results and the reasons for these
- The three (at most) major constraints to achievement of results
- Annual Work Plans (AWP), UNDP Country Assistance Evaluations (CAE) and other expenditure reports (Enterprise Resource Planning (ERP) generated)
- Lessons learned
- Clear recommendations for future orientation in addressing key problems in lack of progress

The PCU will utilize the UNDP/GEF harmonized format for APR / PIR development. The APR / PIRs will be collected, reviewed and analyzed by the PTA, supported by the UNDP/GEF M&E Unit. The APR / PIRs will be discussed in the GEF Interagency Focal Area Task Forces in or around November each year. Consolidated reports by focal area will then be collated by the GEF Independent M&E Unit based on the Task Force findings.

Quarterly Progress Reports

Short reports outlining the main updates in project progress will be developed quarterly by the PCU. These reports will be submitted to IMO and the PTA, using the UNDP-developed format.

Periodic Thematic Reports

As and when called for by UNDP, UNDP-GEF or IMO, the project team will prepare Specific Thematic Reports, focusing on specific issues or areas of activity (for example, IW:LEARN "Experience Notes"). The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimize its requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparation by the project team.

Project Terminal Report

During the last three months of the project the PCU will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met or not achieved, structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities.

Technical Reports

As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports are anticipated to include:

1. Guidance Manual for Maritime IAS Status Assessments
2. Legal, Policy and Institutional Reform (LPIR) Roadmap
3. Guidance on the development of Ballast Water Management Plans (BWMPs)
4. Compliance Monitoring and Evaluation (CME) Framework for Ballast Water Management
5. Guidance on Economic Assessments for Maritime IAS
6. Draft Ballast Water Treatment Test Facility Standards
7. Ballast Water Sediment Facility Construction and Operations Guidance
8. Maritime IAS Status Assessments
9. Global Economic Impact of Marine Invasives
10. Ballast Water Management Technology: Status and Trends
11. Ballast Water Management Training Manual (general course) and E-learning module
12. GMEIS architecture and specifications

The reports will be produced by the PCU, some with the assistance of external consultants, some through Project partners (such as the GIA). These technical reports will represent the project's substantive contribution to the global effort to reduce the risk of ship-carried marine invasive species. The reports will be used to disseminate relevant information and best practices at local, national and international levels.

Project Publications

The project team will determine if any of the above Technical Reports merit formal publication, and will also (in consultation with UNDP, IMO and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format. In anticipation, Project resources have been defined and allocated for these activities.

1.3.4 Independent Evaluation

The project will be subjected to two independent external evaluations as follows:

Mid-term Evaluation

An independent Mid-Term Evaluations will be undertaken, prior to the second GPTF meeting in project year 3. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction as needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring

decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings from the review will be considered at the GPTF meeting and incorporated as recommendations for enhanced implementation during the last 2.5 years of the project. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the DPD. The Terms of Reference for the Mid-term evaluation will be prepared by GloBallast based on guidance from the PTA and IMO. In line with recent GEF IW policy, MTE and TE's will be required to generate one or more GEF IW "Experience Notes" for broad dissemination through IW:LEARN.

Final Evaluation

An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and final GPTF meeting. It will focus on the same issues as the combined mid-term evaluations. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation will also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by GloBallast based on guidance from the PTA and IMO. The Final Evaluation will also generate one or more IW "Experience Notes".

1.3.5 Learning and Knowledge Sharing

Results from the project will be disseminated within and beyond the project intervention zone through the IMO publications office, as well as through the GEF IW:LEARN network. In addition:

- The CTA plus two additional GBP government participants will attend the GEF IW biennial meetings.
- Project team members will participate, as relevant and appropriate, in UNDP/GEF sponsored networks, organized for Senior Personnel, working on projects that share common characteristics.
- Project team members will participate in the biennial Ballast Water R&D symposiums held by the Government of Singapore. The project will also be represented at the regional seas and large marine ecosystem member meeting. In addition, other scientific and policy-based meetings and networks will be accessed, where a clear project benefit to project implementation though lessons learned can be realised.

The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. The effort to identify and analyze lessons learned is an on- going process, and represents one of the project's central contributions. As part of the preparations for the 2nd through 4th GPTF meetings, the PCU will develop a lessons learned report, using the UNDP/GEF approved format. The project budget includes sufficient resources for these activities.

TABLE 1.3.4 (1): INDICATIVE MONITORING AND EVALUATION WORK PLAN AND CORRESPONDING BUDGET

Type of M&E activity	**Responsible Parties**	**Budget US$** *Excluding project team Staff time*	**Time frame**
Inception Meeting	▪ Chief Technical Advisor ▪ UNDP GEF IW PTA ▪ Global Project Task Force	$50,000	3rd Q, Yr 1

Inception Report	▪ Project Team ▪ UNDP GEF IW PTA	None	Within 1 month following IM
Measurement of Means of Verification for Project Purpose Indicators	CTA will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members	$20,000 (estimate)	Program to be finalized in Inception Phase and IM. Measurements at inception, mid term and project conclusion
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	▪ Oversight by Project GEF Technical Advisor and Project Coordinator ▪ Measurements by IMO and local IAs	To be determined as part of the Annual Work Plan's preparation. Indicative cost: $10,000	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	▪ Project Team ▪ UNDP GEF IW PTA	None	Annually
TPR and TPR report	▪ Government Counterparts ▪ Project team ▪ UNDP GEF IW PTA	None	Annually, upon receipt of APR
Global Project Task Force Meetings	▪ CTA ▪ UNDP GEF IW PTA ▪ Global Project Task Force	$150,000	3rd Q, yr1 (Inception meeting) then 4th Q, yr. 2; 2nd Q yr 4; and 4th Q, yr. 5 (final meeting)
Periodic status reports	▪ Project team	$5,000	To be determined by Project team and UNDP GEF IW TA
Technical reports	▪ Project team ▪ Hired consultants as needed	$15,000	To be determined by Project Team and UNDP GEF IW TA
Mid-term External Evaluations (1)	▪ Project team ▪ UNDP GEF IW PTA ▪ External Consultants (i.e. evaluation team)	$60,000	2nd quarter year 3 .
Final External Evaluation	▪ Project team, ▪ UNDP GEF IW PTA ▪ External Consultants (i.e. evaluation team)	$80,000	At the end of project implementation
Terminal Report	▪ Project team ▪ UNDP-CO ▪ External Consultant	None	3rd quarter year 5
Lessons learned	▪ Project team	None	Yearly

	▪ UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, etc)		
Audit	▪ UNDP-CO ▪ Project team	$10,000 (average $2000 per year – 5 years)	Yearly
Visits to field sites	▪ UNDP GEF IW PTA ▪ Government representatives	$10,000 (average one visit per year)	Yearly
TOTAL INDICATIVE COST *Excluding project team staff time and UNDP staff and travel expenses		US$ 410,000 *	

TABLE 1.3.4 (2): IMPACT MEASUREMENT

Key Impact Indicator	Target (Year 5)	Means of Verification	Sampling freq.	Location
1	The project team at global, regional and local levels is effectively coordinating the project, with objectives met, and outputs completed in time and within budget	▪ Annual APR / PIR reviews ▪ Annual Executive Committee / GPTF meetings ▪ Satisfactory / Highly satisfactory ratings on all key activities and outcomes during mid term and terminal evaluations,	Annual	PCU, IMO HQ
2	At project conclusion, each LPC is implementing an effective program of ballast water management in line with the IMO Convention and any Regional Strategies. During the project, each LPC is sharing the lessons learned with other countries in the region	▪ All LPCs have National Task Forces and approved NBWMS in place, with revised legal structures, improved CME systems and a cadre of trained experts ▪ Regional Task Forces and Regional Action Plans are in place in each cooperating region, with planned workshops and meetings carried out as scheduled ▪ Regional Coordinating Organizations are facilitating the participation of other partnering countries in capacity building activities hosted by LPCs	Annual	LPCs in the priority regions
3	Sufficient information is available by the end of the project for LPCs to implement risk-based ballast water management systems. All LMEs and regional Seas programs globally have raised ballast water management as an important coastal zone concern, with their members taking steps to address the issue. Momentum on GBM is sustained in the GB pilot regions.	▪ GMEIS system is operational, ▪ Web sites are in place in each of the 13 LPCs. ▪ Newsletters are published. ▪ The GMEIS web portal includes information showing ballast water protocols and strategies in each LME and Regional Sea globally.	Annual	PCU, and LPCs in the priority regions
4	Cost effective technology solutions and testing standards are developed, tested and promoted through a successful	▪ A Global Industry Alliance is launched,	Annual	PCU & GIA

	partnership with industry	▪ Testing facility standards are developed, ▪ Sediment facility options have been piloted, ▪ At least 2 R&D symposiums held, ▪ BWM Innovation Fund gets launched and supports at least one set of innovative projects		

2 STRATEGIC RESULTS FRAMEWORK AND GEF INCREMENT

2.1 Incremental Cost Analysis

2.1.1 Project background

As noted in the Project Introduction, GloBallast Partnerships will assist developing countries to reduce the risk of aquatic bio-invasions mediated by ships' ballast water and sediments and will expand and build on a successfully completed GEF-UNDP-IMO pilot project (GloBallast Project). With the help of tools developed and lessons learned from the pilot project, the GloBallast Partnerships project will expand government and port management capacities, instigate legal, policy and institutional reforms at the country level, develop mechanisms for sustainability, and drive regional coordination and cooperation. The project will spur global efforts to design and test technology solutions, and will enhance global knowledge management and marine electronic communications to address the issue. The partnership effort is three-tiered, involving global, regional and country-specific partners, representing government, industry and non-governmental organizations. Private sector participation will be achieved through establishing a GloBallast Industry Alliance with partners from major maritime companies. 13 countries, from 6 high priority regions, have agreed to take a lead partnering role focusing especially on legal, policy and institutional reform. All told, more than 70 countries in 14 regions across the globe will participate, including the six pilot countries whose expertise and capacities will be drawn on for this global scaling-up effort

2.1.2 Incremental Cost Assessment

The Incremental Cost Analysis (ICA) couples the planned activities of the project, their expected costs, and planned project financing. As indicated in the following narrative and tables, the project envisions leveraging US $5.64 million in GEF funding to achieve a total incremental financing of $23.34 million. There is also a significant amount of parallel financing that greatly supports the GloBallast effort, which is included in the attached endorsement letters but has not been identified as direct co-financing. This includes $7.5 million that IMO will spend for MEPC and GESAMP meetings. Also considered parallel but not co-finance funding is roughly $17.7 million that private sector partners have identified they will spend on research and development for ballast water treatment and management technologies. Factoring just the direct co-financing, the ratio of co-financing to GEF contribution is 2.8. Taking into account the parallel financing, which the GloBallast pilot effort made possible, the total figure escalates to $48.5 million, a ratio of 8 dollars raised for every 1 dollar of GEF funds.

Baseline

A financial baseline for the project has been set at $ 922 million, over 5 years, established using a 'business as usual' scenario where most countries are tending to their ship-related environmental management activities with little effective regard for, or progress in, addressing ballast water-borne invasive species issues. The baseline estimate adds up expenditures by Governments to manage their marine environmental protection efforts, and then estimates the percentage devoted to dealing with ship-based pollution sources: spills, wastewater, solid wastes, air pollution etc., but not ballast water. Ballast water management is omitted because up until recently, with passage of the IMO BWM Convention, there was little attention given to the environmental consequences of ships' ballast, especially amongst the developing countries that are the focus of this project. The lead partnering countries for GloBallast Partnerships have not yet developed and/or strengthened their legal, policy and institutional structures for ballast water management. Consequently, all of the government actions planned, and co-financing offered, are considered additional measures.

Developing a precise figure for the baseline funding of relevant marine environmental expenditures in the more than 40 countries involved in GloBallast Partnerships is exceedingly difficult, therefore a number of proxies, estimates and interpolations have been used to establish a rough estimate.

The following table (2.1.2 (1)) sets out baseline figures for GloBallast Partnerships, reaching US $922 million over the expected five year period of the project. The figures are based on information received from government sources in representative economies of GloBallast partner countries. National expenditures for general funding of marine environmental protection are aggregated. The figures also utilize GDP figures taken from theWorld Development Indicators Database, (World Bank, 1 July 2006). It is important to note that the following assumptions have been used to derive these figures:

- The cost of response to marine pollution is roughly proportional to the percentage of contaminants entering the sea from various sources. There are some clear indications (based on previous studies) that pollution from maritime traffic contribute to roughly about 15% of the total pollution load
- Larger economies spend proportionately higher percentage of their GDP on environmental protection, including marine environmental protection
- % of GDP can be used as an approximate guideline to assess national expenditure
- Different levels of % GDP were assigned to different groups of economies, based on some of the representative values obtained from certain governments such as India and Iran
- Marine environmental protection in general includes *inter alia* - pollution prevention and response costs for maritime traffic related pollution, coastal zone protection, and infrastructure such as port reception facilities
- Expenditure by Governments to prevent ship-based pollution of marine environment (core thematic baseline for GBP) is estimated based on the assumption that the proportion of this expenditure is similar to the proportion of contaminant loading from maritime traffic to the land-based pollution: around 12% on average (reference GESAMP report 1990). Furthermore, a tapering proportion (15% to 8%) was used to take into account the variations in shipping trade (trade in stronger economies will be higher than those of others)

Table 2.1.2 (1): Aggregate Baseline Expenditures Estimate

No.	Partner Countries (LPC, PC and GB Pilots)	Total GDP (2005) (in Million US$)	Approximate Expenditure on Marine Environment Protection as Percentage of GDP (%)	Approximate Expenditure on Marine Environment Protection in total (in million US$)	Approximate percentage of expenditure on ship-based pollution prevention (%)	Approximate expenditure on ship-based pollution prevention (in million US$)
1	China	2228862	0.02	445.77	15	66.87
2	Brazil	794098	0.02	158.82	15	23.82
3	India	785468	0.02	160.00	15	24.00
4	Mexico	768438	0.02	153.69	15	23.05
5	Turkey	363300	0.02	72.66	15	10.90
6	South Africa	240152	0.02	48.03	15	7.20
7	Iran, Islamic Rep.	196343	0.01	20.00	12	2.40
8	Argentina	183309	0.01	18.33	12	2.20
9	Venezuela, RB	138857	0.01	13.89	12	1.67
10	Colombia	122309	0.01	12.23	12	1.47
11	Chile	115248	0.01	11.52	12	1.38
12	Algeria	102257	0.01	10.23	12	1.23

13	Egypt, Arab Rep.	89336	0.008	7.15	10	0.71
14	Ukraine	81664	0.008	6.53	10	0.65
15	Peru	78431	0.008	6.27	10	0.63
16	Morocco	51745	0.008	4.14	10	0.41
17	Libya	38756	0.008	3.10	10	0.31
18	Croatia	37412	0.008	2.99	10	0.30
19	Ecuador	36244	0.008	2.90	10	0.29
20	Guatemala	31683	0.005	1.58	8	0.13
21	Angola	28038	0.005	1.40	8	0.11
22	Sudan	27699	0.005	1.38	8	0.11
23	Costa Rica	19432	0.005	0.97	8	0.08
24	Côte d'Ivoire	16055	0.005	0.80	8	0.06
25	Panama	15467	0.005	0.77	8	0.06
26	Trinidad and Tobago	14762	0.005	0.74	8	0.06
27	Yemen, Rep.	14452	0.005	0.72	8	0.06
28	Jordan	12861	0.005	0.64	8	0.05
29	Ghana	10695	0.005	0.53	8	0.04
30	Jamaica	9696	0.002	0.19	7	0.01
31	Bahamas, The	5502	0.002	0.11	7	0.01
32	Benin	4287	0.002	0.09	7	0.01
33	Haiti	4245	0.002	0.08	7	0.01
34	Barbados	2976	0.002	0.06	7	0.00
35	Guinea	2689	0.002	0.05	7	0.00
36	Sierra Leone	1193	0.002	0.02	7	0.00
37	Belize	1105	0.002	0.02	7	0.00
38	Antigua and Barbuda	905	0.002	0.02	7	0.00
39	Djibouti	702	0.002	0.01	7	0.00
40	Dominica	279	0.002	0.01	7	0.00
41	São Tomé and Principe	57	0.002	0.00	7	0.00
Total baseline for 2005 (in million US$)						**170.31**
Approximate total projected core thematic baseline for GBP partner countries (2007-2011), assuming an overall 2% annual growth in expenditure (in million US$)						**$922.10**

2.1.3 Global Environmental Objective

The overall goal of the GloBallast Partnership Project is to reduce the risks and impacts of marine bio-invasions caused by international shipping and the specific objective of GBP is to assist vulnerable developing states and regions to implement sustainable, risk-based mechanisms for the management and control of ships' ballast water and sediments in order to minimize the adverse impacts of aquatic invasive species transferred by ships.

GloBallast Partnerships will provide a programmatic framework for the sustainable replication of ballast water management and control measures, ensuring that maximum benefits accrue from the foundation work achieved in the pilot phase. The aims and objectives of GloBallast Partnerships focus on national policy and legal reforms in targeted developing countries and an emphasis on integrated management. The approach will include:

- Building on the achievements and momentum, and utilising the capacity and talent generated by the pilot phase.
- Replication of best-practices and technical activities in newly identified beneficiary countries with the view to stimulate policy reforms at national level.

- Supporting specially vulnerable and/or environmentally highly sensitive countries in their efforts to enact legal reforms to implement the Ballast Water Management Convention.
- Working towards advanced integration through other interested structures, mechanisms and programs, including where optimal, GEF-IW LME projects and UNEP Regional Seas.
- Promoting collaboration to facilitate the successful transfer of new technologies from developed to developing countries.

2.1.4 Alternative

With GEF providing its catalytic support, the alternative is a global, regional and country-based programmatic framework for the sustainable replication of ballast water management and control measures, ensuring that maximum benefits accrue from the foundation work achieved in the pilot phase.

All of the government actions planned, and co-financing offered under GloBallast Partnerships are considered additional, incremental measures. Likewise, a portion of the co-financing support from industry, for research and development, the testing of new equipment and solutions, and the holding of R&D symposia, are considered additional activities, with an expectation that GloBallast Partnerships will help set the legal, policy and institutional framework for countries that will facilitate technology adoption and diffusion among the shipping industry worldwide, in response to the requirements and timetables set out in the BWM Convention. All told, the incremental financing building from the GloBallast partnerships effort should reach US $24.6 million.

Support for appropriate national institutional arrangements will be granted and regional mechanisms will be used as catalysts for supporting national policy reforms. Generic Compliance Monitoring and Enforcement (CME) systems, which could not be developed due to the delay in the adoption of the Ballast Water Management Convention, will be prepared in accordance with the requirements of the IMO instrument. Formalized communication systems through identified lead agencies will be developed and early warning systems for invasions and outbreaks will be established. Priority software and hardware will be designed and direct logistic support from the more advanced countries will be sought. Some incremental investments will be supported by the project to support technology development for ballast water treatment and management. Standardised protocols and methodology for conducting port biological surveys and risk assessments will be provided with direct assistance from the capacity built in the pilot phase.

Specific training on ballast water management and control will be provided, based on the training courses developed during the pilot phase, with emphasis on various responsibilities under the new Ballast Water Management Convention. Sustainable financial and institutional arrangements for the long-term management of ships' ballast water will be established, including the mobilization of public and private sector funding.

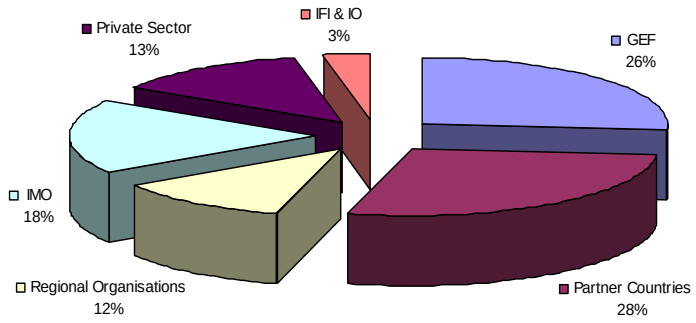
The global information clearing house function established during the pilot phase will be continued and further strengthened, in support of a uniform approach. Strategies to integrate the ballast water programs with existing marine and coastal management databases and maritime information systems will be developed and implemented.

In essence, the proposed GEF project will build on the findings, institutional settings and capacity developed during the pilot phase. The results of this GEF intervention should include a measurable reduction in aquatic bio-invasions globally, with a significant mitigation of the detrimental, sometimes devastating, effects of ballast water transfers, better protection of marine and coastal ecosystems and habitats and conservation of biodiversity.

The following table sets out the anticipated financing for GloBallast Partnerships by GEF and other partners:

Table 2.1.4 (1): Anticipated incremental financing

	Total GEF funding		**$ 6,387,840**
A:	PDFB:	699,840	
	Full Project	5,688,000	
	Total Co-funding by partnering countries		**$ 6,654,629**
B:	Cash Contribution		
	In-kind contribution	6,654,629	
	Total Co-funding by regional coordinating organizations		**$ 2,832,670**
C:	Cash Contribution	304,000	
	In-kind contribution	2,528,670	
	Total Co-funding by IMO		**$ 4,318,800**
D:	Cash Contribution	914,000	
	In-kind contribution	11,773,000	
	Total Co-funding by Private Sector		**$3,133,340**
E:	Cash Contribution	1,000,000	
	In-kind contribution	19,533,400	
	Total Co-funding by Financial Institutions		**$ 762,500**
F:	Cash Contribution	362,500	
	In-kind contribution	400,000	
TOTAL INCREMENT			**$ 24,089,779**
(TOTAL BASELINE)			**($922,100,000)**
TOTAL ALTERNATIVE			**$946,189,779**



2.1.5 Incremental Cost Matrix

In the following matrix is set out each of the four anticipated project outcomes (components) set against incremental costs, and providing a narrative description. As noted in the baseline discussion above, the baseline is established generally for shipping-based pollution abatement and does not include specific actions with respect to ballast water management (given little or no expenditures to date by the participating countries and stakeholders to deal with this environmental problem). Consequently, only the alternative / incremental costs are broken down by component. The financial figures provided are further detailed in the following table 2.1.5 (1): Incremental Cost Co-financing Details. The subsequent table 2.1.5 (2) provides a detailed breakout of how the IMO co-financing figure ($12, 687, 000) has been calculated.

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Component	Baseline	Increment	Alternative
Overall Objective: **To assist vulnerable developing countries to implement sustainable, risk-based mechanisms for the management and control of ships' ballast water and sediments in order to minimize the adverse impacts of aquatic invasive species transferred by ships**	**$922,100,000**	GEF: 6,387,840* IMO: 4,318,800 GIA: 3,133,340 RCO: 2,832,670 LPC: 6,654,629 IUCN: 400,000 EBRD: 362,500 **Total: 24,089,779** (* includes GEF PDF-b support: $699,840)	Total Alternative: **$946,141,779**
Explanatory note: A financial baseline for the project has been set at $ 922 million, over 5 years, established using a 'business as usual' scenario where most countries are tending to their ship-related environmental management activities with little effective regard for, or progress in, addressing ballast water-borne invasive species issues. The baseline estimate adds up expenditures by Governments to manage their marine environmental protection efforts, and then estimates the percentage devoted to dealing with ship-based pollution sources: spills, wastewater, solid wastes, air pollution etc., but not ballast water. Ballast water management is omitted because up until recently, with passage of the IMO BWM Convention, there was little attention given to the environmental consequences of ships' ballast, especially amongst the developing countries that are the focus of this project. Given that the baseline does not figure in ballast water management, all alternative funding, from GEF and other sources, comprise the increment. The $922 million baseline (over 5 years) is not further broken down in this chart since it is not directly relevant to the carrying out of the four project components. The alternative scenario includes financing from GEF, IMO, the regional organizations (RCO) and lead partner countries (LPC), and from industry (GloBallast Industry Alliance –GIA).			
Outcome 1: **Learning, evaluation and adaptive management increased**		GEF: 1,265,000 RCO: 1,154,800 LPC: 1,304,500 Total: **3,724,300**	
Explanatory note: This component includes the various costs associated with managing the GloBallast project at the international regional and country levels. The GEF portion factors in the costs for staffing the PCU, (including Chief Technical Advisor (P5), a Technical Advisor (P3), and an Administrative Assistant (G6)), as well as carrying out monitoring and evaluation activities, and attending international conferences. Nominal GEF support is included to bolster regional and country			

Component	Baseline	Increment	Alternative
funding for the convening of task forces and coordinating with the PCU. The RCOs will each identify a coordinator responsible for GBP activities during the 5 year project cycle; and the LPCs each will appoint a National Focal Point (NFP) representing the Government's Lead Agency for ballast water management and will identify a National Coordinator (NC). The regional and country cost calculations have been developed based upon the co-financing letters provided by each of the RCOs and LPCs. In addition, a $362,500 cost borne by the European Bank of Reconstruction and Development (EBRD) has been added for the purposes of holding Ballast Water Management Training Workshops for key government stakeholders in three additional regions (Black, Baltic and Caspian Seas).			
Outcome 2: **BWM Strategies in place, with legal, policy and institutional reforms developed, implemented and sustained at national level**		GEF: 2,995,000 IMO: 3,582,400 EBRD: 362,500 RCO: 946,070 LPC: 3,070,150 Total: **10,956,120**	
Explanatory note: The project is designed to assist all of the Partner countries to develop, implement and enforce legal, policy and institutional reforms (LPIR). The costs associated with this outcome relate to the preparation of guidance, the convening of training workshops, and direct assistance to countries as they reform their laws, policies and institutions, develop national ballast water management strategies, and implement compliance monitoring and enforcement programs. Most of the IMO co-financing is included for the carrying out of activities within this outcome 2 ($12.1 m out of a total co-financing contribution of $12.6m). The IMO co-financing estimates have been derived based on IMO ongoing and planned activities, as stipulated in the table in Annex G (see "Details of IMO Incremental Co-Financing towards Achieving the Objectives of GloBallast Partnership Project in the next five years (2007-2011)"). For instance, the IMO Ballast water Management Office and the IMO Marine Environmental Protection Committee (MEPC) will have regular meetings IMO HQ in London to discuss the BWM Convention and to develop necessary guidelines. Outcome 2 includes an extensive training program, based around the *modular* training course devised and successfully run during the GloBallast pilot phase. A total of 9 training programs will be carried out (see output 2.2). GEF financing will be used for 4 Training Programs (CPPS, MED, PERSGA & SPREP). One Training Program, in the WACAF region, will be funded jointly by IMO and the Guinea Current LME; one Training Program in the CAR region will be funded by IMO using ITCP funding. The three additional training programs will be financed by EBRD for stakeholders in the Black, Baltic and Caspian Seas.			
Outcome 3: **Knowledge management tools and marine monitoring systems are effectively utilized to expand global public awareness and stakeholder support, improve understanding of ballast water impacts on marine ecology and enhance maritime sector communications**		GEF: 1,198,000 IMO: 736,400 RCO: 731,800 IUCN 400,000 LPC: 1,964,979 Total: **5,031,179**	

Component	Baseline	Increment	Alternative
Explanatory note: The knowledge management outcome is subdivided into three discreet outputs. The first involves efforts to build a better understanding of the ecological impacts of bio-invasions and likely vectors. This involves continuation, refinement and expansion of the GB pilot phase port baseline survey work. The second output will establish the GloBallast Marine Electronic Information System (GMEIS), designed to provide useful data and information to various stakeholders, including the shipping industry using electronic / internet formats and platforms. The third output involves continuing to build on the GloBallast public awareness success by providing information on ballast water management for public consumption, using especially print and video. The associated costs under the outcome stem primarily from strategy development, training, and tech support activities, with very limited software development and supply. Project participants at the national and regional levels are expected to cover hardware costs. The GEF increment will be utilized throughout each of the planned outputs, and most notably to conceptualize and plan for the Global Marine Electronic Information System (GMEIS). Some GEF support will help the LPC to develop their dedicated BW web sites. Within outcome 3, LPC country port environmental managers and taxonomists will get trained on how to carry out port baseline surveys, but it will be the responsibility of the LPCs to identify additional funding for the actual carrying out of baseline surveys. 6 workshops are planned, hosted by one LPC each from CAR, PERSGA, CPPS and WACAF and SPREP. Each of the workshops will include approximately 20 participants (including other Partner countries in the region). For the Mediterranean region, funding will be provided by the SAFEMED Project, which is being implemented by the RCO, REMPEC. IMO's co-financing for this outcome will underwrite most of the costs of developing and disseminating the GloBallast quarterly newsletter.			
Outcome 4: Public-private partnerships developed to spur the development of cost effective ballast water technology solutions		GEF: 230,000 LPCs 315,000 Industry: 3,133,340 Total: **3,678,340**	
Explanatory note: The technology development effort is, and should be, driven by industry. The costs associated with the development of cost-effective treatment technologies for ballast water management are properly addressed through market forces, especially as the market for designing, testing, installing and operating on-board ballast water treatment equipment may reach $15 billion through the next 15 years, taking into consideration 40,000 international ships and almost 1000 new ship constructions per year. The $3,133,340 in co-financing from industry is of two types. It includes cash contributions of $ 1 million from the founding partners of the GloBallast Industry Alliance (GIA) (see co-finance commitment letters Annex H). The remaining $2,133,340 represents 10% of what industry partners have identified as R&D investments they will make to design and test ballast water treatment technologies. It is anticipated that the membership of the GIA will expand during the project. Initial projections are achieving between US $ 3 to 5 million in direct cash contribution co-financing from industry. The $1 million indicated to date has been pledged in writing (Annex H). The nominal GEF funding within this component ($230,000) provides technical oversight of GIA activities by the PCU, including nominal support to the GIA innovation fund (4.4.1), and participation in industry roundtables and R&D forums (4.4.2). The GEF contribution will also help to establish standards for testing facilities, to ensure global consistency by the national testing facilities and agencies that are approving treatment technologies.			

Incremental Cost Co-financing Details

The following table provides an accounting of the co-financing contribution that has been indicated by GloBallast Partners. The amounts given were provided by partners along with their project endorsement. In addition to the output and activity columns that correspond to the designations in the Logical Framework and work plan there is also a column marked as linked. The co-sponsors filled in their financial tables using an early draft of the Logical Framework that included a different numbering on the project components (outcomes, outputs and activities). The linked column therefore aligns the sponsor financing tables with the DPD.

Table 2.1.5 (1) Incremental Cost Co-financing Details

Component 1, LPCs			**Argentina**	**Chile**	**Colombia**	**Venezuela**	**Jamaica**	**Trinidad & Tobago**	**Bahamas**	**Turkey**	**Croatia**	**Egypt**	**Yemen**	**Sudan**	**Jordan**	**Ghana**	**LPC Total**
output	***activity***	***Linked***															
1.1	**1.1.1**																
	1.1.2																
	1.1.3	**1.5**															
	1.1.4	**1.6**															
	1.1.5	**1.7 (a), 1.7 (b)**	**65,000**	**58,000**	**10,000**	**100,000**	**52,500**	**55,000**	**101,000**	**20,000**	**64,000**	**50,000**	**50,000**	**50,000**	**50,000**	**180,000**	**905500**
	1.1.6	**1.8**		**15,000**	**18,000**	**80,000**	**39,000**	**15,000**	**132,000**		**15,000**	**15,000**	**15,000**	**15,000**	**15,000**	**10,000**	**399000**
	1.1.7	**10.4c**															
1.2	**1.2.1**																
	1.2.2																
	1.2.3																
1.3	**1.3.1**																
Component 1 LPC Subtotals			**15,000**	**73,000**	**28,000**	**180,000**	**91,500**	**70,000**	**233,000**	**20,000**	**79,000**	**65,000**	**65,000**	**65,000**	**65,000**	**190,000**	**1,304,500**

Component 2, LPCs			**Argentina**	**Chile**	**Colombia**	**Venezuela**	**Jamaica**	**Trinidad & Tobago**	**Bahamas**	**Turkey**	**Croatia**	**Egypt**	**Yemen**	**Sudan**	**Jordan**	**Ghana**	**LPC Total**
output	***activity***	***Linked***															
2.1	**2.1.1**																**0**
	2.1.2	**5.3**	**105,000**	**67,000**		**30,000**				**20,000**	**32,500**					**12,000**	**266500**
2.2	**2.2.1**																**0**
	2.2.2	**2.2**	**12,000**	**12,000**	**3,600**	**200,000**	**8,000**	**12,000**	**6,000**		**12,000**	**12,000**	**12,000**	**12,000**	**12,000**	**24,000**	**337600**
2.3	**2.3.1**																**0**
	2.3.2	**9.5**							**6,000**	**20,000**	**4,000**					**8,000**	**38000**
	2.3.3																**0**
2.4	**2.4.1**																**0**
	2.4.2	**2.3 and 3.2**	**172,500**	**83,400**	**0**	**10,000**	**0**	**0**	**0**	**30,000**	**22,500**	**0**	**0**		**0**	**24,000**	**342400**
	2.4.3	**3.3**	**33,000**	**15,000**	**21,000**		**40,500**	**33,000**	**8,000**		**33,000**	**33,000**	**33,000**		**33,000**	**5,400**	**287900**
	2.4.4	**3.4**	**51,000**	**55,000**	**33,000**		**26,000**	**63,000**	**12,000**	**5,000**	**63,000**	**63,000**	**63,000**	**63,000**	**63,000**	**9,000**	**569000**
2.5	**2.5.1**																**0**
	2.5.2	**4.2**	**57,500**	**27,800**						**20,000**	**7,500**					**8,000**	**120800**
	2.5.3	**4.3**	**31,000**	**51,000**	**22,000**		**62,000**	**51,000**	**3,200**	**10,000**	**51,000**	**51,000**	**51,000**	**51,000**	**51,000**	**36,000**	**521200**
2.6	**2.6.1**																**0**
	2.6.2	**5.4**	**18,000**	**11,400**	**7,150**	**150,000**	**2,500**	**7,000**			**7,000**	**6,500**	**6,500**		**6,500**	**12,000**	**234550**
2.7	**2.7.1**																**0**
	2.7.2	**7.4**	**57,500**	**27,800**						**10,000**	**7,500**					**12,000**	**114800**
	2.7.3	**7.5**	**10,000**	**10,000**	**14,950**		**9,000**	**10,000**	**17,000**		**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**3,000**	**123950**
	2.7.4	**7.6**	**10,000**	**10,000**	**14,950**		**4,500**	**10,000**	**12,000**		**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**2,000**	**113450**
Component 2 LPC Subtotals			**557,500**	**370,400**	**116,650**	**390,000**	**152,500**	**186,000**	**64,200**	**115,000**	**260,000**	**185,500**	**185,500**	**146,000**	**185,500**	**155,400**	**3070,150**

Component 3, LPCs			Argentina	Chile	Colombia	Venezuela	Jamaica	Trinidad & Tobago	Bahamas	Turkey	Croatia	Egypt	Yemen	Sudan	Jordan	Ghana	LPC Total
output	*activity*	*Linked*															
3.1	3.1.1																
	3.1.2	9.3	75,000	75,000		30,000				30,000						12,000	222,000
	3.1.3	9.2						50,000		5,000							55,000
	3.1.4	9.6														12,000	1,200
	3.1.5	9.4 / Sp. P	60,000	50,000	49979	300,000	70,000	60,000	53,200	65,000	70,000	60,000	60,000	60,000	60,000	80,000	1,098,179
	3.1.6																
3.2	3.2.1																
	3.2.2																
	3.2.3																
	3.2.4	8.3	57,500	27,800		10,000				20,000	7,500					10,000	132,800
	3.2.5	8.4	27,000	27,000	29,000		25,000	27,000	6,000	40,000	27,000	27,000	27,000	27,000	27,000	32,000	348,000
	3.2.6																
	3.2.7	10.4		4,800					2,400	5,000						5,000	17,200
3.3	3.3.1																
	3.3.2																
	3.3.3	10.2 + Sp. P						20,000	54,800							5,000	79,800
Component 3 LPC SubTotals			219,500	184,600	78,979	340,000	95,000	157,000	116,400	165,000	104,500	87,000	87,000	87,000	87,000	156,000	1,964,979

Component 4, LPCs			Argentina	Chile	Colombia	Venezuela	Jamaica	Trinidad & Tobago	Bahamas	Turkey	Croatia	Egypt	Yemen	Sudan	Jordan	Ghana	LPC Total
output	*activity*	*Linked*															
4.1	4.1.1																
	4.1.2																
4.2	4.2.1																
	4.2.2																
	4.2.3																
4.3	4.3.1																
	4.3.2																
	4.3.3																
4.4	4.4.1 a																
	4.4.1 b					200,000			5,000	110,000							315,000
	4.4.2																
Component 4, LPC subtotals						200,000			5,000	110,000							315,000
Total LPC Co-financing			857,000	628,000	223,629	1,110,000	339,000	413,000	418,600	410,000	443,500	337,500	337,500	298,000	337,500	501,400	6,654,629

Component 1, RCO's and other co-sponsors			CPPS	REMPEITC	REMPEC	PERSGA	GCLME	SPREP	ROPME	RCO Total	IUCN	IMO	EBRD	GIA	Total
output	*activity*	*Linked*													
1.1	1.1.1														0
	1.1.2														0
	1.1.3	1.5	64,900	144,000	225,000	137,000		150,000		720900					720,900
	1.1.4	1.6	28,900			120,000		150,000		298900					298,900
	1.1.5	1.7 (a), 1.7 (b)													
	1.1.6	1.8													0
	1.1.7	10.4c	5,000	10,000		10,000		110,000		135000					135,000
1.2	1.2.1														0
	1.2.2														0
	1.2.3														0
1.3	1.3.1														0
Component 1 RCO + subtotals			98,800	154,000	225,000	267,000		410,000		1,154,800		0	0	0	2,309,600

Component 2, RCO's and other co-sponsors			CPPS	REMPEITC	REMPEC	PERSGA	GCLME	SPREP	ROPME	RCO Total	IUCN	IMO	EBRD	GIA	Total
output	*activity*	*Linked*													
2.1	2.1.1														40,000
	2.1.2	5.3	6,000	98,000		93,750		102,500		300250		348,000	362,500		1,277,250
2.2	2.2.1											530,250			2,893,250
	2.2.2	2.2													337,600
2.3	2.3.1														0
	2.3.2	9.5													38,000
	2.3.3														0
2.4	2.4.1											1,136,650			2,943,250
	2.4.2	2.3 and 3.2	30,320	189,600	0	172,500		0	0	392420		0	0	0	734,820
	2.4.3	3.3													
	2.4.4	3.4													
2.5	2.5.1											943250			2,943,250
	2.5.2	4.2	6,000	63,200		57,500				126700					247,500
	2.5.3	4.3													
2.6	2.6.1											80,000			50,000
	2.6.2	5.4													
2.7	2.7.1											544,250			2,943,250
	2.7.2	7.4	6,000	63,200		57,500				126700					241,500

	2.7.3	7.5													
	2.7.4	7.6													
Component 2 RCO + subtotals			**48,320**	**414,000**	**0**	**381,250**		**102,500**		**946,070**		**3,582,400**	**362,500**		**5837,040**

Component 3			**CPPS**	**REMPEITC**	**REMPEC**	**PERSGA**	**GCLME**	**SPREP**	**ROPME**	**RCO Total**	**IUCN**	**IMO**	**EBRD**	**GIA**	**Total**
output	***activity***	***Linked***													
3.1	**3.1.1**														**0**
	3.1.2	**9.3**	**6,000**	**80,600**	**80,000**		**75,000**	**79,500**		**321100**					**321100**
	3.1.3	**9.2**	**9,000**	**24,000**			**27,000**			**60000**					**60000**
	3.1.4	**9.6**									**200000**				**0**
	3.1.5	**9.4 / Sp. P**									**200000**				**0**
	3.1.6														**0**
3.2	**3.2.1**														**0**
	3.2.2											**35000**			**0**
	3.2.3														**0**
	3.2.4	**8.3**	**6,000**	**63,200**			**57,500**			**126700**		**40000**			**126700**
	3.2.5	**8.4**													**0**
	3.2.6											**40400**			**0**
	3.2.7	**10.4**													**0**
3.3	**3.3.1**								**224,000**	**224000**					**224000**
	3.3.2														**0**
	3.3.3	**10.2 + Sp. P**										**566000**			**566000**
Component 3 RCO + subtotals			**21000**	**167800**	**80000**		**159500**	**79500**	**224000**	**731800**	**400000**	**736400**	**0**	**0**	**2,600000**

Component 4			**CPPS**	**REMPEITC**	**REMPEC**	**PERSGA**	**GCLME**	**SPREP**	**ROPME**	**RCO Total**	**IUCN**	**IMO**	**EBRD**	**GIA**	**Total**
output	***activity***	***Linked***													
4.1	**4.1.1**													**45,000**	**45,000**
	4.1.2													**30,000**	**30,000**
4.2	**4.2.1**														**0**
	4.2.2													**40,000**	**40,000**
	4.2.3														**0**
4.3	**4.3.1**													**20,000**	**20,000**
	4.3.2													**80,000**	**80,000**
	4.3.3													**10,000**	**10,000**

4.4	**4.4.1 a**													**1,000,000**	**1,000,000**
	4.4.1 b													**2,023,340**	**2,023,340**
	4.4.2													**200,000**	**200,000**
Component 4 RCO + subtotals														**3,448,340**	**3,448,340**
Total RCO & other co-sponsor co-financing			**168,120**	**735,800**	**305,000**	**807,750**	**0**	**592,000**	**224,000**	**2,832,670**	**400,000**	**4,318,800**	**362,500**	**3,133,340**	**11,047,310**

Table 2.1.5 (2) Further Details of IMO Incremental Co-Financing towards Achieving the Objectives of GloBallast Partnership Project in the next five years (2007-2011)

The following table provides an accounting of the total co- and parallel financing that IMO will provide for GloBallast Partnerships. While the MEPC-Ballast Water Working Group (BWWG) and GESAMP-Ballast Water Working Group meetings are fully cost out in this table, only 10% of these cost elements are included as direct co-financing to the project.

Activity	Cost Element	Total Cost (US$)	Basis of Cost Calculations
A. IMO Secrétariat – Marine Environment Division			
1) IMO Office for Ballast Water Management: To act as the full-time Secretariat of the BWM Convention and to backstop technical cooperation activities such as GloBallast Projects	HR Costs	1,800,000	▪ 1 full-time Professional at P5 level x 5 years (200K per year) ▪ I full-time professional at P3 Level x 5 years (100K per year) ▪ 1 Database-cum-administrative Assistant (G5 level): x 5 years (60K per year)
2) IMO MED- Other Staff time (Director and 2 Senior Deputy Directors)		450,000	▪ 0.5 month per person per meeting x 3 persons (D1/D2 levels) x US$20,000 per month x 12 MEPC/MSC(BLG) meetings in 5 years ▪ 0.3 month per person per year x 3 persons (D1/D2 level) x US$20,000 per month x 5 years towards senior management support
3) Office Overheads		225,000	▪ Calculated as 10% of HR Costs
Sub-Total A			**2,475,000**
B: IMO – Marine Environmental Protection Committee (MEPC) – Contribution from IMO Member Countries			
Regular meetings of the MEPC-BW working group at IMO HQ in London to discuss the BWM Convention and to develop necessary guidelines	Travel Costs	10% of 1,200,000 (120,000)	12 meetings (7 BWWGs and review meetings of MEPC and 5 BLG meetings during 2007-2011 calculated based on 1 MEPC meeting each in 2007, 2009, 2011, 2 MEPC meeting in 2008, 2010, 1 BLG sub-committee meetings every year), average 50 BW experts discussing BWM agenda items either in the plenary sessions or in dedicated working / review groups (range 30-80) x US$2000 per air-ticket (range $500 - $4,000)
	DSA in London	10% of 1,680,000 (168,000)	7 days @ 400 US$ per day (UN DSA rate for London) x 12 meetings x 50 delegates per meeting

	Time of MEPC delegates/experts	10% of 1,680,000 (168,000)	7 days @ US400 per day (average of US$100 – 700 per day) x 12 meetings x 50 delegates per meeting
	In-country Preparations for MEPC meeting	10 % of 3,600,000 (360,000)	15 days of preparation per meeting per delegate @ US400 per day ((average of US $50 – 750 per day) x 12 meetings x 50 delegates per meeting
	IMO facilities for meetings	10% of 60,000 (6,000)	5 days @ US$1000 per day x 12 meetings
	Documentation & Translations	10% of 360,000 (36,000)	5 staff x 1 month per meeting x @6000 per month x 12 meetings
	external communications	10% of 18,000 (1,800)	1 staff x 0.25 month per meeting x @US$6000 per month x 12 meetings
IMO – GESAMP –BW Expert Group for Approval of Active Substances used in Ballast Water Treatment	Consultancy Fees, Travel and DSA of GESAMP experts	10% of 700,000 (70,000)	100,000 per meeting (to review minimum two applications) x 7 meetings back-to-back with MEPC meetings
Sub-Total B			**10% of $9,298,000 $929,800**
C: IMO Integrated Technical Cooperation Projects			
ITCP Projects	Training/technical consulting support for developing regions	498,000	▪ IMO Council Approved Budget for 2006-2007 Biennium = US$116,000 (two BWM training activities to be conducted in 2007) ▪ It is expected that similar level of funding for training activities will be available for the 2008-2009 and 2010-2011 biennia, subject to IMO Council Approval = US $232,000
Sub-Total C			**$348,000**
D: Awareness Raising: Production of BBC TV Documentary on Ballast Water			
BBC Contract	Production of a 50 minutes TV documentary	566,000 (£306,000)	During the PDF-B Phase, the cash funding was raised by IMO mainly through industry sponsorships. (exchange rate used – £1: $1.85)
Sub-TotalD			**$566,000**
Total (A+B+C+D) $4,318,800			

Table 2.1.5 (3) Private Sector Co-Financing / parallel financing through Global Industry Alliance (GIA)

Organization	Amount	Type	Comments
GIA - Core Members			
APL Shipping, Singapore	250,000	cash, direct	$50,000 per year x 5 years

BP Shipping, UK	250,000	cash, direct	$50,000 per year x 5 years
British Maritime Technologies, UK	250,000	cash, direct	$50,000 per year x 5 years
Vela Marine International, UAE	250,000	cash, direct	$50,000 per year x 5 years
sub-total	**1,000,000**	cash, direct	
GIA - Associate Members			
Degussa, Germany	10% of 250,000 = $25,000	cash, indirect	$250K to 350K estimate
Environmental Technologies Inc, USA	10% of 2,000,000 = $200,000	cash, indirect	total for 5 years
Ferrate Treatment Technologies, USA	10% of 7,000,000 = $700,000	cash, indirect	2-4 million during 2007-2008, 5 -10 million 2008-2011
IESE, Singapore	10% of 1,500,000 = $150,000	cash, indirect	1.5 million for technology development
MetaFil AS, Norway	10% of 5,000,000 = 500,000	cash, indirect	
NIOZ, Netherlands	10% of 471,000 = $47,100	cash, indirect	62,800 per year by NIOZ and 31400 per year by CaTO Marine Systems
NIWA, New Zealand	10% of 3,112,400 = $311,240	cash, indirect	5.02 m NZ $ (1NZ$ = 0.62 US$)
sub-total	**$1,933,340**		
GIA – Conference Partner			
IESE, Singapore	**$200,000**	in-kind	towards holding the joint-international conference series in Singapore (biannual, $100K per annum)
Total Industry Co-financing for GIA	**$3,133,340**		

2.2: PROJECT LOGICAL FRAMEWORK

Project Goal: To reduce the risks and impacts of ballast water mediated marine bio-invasions caused by international shipping.					**Total budget**	**23,389,939 * (*not including GEF PDF-b support: $699, 840)**
	Objective	**Indicators**	**Sources of Verification** **P: Process Indicator** **SR: Environmental Stress Reduction Indicator** **E/WR: Environmental Status Indicator**	**Budget**	**Funding Source**	**Risks & Assumptions**
	To assist vulnerable developing countries to implement sustainable, risk-based mechanisms for the management and control of ships' ballast water and sediments in order to minimize the adverse impacts of aquatic invasive species transferred by ships	By the end of the project, all partnering countries can demonstrate significant improvement in legal, policy and institutional structures, with corresponding reduced risk of ballast water borne marine bio-invasions	• All lead partnering countries (LPCs) have assigned a Lead Agency, formed a National Task Force and developed National Ballast Water Management Strategy (NBWMS). • Each LPC has revised its legal instruments, instituted a risk-based compliance monitoring and enforcement (CME) system, and established a sustainable financing structure for their national ballast water management program. • All lead participating countries are proceeding towards ratification of the IMO ballast water management convention, with at least 10 LPCS ratified and implementing the Convention. • At least 3 neighboring partnering countries of each LPCs developed draft NBWMS. • The Regional Seas & LME conventions in each partner region	**5,688,000**	**GEF**	IMO Member States will continue to develop and finalize all BWMC guidelines. Approved BW Treatment Technology solutions will be available in time for the shipping industry prior to the BWMC entering into force
				4,318,800	**IMO**	
				3,133,340	**GIA**	
				400,000	**IUCN**	
				362,500	**EBRD**	
				2,832,670	**RCO**	
				6,654,629	**LPC**	

			include approved provisions supporting improved BWM, the BWM convention and BWM regional strategies.			
	Outcomes[2]:	**Indicators**	**Sources of Verification**	**Budget**	**Funding Source**	**Risks & Assumptions**
1	**Learning, evaluation and adaptive management increased (P)**	The project team at global, regional and local levels is effectively coordinating the project, with objectives met, and outputs completed in time and within budget	Satisfactory / Highly satisfactory ratings on key activities and outcomes during terminal evaluation	**1,265,000** **1,154,800** **1,304,500**	**GEF** **RCOs** **LPCs**	Flexibility is built into the project for adaptive management. IMO Office of BWM offers significant backstopping support
2	**BWM Strategies in place, with legal, policy and institutional reforms developed, implemented and sustained at national level (P)**	At project conclusion, each LPC is implementing an effective program of ballast water management in line with	• By the end of the project, each LPC will have a National Task Force and approved NBWMS in place	**2,995,000**	**GEF**	Country buy-in and political support is paramount to ensure LPIR and planning recommendations get carried out

[2] Each of the key outcomes of the Project includes an indication of the type of indicator used. Most of the indicators for GloBallast Partnerships are Process **(P)** indicators. This is reasonable given the nature of the environmental problem and its mitigation. GloBallast Partnerships is designed to reduce the threat of invasives through ships' ballasting operations, however it is very difficult to detect specific invasive outbreaks as they are just starting, and virtually impossible to eradicate once the new species has established a foothold. The pathways and proliferation of marine invasives through international shipping make it difficult to set specific stress reduction indicators. This is a risk-reduction effort, which by nature is process driven. Nevertheless, several Stress Reduction (SR) indicators have been identified under Outcome 4– tied to specific demonstration projects for ballast sediment retention and new treatment technologies

During the inception phase, each of the lead countries will develop their implementation plans, within which indicators will also be included, with emphasis on stress reduction where feasible. So for instance, once ballast management requirements are in place, baselines can be established for the number of vessels being screened for compliance with ballast management and reporting system requirements. In addition, once the Ballast Water Convention enters into force, baselines can be established for the number of ships that have installed ballast treatment technologies and are implementing approved ballast management plans.

		the IMO Convention and any Regional Strategies. During the project, each LPC is sharing the lessons learned with other countries in the region	• All LPCs will have revised legal structures, improved CME systems and a cadre of trained experts • Regional Task Forces and Regional Action Plans in place in each cooperating region by the end of the Project • Regional Coordinating Organizations are facilitating the participation of other partnering countries in capacity building activities hosted by LPCs	**3,582,400** **362,500** **946,070** **3,070,150**	**IMO** **EBRD** **RCOs** **LPCs**	Amongst the partnering regions, the aim is for countries to develop and agree on a regional BWM strategy. Support of Contracting Parties of the Regional convention for adopting the Regional Strategy is essential, for sustainability of efforts
3	**Knowledge management tools and marine monitoring systems are effectively utilized to expand global public awareness and stakeholder support, improve understanding of ballast water impacts on marine ecology, and enhance maritime sector communications. (P)**	Sufficient information is available by the end of the project for LPCs to implement risk-based ballast water management systems. All LMEs and regional Seas programs globally have raised ballast water management as an important coastal zone concern, with their members taking steps to address the issue. Momentum on GBM is sustained in the GB pilot regions.	• GMEIS system is operational, web sites are in place in each of the 13 LPCs. Newsletters are published. The GMEIS web portal includes information showing ballast water protocols and strategies in each LME and Regional Sea globally.	**1,198,000** **736,400** **400,000** **731,800** **1,964,979**	**GEF** **IMO** **IUCN** **RCO** **LPCs**	Flexibility for adaptive management is assumed, with the PCU empowered to respond to information requests from (not yet participating) LMEs, and able to build in opportunities for GB pilot country experts to assist in regional and global activities.
4	**Public-private partnerships developed to spur the development of cost-effective**	Cost effective technology solutions and testing standards are developed,	• A GloBallast Industry Alliance is launched, testing facility standards are developed,	**230,000**	**GEF**	The GloBallast Industry Alliance is developed early during year 1 and forms a

	ballast water technology solutions (P and SR)	tested and promoted through a successful partnership with industry	sediment facility options have been piloted, at least 2 R&D symposiums held, and the BWM Innovation Fund gets launched.	**3,133,340** **315,000**	**GIA** **LPCs**	close partnership, meeting regularly with GPTF
	Outcomes/Outputs/Activities	**Indicator**	**Sources of Verification**	**Budget**	**Funding Source**	**Risks & Assumptions**
1	**Learning, evaluation and adaptive management increased**	The project team at global, regional and local levels is effectively coordinating the project, with objectives met, and outputs completed in time and within budget	• Satisfactory / Highly satisfactory ratings on key activities and outcomes during terminal evaluation	**1,265,000** **1,154,800** **1,304,500**	**GEF** **RCOs** **LPCs**	Flexibility is built into the project for adaptive management. IMO Office of BWM offers significant backstopping support
1.1	**Project Management and coordination structures in place at global, regional and local level**	A successful partnership in place providing effective management and direction for GBP at global, regional and country levels	• PCU, RCOs and LCPs up and running by end of 2nd Q, yr 1. GPTF, RTF and LPTF meetings held on schedule. • Financial and project management carried out according to GEF & UNDP guidelines • Project completed on time and within budget. Low staff turnover, high country buy-in.	**1,125,000** **1,154,800** **1,304,500**	**GEF** **RCOs** **LPCs**	PCU provided with space and support at IMO. RCOs able to monitor and coordinate participating country activities. Lead Partnering Countries (LPCs) able to achieve co-financing
1.1.1	**Hire, equip and maintain project coordination unit staff and office at IMO HQ**	Project coordination is properly staffed and effectively managing GBP	• By 2nd Q, yr 1, PCU is in place with all experts hired and working. TORs drafted, positions advertised, experts selected. Verified via APR, PIRs MTE and terminal evaluations	**670,000**	GEF	PCU start up contingent on timing of contract approval. Agreements on IMO support arrangements. Availability of adequate office space

1.1.2	**Establish and support Global Project Task Force (GPTF)**	GPTF is launched and provides guidance and direction for GBP Executive management meetings are held to provide annual project oversight	• 3 full GPTF meetings (6 RCO members + 6 RTF representatives + Partners + GEF-UNDP + IMO) • 2 executive management meetings at IMO (GEF, UNDP, IMO)	150,000	GEF	Membership builds from the GPTF developed during the 1st GBP Off year executive meetings developed in order to ensure close project oversight while keeping GPTF costs down.
1.1.3	**Designate and coordinate with regional coordinating organizations**	RCOs organize for regional activities and serve as financial conduit for PCU to LPCs	• RCOs in place and MOAs completed by end of 2nd Q, yr 1	720,900 75,000	RCOs GEF	MOAs developed as needed for RCOs not yet with financial connection to IMO. RCOs focus especially on regional inclusion of non-LPCs. GEF support for hiring ad-hoc administrative assistance
1.1.4	**Establish and maintain regional task forces**	RCOs effectively coordinate regional activities and ensure sustainability after project completion. All partnering countries in the region nominate RTF members, BWM discussed in regional forums	• 3, meetings (2 days) in each of the five regions: during inception, prior to mid term GPTF and prior to final GPTF (2nd and 3rd meeting coincides with activities under 2.4.2) - 20,000 per region for Inception meeting and 10,000 per region for 2nd and 3rd meeting, (LPCs hosting the meetings).	298,900 180,000	RCOs GEF	Task forces to develop recommendations for regional convention support and member adoption of BWMC. Task forces to include maritime and environmental interests
1.1.5	**Establish project coordination in each LPC, including identifying lead organization (LO), national focal point and national project coordinator**	Effective structure of country coordination is established in each of the 13 lead participating countries (LPCs)	• NFPs and NPCs assigned by LPCs	905,500	LPCs	LO should comprise the maritime authorities. NFP is a top manager of the LO. NPC is from middle level staff and has allocated significant time to the project. teleconferences every 6 mo. CTA, RCOs and LPC FPs
1.1.6	**Establish and maintain National**	Guidance and	• NTF meetings every other year,	399,000	LPCs	Includes key ministries:

	Task Forces	recommendations for national program. Generating support for legal policy and institutional reform (LPIR) and adoption of the ballast water management convention (BWMC)	prior to GPTF meetings			port state control, transportation, environment, health, ports management. to include other stakeholder involvement (industry and NGO)
1.1.7	**Represent and promote GloBallast Partnerships in international and regional conventions and forums**	GBP awareness and stature is raised in international and regional forums through participation of PCU, RCO and national focal points from LPCs	• GBP presence at 3 forums per year: IW conference, CBD COP 9&10, Regional Seas (participation by LPC or RCO or PCU)	50,000 135,000	GEF RCOs	Timing of international meetings does not conflict with other project activities. Two persons form LPCs plus PCU member to the IW conferences
1.2	**Project monitoring, evaluation and reporting systems established and implemented**	Monitoring and evaluation support provides timely assistance to keep project on track and recommend strategies to ease bottlenecks	• MTE and TE carried out on time and within budget.	**140,000**	**GEF**	M&E program carried out based on GEF / UNDP procedures
1.2.1	**Conduct mid term evaluation and initiate mid course corrections**	Providing external recommendations on mid course corrections	• Mid term Evaluation held prior to yr 3 GPTF meeting	60,000	GEF	Key is to have the mid term completed prior to the GPTF so recommendations can be taken into account.
1.2.2	**Conduct terminal evaluation**	At the end of GBP, the project successes, shortcomings, lessons learned and next step are identified	• Final evaluation and audit held prior to final GPTF meeting	80,000	GEF	Terminal evaluation in keeping with UNDP requirements. TE focused on lessons learned and sustainability
1.2.3	**Develop and submit APR/PIRs and other required GEF/UNDP project monitoring reports**	All reporting requirements for GEF, UNDP and IMO are observed and GPTF receives timely updates enabling proper management of the GBP	• Annual Project Reports (APR) and Project Implementation Reviews (PIR) developed annually and submitted prior to GPTF meetings.	(PCU internal)	GEF	Requires timely reporting of activities from the NFPs and RCOs

2	**BWM Strategies in place, with legal, policy and institutional reforms developed, implemented and sustained at national level**	At project conclusion, each LPC is implementing an effective program of ballast water management in line with the IMO Convention and any Regional Strategies. During the project, each LPC is sharing the lessons learned with other countries in the region	• By the end of the project, each LPC will have a National Task Force and approved NBWMS in place • All LPCs will have revised legal structures, improved CME systems and a cadre of trained experts. • Regional Task Forces and Regional Action Plans in place in each cooperating region by the end of the Project. • Regional Coordinating Organizations are facilitating the participation of other partnering countries in capacity building activities hosted by LPCs	**2,995,000**	**GEF**	Country buy-in and political support is paramount to ensure LPIR and planning recommendations get carried out Amongst the partnering regions, the aim is for countries to develop and agree on a regional BWM strategy. Support of Contracting Parties of the Regional convention for adopting the Regional Strategy is essential, for sustainability of efforts
				3,582,400	**IMO**	
				362,500	**EBRD**	
				946,070	**RCOs**	
				3,070,150	**LPCs**	
2.1	**Institutional capacities are enhanced through a comprehensive training program on Ballast water management**	By end of yr 2, key decision makers, industry representatives and maritime training institutes in every priority region and LPC have been provided introductory training on all aspects of BWM	• By end of yr 2, more than 250 stakeholders from pertinent ministries, industries and training institutes have participated in BWM modular course. • By end of yr 3, selected maritime institutes in each region / LPC are training maritime experts in all aspects of ship-based BWM. • By end of yr 2, the BWM modular package is also made available in an e-learning format.	**370,000**	**GEF**	Existing BWM modular course is updated to include the BWM convention requirements. Attention is paid to getting decision makers in the pertinent ministries to attend. Attendees are then kept in the process via newsletter mailings and follow on events.
				348,000	**IMO**	
				40,000	**GIA**	
				362,500	**EBRD**	
				266,500	**LPC**	
				300,250	**RCO**	
2.1.1	**Update GloBallast Introductory Modular Course for Ballast Water Management**	Updated Modular course ready for regional training by 2nd Q year 1.	• Completed course manual 2nd Q yr 1, completed e-learning package 1st Q yr 2. GMEIS portal posting. APR/PIR	**20,000**	GEF	Developed from initial course offerings during GBP1

		E-learning module available for modular course instruction in yr 2		40,000	GIA	E-learning platform GIA financed and developed with IW Learn
2.1.2	**Hold training courses on BWM using updated Modular Training package**	By end of yr 2, more than 250 stakeholders from pertinent ministries in every GBP2 region trained on BW basics	• Total 9 training programs : 4 Training Programs (CPPS, MED, PERSGA & SPREP funded by GEF); • 1 Training Program in WACAF funded through IMO-GCLME IAA; • 1 Training Program in CAR funded by IMO ITCP (Training programs to be hosted one LPC per region); • 5 additional training programs in Black Sea, Baltic and Caspian Sea to be funded by EBRD (50,000 per training).	362,500	EBRD	Support for specific Regional training workshops through several sources, including EBRD, IMO, GEF and participating countries. Globallast Pilot Countries offering experts for training in GBP regions.
				348,000	IMO	
				350,000	GEF	
				266,500	LPC	
				300,250	RCO	
2.2	**Risk-based, rapid status assessment reports are developed and used to guide country activities**	Early in project yr 2 all LPCs have identified the key issues of BWM and marine invasive species and developed their LPC action plans under GBP. LPCs have coordinated their planned activities with the other participating countries in the region	• 13 Rapid Assessment Reports completed by the end of 1st Q, yr 2, covering all key aspects for BWM and AIS. Verified by report submission.	**345,000**	**GEF**	LPCs can quickly organize with the PCU to carry out rapid assessments. Information is available amongst the LPCs concerning marine biodiversity issues, ports management and port state control activities. The National Focal Points and National Coordinators have inter-ministerial support to get information from other ministries and institutes
				530,250	**IMO**	
				337,600	**LPCs**	
2.2.1	**Develop template and guidelines for rapid assessments**	Guidance is provided to the LPCs during the 2nd Q of yr 1, enabling them to assess their situation with respect to invasive species and ballast water management (BWM)	• Guidelines and templates are developed by PCU and submitted to LPCs during 2nd Q, yr 1, prior to GPTF inception meeting	**20,000**	GEF	Globallast pilot (GBP) experts will assist in developing the template based on experience from pilot effort
				530,250	IMO	

2.2.2	**Develop rapid status assessments**	All 13 LPCs have identified their key national issues for BW management and have identified their top priorities and plans for reforms during GBP	• 13 Rapid Assessment Reports completed by the end of 1st Q, yr 2	325,000	GEF	Assessment is not a full transboundary diagnostic analysis (TDA) but meant to enable rapid assessment for project planning. Assessments should include stakeholder reviews, expert rosters, general info on marine species and ecology, major ports and their traffic mix, pertinent policies and legislation, implications of ballast water management convention (BWMC) ratification, related legislation (e.g. MARPOL & CBD), & port state control arrangements.
				337,600	LPCs	
2.3	**Economic aspects of marine bio-invasions factored into national strategic planning**	The economic impacts of marine invasive species is better understood, and economic impact as well as management costs, are factored into strategic planning for ballast water management	• LPC specific and aggregated economic impact reports completed by 3rd Q, yr 4	**370,000**	**GEF**	Data likely limited on the extent and reasons for reduction of many fish species. Effort requires that each LPC assessment utilized same economic methodology, to enable collating and comparisons
				38,000	**LPCs**	
2.3.1	**Develop guidance for economic assessments**	LPC economists are given methodology tools enabling economic impact assessments to be carried out	• Marine invasives economic assessment guidance completed 2nd Q Yr 2	60,000	GEF	Able to utilize GISP economic methodology as baseline. Providing step by step instructions on the use of models and calculations
2.3.2	**Develop national economic impact and response cost assessments, taking into account the need for financial sustainability**	The economic consequences of marine bio-invasions in each of the LPCs is better understood	• Each LPC (13) completes an economic assessment by 3rd Q, Yr 3.	310,000	GEF	Data likely limited on the extent and reasons for reduction of many fish species. Health statistics may be difficult to access
				38,000	LPCs	

2.3.3	**Aggregate economic information**	Global economic impacts and response costs of marine invasive species better understood	• Aggregate Economic Assessment Report completed, 2nd Q, Yr 4.	30,000	GEF	Requires that each LPC assessment utilized same economic methodology, to enable collating and comparisons
2.4	**National Ballast Water Management Strategy (NBWMS) developed and implemented**	All lead countries and priority regions have approved and are implementing strategic plans to reduce the risk of bio-invasions from ship ballast water	• All 13 LPCs develop approved BWMSs by the end of yr 4. All 6 priority regions (incl. SPREP) have a regional action plan (RAP) for BWM in place by end of yr. 4	**900,000** **1,136,650** **392,420** **1,199,300**	**GEF** **IMO** **RCOs** **LPCs**	NBWMSs are approved at cabinet of ministers level. RAP is officially brought under the regional convention framework. NBWMSs specifically address legal, policy and institutional reforms and ratification of the ballast water management convention
2.4.1	**Develop guidelines for national BWMS development, including options for financial sustainability**	Guidance is developed enabling the participating countries to launch national planning efforts	• PCU develops and disseminates guidance to RCOs and LPCs during 1st Q, yr 2	65,000 1,136,650	GEF IMO	
2.4.2	**Hold (a) regional harmonization (including regional LPI assessment) and (b) Sustainability workshops**	A regional ballast water management action plan approved in each of the 6 priority regions	• 5 regions, (20,000 per region x 2 meetings (2 day each), back to back with RTF meetings-activity 1.1.4 (LPCs hosting the meetings). • Draft Regional action plan developed and submitted to regional convention meeting by 2nd Q, Yr 5. • Builds from GBP national and regional planning efforts, amended to account for BWMC adoption.	200,000 342,400 392,420	GEF LPC RCOs	Meetings serve as the 2nd and 3rd RTF meetings; 1st meeting to consider issues and concerns in common: second meeting to adopt concrete proposal for regional convention approval and to identify regional mechanisms for sustainability: 6th region for RBMP development is SPREP

2.4.3	**Hold national stakeholder workshops**	LPCs meet with key stakeholders to take comment on draft BWM Strategies, and ensure buy in once plans are adopted	• At least 3 stakeholder meeting in each of the 13 LPCs, before the end of yr.3	287,900	LPCs	Interested industry and NGO parties are able to review the draft NBWMS and provide comments prior to completion; Lead partner country (LPC) managed process
				215,000	GEF	
2.4.4	**Develop national BWMSs**	All 13 LPCs have in place a national strategy addressing ballast water management	• All 13 LPCs develop approved BWMSs by the end of yr 4, PCU provides technical assistance ($20,000 per country)	420,000	GEF	Plans include milestones and schedules beyond the conclusion of GBP
				569,000	LPC	
2.5	**National legal reforms instituted**	By the end of yr 4, all LPCs have instituted legal and regulatory changes that improve BW management and adopt or harmonize with the IMO Ballast Water Management Convention	• All LPCs adopt new legislation / regulations to strengthen ballast water management by 1st Q yr 4	**535,000**	**GEF**	Legal expertise available in LPCs to work with GBP experts on legislative changes. NFPs devise strategies to get new legislation approved through parliament. Industry and NGOs have been consulted throughout legal effort, to minimize opposition
				943,250	**IMO**	
				126,700	**RCO**	
				642,000	**LPCs**	
2.5.1	**Develop legal road map, model legislation and training manuals**	By 1st Q yr 2, LPCs have tools available for revising BW legal structures	• PCU thru consultancy to develop generic legal reform road map, model legislation and template. Road map, model and manuals developed by 4th Q, yr 1	35,000	GEF	Builds from GB experience and PDF-b review; Experts from GB to contribute
				943,250	IMO	
2.5.2	**Train LPC lawyers on developing legal frameworks for BWM**	Legal experts in priority regions trained on legal aspects of BWM, by 2nd Q yr 3	• PCU to support LPCs with LPIR technical consulting assistance	**220,000**	GEF	Legal road map, model legislation and training module is prepared; Experts from GB will assist
				126,700	RCO	
				120,800	LPCs	

2.5.3	**Develop national legislation**	All LPCs adopt new legislation / regulations strengthening BWM by 1st Q yr 4	• National legislation revised, country reports submitted	521,200	LPCs	Includes comprehensive review of pertinent national legislation; GBP provides ad hoc assistance to legislative effort during yr 3; LPCs work to ratify and implement BWM Convention
				280000	GEF	
2.6	**Specialist capacities improved for BWM**	Expertise on key facets of ballast water techniques and coastal biodiversity monitoring is enhanced across the participating countries and regions.	• By the beginning of project yr. 2, there exists global, regional and LPC rosters of taxonomists available to assist on coastal and port species surveys. • By the end of year 3, 6 port species survey workshops have been held. • By end of yr 4, selected maritime institutes in each region / LPC are training maritime experts in key aspects of ship-based BWM.	**65,000**	**GEF**	Entry into force of the Ballast Water Management Convention will spur considerable interest amongst countries and maritime institutes for specialist training. Other related programs, such as GISP, should be closely linked for port survey training.
				234,550	**LPCs**	
				80,000	**IMO**	
2.6.1	**Develop model BWM (specialist) course**	By end of yr 4, specialist course is prepared for training institutes based on IMO Model Courses	• IMO completes specialist course development, incorporating IMO STCW	80,000	IMO	Expected roll out as BWMC enters into force; Role of GBP is to assist LPCs to deliver model course in maritime institutes
2.6.2	**Capacitate Training Institutes for delivery of Introductory course and specialized courses**	By end of yr 5, sailors can be trained to be a BWM expert in any of the GBP priority regions	• Training institutes identified 4th Q yr 4; At least 1 institute in each of LPC offering BWM specialist course during yr 5	65,000	GEF	Accreditation criteria is developed to identify and accredit institutes; Ad hoc support from PCU for LPC-led effort
				234,550	LPCs	
2.7	**Compliance monitoring and enforcement indicators are developed and national systems enhanced, with an emphasis on risk-based priority setting, and the use of voluntary approaches**	By the end of yr 4, each LPC has developed / enhanced its CME system. By end of year 4, 35% of merchant shipping fleet calling on LPC ports indicates BWM plans	• By 2nd Q, yr 2, all Shipping companies calling on LPC ports have received model BWM plans. Follow on questionnaire in mid yr 3 identifies shipping companies implementing the plans.	**380,000**	**GEF**	CME systems include approved mechanisms for BW reporting, sampling, citations, and streamlined procedures for low risk ship. Voluntary approaches, including streamlined
				544,250	**IMO**	
				126,700	**RCO**	
				352,200	**LPC**	

		being implemented				procedures for ISO and 'green award' certification are strongly supported
2.7.1	**Develop and disseminate model CME framework, including indicators**	By start of yr. 3, model CME framework is available for LPCs to develop their revised CME systems	• Model CME framework and indicators developed, 3rd Q, Yr 2	60,000 544,250	GEF IMO	Build on CME activities during GloBallast Pilot Phase (scoping study and CME symposium); Takes into account approval of the BWM Convention and IMO guidelines; Emphasis placed on voluntary approaches, streamlined procedures and risk-based priority setting
2.7.2	**Hold training workshops on CME**	By end of year 3, at least 100 Port State Control Officers and CME managers in partner countries are trained on essential aspects of BW CME	• Country CME managers trained, 4th Q yr 3; Regional training workshop reports, APR/PIR	150,000 126,700 114,800	GEF RCO LPC	Training of port state control authorities - 5 regions. $30,000
2.7.3	**Countries implement modified CME systems**	By the end of yr 4, LPCs are effectively monitoring and enforcing BWM requirements based on new BWM laws and procedures	• By 2nd Q yr 4, all 13 LPCs have regulations approved, procedures revised, budgets augmented for revised CME programs	130,000 123,950	GEF LPC	Technical assistance to 13 LPCs for implementing CMEs, Clear expectations on LPCs to improve CME systems; CME systems utilize risk-based priority setting; LPC CME systems are harmonized with BWM Convention
2.7.4	**Conduct follow up reviews of modified CME systems and develop lessons learned study**	All 13 LPCs have undertaken a review of CME improvements by end of yr 5	• PCU / RCOs to hire consultants to report on progress with CME reforms 1 yr after implementation by 5 regions.	40,000 113,450	GEF LPC	Follow up study developed as part of concluding report and sustainability recommendations; CME study to include # of BW report forms received, ships boarded, samples taken, enforcement actions

3	**Knowledge management tools and marine monitoring systems are effectively utilized to expand global public awareness and stakeholder support, improve understanding of ballast water impacts on marine ecology, and enhance maritime sector communications.**	Sufficient information is available by the end of the project for LPCs to implement risk-based ballast water management systems. All LMEs and regional Seas programs globally have raised ballast water management as an important coastal zone concern, with their members taking steps to address the issue. Momentum on GBM is sustained in the GB pilot regions.	• GMEIS system is operational, web sites are in place in each of the 13 LPCs. Newsletters are published. The GMEIS web portal includes information showing ballast water protocols and strategies in each LME and Regional Sea globally.	**1,198,000**	**GEF**	Flexibility for adaptive management is assumed, with the PCU empowered to respond to information requests from (not yet participating) LMEs, and able to build in opportunities for GB pilot country experts to assist in regional and global activities.
				736,400	**IMO**	
				731,800	**RCO**	
				1,964,979	**LPCs**	
3.1	**Baseline information established on biodiversity and alien species presence in major ports (SR)**	By end of yr 3, LPCs have detailed knowledge of marine invasive species risks, and presence	• Baseline data from at least 1 port in each of the 13 LPCs developed, plus expectation of other participating country surveys, enabling ID of existing invasive species prevalence	**385,000**	GEF	Actual survey assessments carried out and funded by LPCs with additional cosponsor support
				55,000	IMO	
				400,000	**IUCN**	
				1,387,179	**LPCs**	
				381,100	RCO	
3.1.1	**Update Port baseline survey protocols**	Lessons learned from previous baseline surveys are applied as revised protocols	• PCU completes revised protocols; 1st Q yr 2	25,000	GEF	Builds from protocol improvement recommendations during GB survey

				25,000	IMO	
3.1.2	**Hold training workshops on port baseline survey design and implementation**	Regional experts are trained during yr 3 to carry out baseline port invasive species surveys	• 6 workshops (hosted by one LPC each from CAR, PERSGA, CPPS and WACAF and SPREP), each with 20 participants (including other participating countries in the region) + MED training to be funded by SAFEMED Project implemented by RCO for Mediterranean Region.	150,000	GEF	Experienced trainers from GloBallast countries can be utilized
				321,100	RCO	
				30,000	IMO	
				222,000	LPC	
3.1.3	**Develop country, regional and global rosters of taxonomy experts**	Taxonomists are identified in every LPC	• Roster compiled 4th Q Yr 1	55,000	LPCs	Roster compiled by LCPs, RCOs, PCU
				60,000	RCO	
3.1.4	**Train local taxonomists in generic tools and methodologies for marine invasives detection and analysis**	Local expertise is raised for marine taxonomy work in each LPC	• 13 sessions carried out by 3rd Q year 2. 75 persons trained	65,000	GEF	Able to utilize IOC capacity building program or Census of Marine Life Project for training content
				200,000	IUCN	
				12,000	LPC	
3.1.5	**LPCs carry out baseline surveys and develop national marine invasives reports**	LPCs provide assessments and data on biodiversity in major ports by end of yr 3	• 13 LPC reports completed by 2nd Q yr 3.	130,000	GEF	PCU provides support to LPCs, including baseline survey training, and technical assistance on report and database development; LPCs to seek

				200,000	IUCN	co-financing to carry out surveys and then develop report; LPCs are able to raise own funds and get additional co-sponsors conduct port baseline surveys for 2 or more major ports; Each LPC conducts at least 2 commercial port baseline surveys
				1,098,179	LPC	
3.1.6	**Compile country baseline data and input into GMEIS (see activity 3.2)**	Global marine electronic information system is enhanced through detailed LPC information on port area biodiversity	• Data input received, entry completed Q4, Yr 5	15,000	GEF	LPC data is generated and provided in proper format for easy collation and GMEIS input
3.2	**Global Marine Electronic Information System (GMEIS) for Ballast Water Management Established**	Architecture is agreed to and data entered for launch and updating of Global Marine Electronic Information System during yr s 3 - 5.	• GMEIS launched during yr 3. By project year 5, the backbone for a Globallast marine electronic information system for BWM has been designed. • Web portal as the front-end of this system is operating, and a country profile database is in place	**370,000**	GEF	GMEIS will expand in use to encompass other environmental applications and will provide seamless linkages with existing/upcoming safety and navigational applications such as MEHs. Database should enable risk-based priority setting for port state control authorities and greater clarity on country requirements to shippers. Shipping industry and other stakeholders buy into the GMEIS concept and are willing to use this system for BWM purposes
				126,700	**RCO**	
				115,400	**IMO**	
				498,000	**LPCs**	

3.2.1	**Identify GMEIS Design/architecture Options**	Design options identified and explained	• Design options report, completed by 1st Q, Yr 2	25,000	GEF	Study identifies GMEIS architecture options for ballast, expandable to other shipping & navigation issues
3.2.2	**Hold GMEIS expert workshop for design / architecture selection**	By mid yr 2, top experts have planned out the GMEIS architecture, with ballast water as 1st application	• Expert Workshop held (Marine Electronic Highway experts, other database developers) to finalize the global architecture	70,000	GEF	Workshop succeeds to develop recommended GMEIS architecture
				35,000	IMO	
3.2.3	**Develop country profile database format and disseminate to participating countries**	By mid yr 2, participating countries receive tools and instruction for developing Country Profile / BW databases	• Guidance developed and sent to LPCs by 1st Q Yr 2	20,000	GEF	User-friendly format is developed that LPCs can readily utilize
3.2.4	**Provide training and technical assistance on knowledge management and database development for LPCs**	During yrs 3&4, training enables experts to manage database development in participating countries	• IT consultancy team provides internet and (limited) on-site assistance (5, per LPC) or sub-regional training	125,000	GEF	Database guidance (3.2.3) developed
				126,700	RCO	
				40,000	IMO	
				132,800	LPCs	
3.2.5	**Develop country profile databases**	Each LPC is able to develop a database of information on marine invasive species and ballast water management	• All LPC databases developed by Yr 4, using local technical assistance	100,000	GEF	LPCs have existing IT hardware and software capacity; LPCs organize data entry; LPCs and PCU pre-agreed on information sharing
				348,000	LPC	
3.2.6	**Develop and maintain GloBallast GMEIS web portal**	GloBallast web site is updated for use in GBP during yr 1 and then gets	• Website updated and in operation during year 1, augmented as GMEIS by year 3	50,000	GEF	Scale up from existing GloBallast site; GMEIS database enhancements

		major transformation to GMEIS portal during yr 3		40,400	IMO	ready by yr 3; Stakeholder interest expands to utilize portal features
3.2.7	**Launch and maintain national BWM websites**	Each LPC has a web site up and running early in Yr 2, as main access for public to project information	• All lead participating country websites developed and operational by 1st Q yr 2,	17,200	LPCs	LPCs have financial and human resources to develop and maintain
				125,000	GEF	
3.3	**Stakeholder and public awareness of ballast water management and marine bio-invasion issues is raised and sustained**	Interested stakeholders and the general public in all GBP regions and participating countries stay informed of the issues and project status	• Timely publication of newsletters, printing and dissemination of brochures, and widespread dissemination of the BBC documentary	**298,000**	GEF	Information made available through various printed media compliments the GMEIS web porthole. Stakeholder outreach to the pilot regions and to new regional partners is supported through other GEF funding (direct to LMEs and regional seas).
				79,800	**LPC**	
				566,000	**IMO**	
				224,000	**RCO**	
3.3.1	**Stakeholder outreach to GB pilot regions, LMEs and Regional Seas**	Momentum on ballast water management is maintained in the GB pilot regions and extended to new regions, networked through the LME and regional Seas structures	• Prior to the conclusion of GBP, all LMEs and regional seas globally have addressed the issue of ballast water borne invasive species, through strategies, protocols, white papers, etc.	160,000	GEF	Assumes a mix of tools to build and sustain stakeholder momentum, including direct contact, literature, participation in events, review of strategies and resolutions and in the case of the pilot regions, some small scale financial support for the inclusion of pilot country experts in regional workshops. Any direct support will be limited to use by and for GEF-eligible countries.
				224,000	RCO	

3.3.2	**Publish and post quarterly newsletters**	Interested stakeholders are provided with regular project updates by email	• 4 newsletters per yr, 20 total	88,000	GEF	Mailing list will need to be developed; Email preferred to keep postage to a minimum; Newsletters also posted on GMEIS portal
3.3.3	**Develop, update and translate GloBallast brochures and publications**	Public awareness is raised through selected development, translation and dissemination of pamphlets, posters, and the BBC documentary	• 2 new brochures, 2 publications updated, 4 translated, 600 copies of BBC documentary distributed.	50,000	GEF	Translation services are acquired; Builds from successful publications effort during GB, including 10 most wanted poster; BBC documentary to be a major feature of promotion efforts
				566,000	IMO	
				79,800	LPC	
4	**Public-private partnerships developed to spur the development of cost-effective ballast water technology solutions**	Cost effective technology solutions and testing standards are developed, tested and promoted through a successful partnership with industry	• A GloBallast Industry Alliance is launched, testing facility standards are developed, sediment facility options have been piloted, at least 2 R&D symposiums held, and the BWM Innovation Fund gets launched	**230,000**	GEF	The GloBallast Industry Alliance is developed early during year 1 and forms a close partnership, meeting regularly with GPTF
				315,000	**LPC**	
				3,133,340	**GIA**	
4.1	**Strategic partnership forged with shipping industry**	Shipping industry enters into close partnership with other key stakeholders under GBP, through the GIA, helping to overcome major barriers in developing and implementing technology solutions	• At least 5 major maritime industry players agree to join the GIA. The GITF and industry dialogue meetings held concurrent to GPTF meetings throughout 5 yr project.	**75,000**	**GIA**	GloBallast Industry Alliance successfully launched with sufficient industry support. MOA signed between IMO and GIA members on purpose of alliance and use of funds. GIA fund established

4.1.1	**Set up a GloBallast Industry Task Force to meet annually and provide input to GloBallast Partnerships**	Shipping Industry organized throughout project, providing timely advise and support to GBP	• 3 GITF meetings held concurrent to industry dialogues and GPTF meetings. Minutes produced.	45,000	GIA	Successful launch of a GloBallast Industry Alliance and approval of industry funding
4.1.2	**Hold biannual industry dialogues between GITF and the GloBallast Steering Committee**	Throughout the project, structured discussions are held for the GPTF to receive industry advice on GBP	• Industry dialogues held concurrent to the (3) GPTF meetings.	30,000	GIA	Sequencing of meetings – GITF – Industry Dialogue - GPTF
4.2	**Globally agreed standards developed for ballast water technology test facilities**	Port States can mutually accept technologies approved based on internationally agreed testing standards and test facilities	• By end of yr 3, test facility standards and procedures for endorsement of test facilities are developed into IMO BWMC guidelines	**70,000** **40,000**	**GEF** **GIA**	Testing facility for standards review in GEF eligible country. Countries prepared to set-up test facilities in different regions and are willing to cooperate in developing common standards for test facilities.
4.2.1	**Develop framework for ballast water treatment equipment test facility standards and inter-calibration procedures**	Frameworks are developed that identify the key issues and options for expert agreement on test facility standards and procedures	• PCU to develop general framework for global standardization of test facilities. Framework developed by 2nd Q, Yr 2	40,000	GEF	Government and industry interest to devise uniform standards for testing BW treatment technologies
4.2.2	**Hold experts workshop to propose test facility standards and procedures**	Test facility standards and procedures are agreed to and proposed to IMO for adoption into BWMC guidelines	• GIA to sponsor 1 workshop. Workshop held by 1st Q y r3	40,000	GIA	Willingness of key non-GEF countries (US, Australia, Norway and Singapore etc) to work with GBP on unified test facility standards development

4.2.3	**Develop and disseminate standards and procedures manual for ballast water treatment equipment test facility standards**	All IMO members receive notice of recommended testing facility standards	• By end of yr 3, test facility standards and procedures are developed into IMO BWMC guidelines	30,000	GEF	GB or GBP lead country will agree to host and pay for test facility construction: Consensus can be achieved at experts meeting: IMO members will approve the recommended standards and procedures and include in BWMC guidance
4.3	**Solutions devised and best practices publicized on port-based reception facilities for ballast water tank sediments (SR)**	Based on pilot site results, all port authorities within priority regions receive recommendations on construction of sediment facilities	• Pilot site constructed in Yr 4, with results evaluated and disseminated in year 5.	**110,000**	**GIA**	sediment pilot established in one of the GBP LPCs
4.3.1	**Identify dry dock site and conduct feasibility study for pilot sediment facility**	PCU to organize feasibility study; completed by 1st Q, yr	• Feasibility study developed. Report issued to PCU 1st Q, yr 4	20,000	GIA	GIA funding agreed to by industry partners; Suitable site is found
4.3.2	**Construct and manage pilot sediment facility (SR)**	Pilot site constructed by 3rd Q yr 4, and operational	• Construction and management of 1 pilot facility. Start up report available by 1st Q, yr 5**,**	80,000	GIA	Host provides significant in-kind support
4.3.3	**Assess pilot facility operation and disseminate lessons learned**	Operational recommendations are made available to participating countries during yr 5 on construction of sediment facilities	• PCU to hire consultancy for evaluation and reporting. Assessment report completed 3rd Q yr 5	10,000	GIA	pilot site activity is enough to yield lessons learned and recommendations; IMO members prepared to include results into guidance for BW Convention
4.4	**State of the art in Ballast water treatment technology solutions identified and publicized (P/SR)**	Innovative solutions for ships to meet the BWMC requirements are developed and publicized.	• Up to 10 innovative technology projects provided with seed money through GIA (alternatively, 3 to 4 best currently available technologies tested onboard a ship for technology transfer/training purpose).	**160,000** **315,000**	**GEF** **LPC**	GIA willing to sponsor innovation effort. Singapore willing to continue sponsorship of Technology Conferences

			• 2 technology conferences and 2 R&D forums held, with participation by LPC scientists and other representatives	**2,908,340**	**GIA**	
4.4.1	**Establish Ballast Water Innovation Fund and support innovative projects (P/SR)**	Innovative research on BW technologies is supported	• PCU to send request for proposals (RFP) for Technology Testing, proposals reviewed by Expert panel and award decisions by GIA and GBP • Independent technology solutions development by R&D Sector within the GIA framework. • Fund developed by 4th Q yr 1, 1st awards by 3rd Q yr 2 2nd awards by 1st Q yr. 5. 20-25 projects	1,000,000	GIA	From GIA industry partners directly to support the innovation fund Awarding of funds using transparent screening procedures Private sector direct R&D spend on GBP related issues (e.g. sediment facilities, testing facilities)
				60,000	GEF	
				315,000	LPC	
				1708,340	GIA	
4.4.2	**Hold biennial global R&D forums and biennial technology conferences**	State of the art in BW research and treatment techniques are showcased every other year	• R&D Forums and Technology Conferences (GBP funds used to facilitate participation of LPC nominees.	200,000	GIA	Organizations continue hosting the ongoing Technology Conferences / IMO to provide venue for the R&D conference

2.2 Project Document for CEO Endorsement and Delegation of Authority letter

(Annex B of the Executive Summary approved at Work Program (To be inserted after approval)

2.3 Total Budget and Workplan

2.3.1 Project Budget

	GEF Outcome / ATLAS Activity	Source of Funds	Atlas Code	ERP/ATLAS Budget Description/Input	yr1	yr2	yr3	yr4	yr5	Budget
1	**Learning, evaluation and adaptive management increased**									
1.1.1	**Hire, equip and maintain project coordination unit staff and office at IMO HQ[c]**	GEF	71400	Chief Technical Advisor (Level P5)	27,000	27,000	27,000	27,000	27,000	135,000
		GEF	71400	Technical Advisor (Level P3)	12,000	12,000	12,000	12,000	12,000	60,000
		GEF	71400	Administrative Assistant (Level G6)	60,000	60,000	60,000	60,000	60,000	300,000
		GEF	72500	PCU Office General	25,000	25,000	25,000	25,000	25,000	125,000
		GEF	71600	PCU Travel[d]	20,000	10,000	10,000	10,000	10,000	60,000
1.1.2	**Establish and support Global Project Task Force (GPTF)**	GEF	71300	Local Consultants	50,000		50,000		50,000	150,000
1.1.3	**Designate and coordinate with regional coordinating organisations**	GEF	71300	Local Consultants	15,000	15,000	15,000	15,000	15,000	75,000

[c] The personnel cost under 1.1.1 represents only the costs associated with the project administration activities by the Project Coordination Unit. Costs associated with the technical experts (CTA and TA), who will deliver most of the technical outcomes, are incorporated within the International Consultants components. Extensive use of technical expertise existing within PCU would ensure the much needed cost-efficiency required by the tight budgets.

[d] The travel costs are primarily for PCU staff for the purpose of project management, administration and for outreach activities. Travel costs for technical workshops, training events and travel costs for international experts are incorporated within the local and international consultant components, unless specified otherwise.

1.1.4	**Establish and maintain regional task forces**	GEF	71300	Local Consultants	60,000		60,000		60,000	180,000
1.1.7	**Represent and promote GloBallast Partnerships in international and regional conventions and forums**	GEF	71600	Travel	8,000	8,000	8,000	8,000	8,000	40,000
1.2.1	**Conduct mid term evaluation and initiate mid course corrections**	GEF	71200	International Consultants			60,000			60,000
1.2.2	**Conduct terminal evaluation and project audit**	GEF	71200	International Consultants					80,000	80,000
	Sub-Total	**GEF**			**277,000**	**157,000**	**327,000**	**157,000**	**347,000**	**1,265,000**
2	**BWM Strategies in place, with legal, policy and institutional reforms developed, implemented and sustained at national level**									
2.1.1	**Update GloBallast Introductory Modular Course for Ballast Water Management**	GEF	71200	International Consultants	20,000					20,000
2.1.2	**Hold training courses on BWM using updated Modular Training Package**	GEF	71200	International Consultants	145,000	55,000				200,000
		GEF	71300	Local Consultants	115,000	35,000				150,000
2.2.1	**Develop template and guidelines for rapid assessments**	GEF	71200	International Consultants	20,000					20,000
2.2.2	**Develop rapid status assessments**	GEF	71300	Local Consultants	130,000	65,000				195,000
			71200	International Consultants	65,000	65,000				130,000

2.3.1	**Develop guidance for economic assessments**	GEF	71200	International Consultants		60,000				60,000
2.3.2	**Develop national economic impact and response cost assessments, taking into account the need for financial sustainability**	GEF	71300	Local Consultants			50,000	170,000		220,000
			71200	International Consultants				90,000		90,000
2.3.3	**Aggregate economic information**	GEF	71200	International Consultants				30,000		30,000
2.4.1	**Develop guidelines for national BWMS development, including options for financial sustainability**	GEF	71200	International Consultants		65,000				65,000
2.4.2	**Hold (a) regional harmonisation (including regional LPI assessment) and (b) Sustainability workshops**	GEF	71200	International Consultants			75,000		75,000	150,000
		GEF	71300	Local Consultants			25,000		25,000	50,000
2.4.3	**Hold national stakeholder workshops**	GEF	71300	Local Consultants		65,000		75,000	75,000	215,000
2.4.4	**Develop national BWMSs**	GEF	71300	Local Consultants			120,000	130,000		250,000
			71200	International Consultants			90,000	80,000		170,000
2.5.1	**Develop legal road map, model legislation and training manuals**	GEF	71200	International Consultants	35,000					35,000
2.5.2	**Train LPC lawyers on developing legal frameworks for BWM**	GEF	71200	International Consultants		110,000	110,000			220,000
2.5.3	**Develop national legislation**	GEF	71200	International Consultants			20,000	60,000	40,000	120,000

			71300	Local Consultants			40,000	80,000	40,000	160,000
2.6.2	**Capacitate Training Institutes for delivery of Introductory course and specialized courses**	GEF	71300	Local Consultants				65,000		65,000
2.7.1	**Develop and disseminate model CME framework, including indicators**	GEF	71200	International Consultants		60,000				60,000
2.7.2	**Hold training workshops on CME**	GEF	71200	International Consultants			100,000			100,000
		GEF	71300	Local Consultants			50,000			50,000
2.7.3	**Countries implement modified CME systems**	GEF	71300	Local Consultants				90,000	40,000	130,000
2.7.4	**Conduct follow up reviews of modified CME systems and develop lessons learned study**	GEF	71200	International Consultants					40,000	40,000
	Sub-Total	**GEF**			**530,000**	**580,000**	**680,000**	**870,000**	**335,000**	**2,995,000**
3	**Knowledge management tools and marine monitoring systems are effectively utilised to expand global public awareness and stakeholder support, improve understanding of ballast water impacts on marine ecology, and enhance maritime sector communications.**									
3.1.1	**Update Port baseline survey protocols**	GEF	71200	International Consultants	25,000					25,000
3.1.2	**Hold training workshops on port baseline survey design and implementation**	GEF	71200	International Consultants		60,000	40,000			100,000
		GEF	71300	Local Consultants		30,000	20,000			50,000
3.1.4	**Train local taxonomists in generic tools and methodologies for marine invasives detection and analysis**	GEF	71200	International Consultants		40,000	25,000			65,000

3.1.5	**LPCs carry out baseline surveys and develop national marine invasives reports**	GEF	71300	Local Consultants			40,000	50,000	40,000	130,000
3.1.6	**Compile country baseline data and input into GMEIS (see activity 3.2)**	GEF	74100	Professional services					15,000	15,000
3.2.1	**Identify GMEIS Design/architecture Options**	GEF	71200	International Consultants		25,000				25,000
3.2.2	**Hold GMEIS expert workshop for design / architecture selection**	GEF	71200	International Consultants		60,000				60,000
		GEF	71600	Travel		10,000				10,000
3.2.3	**Develop country profile database format and disseminate to participating countries**	GEF	71200	International Consultants		20,000				20,000
3.2.4	**Provide training and technical assistance on knowledge management and database development for LPCs**	GEF	71200	International Consultants		15,000	30,000	30,000	50,000	125,000
3.2.5	**Develop country profile databases**	GEF	71300	Local Consultants		25,000	25,000	25,000	25,000	100,000
3.2.6	**Develop and maintain GloBallast GMEIS web portal**	GEF	71200	International Consultants	10,000	10,000	10,000	10,000	10,000	50,000
3.2.7	**Launch and maintain national BWM websites**	GEF	71300	Local Consultants	25,000	50,000	10,000	10,000	30,000	125,000
3.3.1	**Stakeholder outreach to GB pilot regions, LMEs and Regional Seas**	GEF	71200	International Consultants	20,000	30,000	30,000	40,000	40,000	160,000
3.3.2	**Publish and post quarterly newsletters**	GEF	72300	Materials and Goods	18,000	18,000	18,000	18,000	16,000	88,000
3.3.3	**Develop, update and translate GloBallast brochures and publications**	GEF	71200	International Consultants	10,000	10,000	10,000	10,000	10,000	50,000

	Sub-total	**GEF**			**108,000**	**403,000**	**258,000**	**193,000**	**236,000**	**1,198,000**
4	**Public-private partnerships developed to spur the development of cost-effective ballast water technology solutions**									
4.2.1	**Develop framework for ballast water treatment equipment test facility standards and inter-calibration procedures**	GEF	71200	International Consultants		40,000				40,000
4.2.3	**Develop and disseminate standards and procedures manual for ballast water treatment equipment test facility standards**	GEF	71200	International Consultants			30,000			30,000
4.4.1	**Establish Ballast Water Innovation Fund and support innovative projects**	GEF	71200	International Consultants		30,000		30,000		60,000
4.4.2	**Hold biennial global R&D forums and biennial technology conferences**	GEF	71600	Travel (Training for LPC Scientists)			50,000		50,000	100,000
	Sub-total	**GEF**			**0**	**70,000**	**80,000**	**30,000**	**50,000**	**230,000**
	Total	**GEF**			**915,000**	**1,210,000**	**1,345,000**	**1,250,000**	**968,000**	**5,688,000**

2.3.2 Work Plan

	Outcomes/Outputs/Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	**Learning, evaluation and adaptive management increased**																				
1.1	**Project Management and coordination structures in place at global, regional and local level**																				
1.1.1	**Hire, equip and maintain project coordination unit staff and office at IMO HQ**																				
1.1.2	**Establish and support Global Project Task Force (GPTF)**																				
1.1.3	**Designate and coordinate with regional coordinating organizations**																				
1.1.4	**Establish and maintain regional task forces**																				
1.1.5	**Establish project coordination in each LPC, including identifying lead organization (LO), national focal point and national project coordinator**																				
1.1.6	**Establish and maintain National Task Forces**																				
1.1.7	**Represent and promote GloBallast Partnerships in international and regional conventions and forums**																				
1.2	**Project monitoring, evaluation and reporting systems established and implemented**																				
1.2.1	**Conduct mid term evaluation and initiate mid course corrections**																				

1.2.2	**Conduct terminal evaluation**																							
1.2.3	**Develop and submit APR/PIRs and other required GEF/UNDP project monitoring reports**																							
2	**BWM Strategies in place, with legal, policy and institutional reforms developed, implemented and sustained at national level**																							
2.1	**Institutional capacities are enhanced through a comprehensive training program on Ballast water management**																							
2.1.1	**Update GloBallast Introductory Modular Course for Ballast Water Management**																							
2.1.2	**Hold training courses on BWM using updated Modular Training package**																							
2.2	**Risk-based, rapid status assessment reports are developed and used to guide country activities**																							
2.2.1	**Develop template and guidelines for rapid assessments**																							
2.2.2	**Develop rapid status assessments**																							
2.3	**Economic aspects of marine bio-invasions factored into national strategic planning**																							
2.3.1	**Develop guidance for economic assessments**																							
2.3.2	**Develop national economic impact and response cost assessments, taking into account the need for financial sustainability**																							
2.3.3	**Aggregate economic information**																							
2.4	**National Ballast Water Management Strategy (NBWMS) developed and implemented**																							

2.4.1	**Develop guidelines for national BWMS development, including options for financial sustainability**																						
2.4.2	**Hold (a) regional harmonisation (including regional LPI assessment) and (b) Sustainability workshops**																						
2.4.3	**Hold national stakeholder workshops**																						
2.4.4	**Develop national BWMSs**																						
2.5	**National legal reforms instituted**																						
2.5.1	**Develop legal road map, model legislation and training manuals**																						
2.5.2	**Train LPC lawyers on developing legal frameworks for BWM**																						
2.5.3	**Develop national legislation**																						
2.6	**Specialist capacities improved for BWM**																						
2.6.1	**Develop model BWM (specialist) course**																						
2.6.2	**Capacitate Training Institutes for delivery of Introductory course and specialized courses**																						
2.7	**Compliance monitoring and enforcement indicators are developed and national systems enhanced, with an emphasis on risk-based priority setting, and the use of voluntary approaches**																						
2.7.1	**Develop and disseminate model CME framework, including indicators**																						
2.7.2	**Hold training workshops on CME**																						
2.7.3	**Countries implement modified CME systems**																						

2.7.4	**Conduct follow up reviews of modified CME systems and develop lessons learned study**																										
3	**Knowledge management tools and marine monitoring systems are effectively utilized to expand global public awareness and stakeholder support, improve understanding of ballast water impacts on marine ecology, and enhance maritime sector communications.**																										
3.1	**Baseline information established on biodiversity and alien species presence in major ports**																										
3.1.1	**Update Port baseline survey protocols**																										
3.1.2	**Hold training workshops on port baseline survey design and implementation**																										
3.1.3	**Develop country, regional and global rosters of taxonomy experts**																										
3.1.4	**Train local taxonomists in generic tools and methodologies for marine invasives detection and analysis**																										
3.1.5	**LPCs carry out baseline surveys and develop national marine invasives reports**																										
3.1.6	**Compile country baseline data and input into GMEIS (see activity 3.2)**																										
3.2	**Global Marine Electronic Information System (GMEIS) for Ballast Water Management Established**																										
3.2.1	**Identify GMEIS Design/architecture Options**																										
3.2.2	**Hold GMEIS expert workshop for design / architecture selection**																										
3.2.3	**Develop country profile database format and disseminate to participating countries**																										

3.2.4	**Provide training and technical assistance on knowledge management and database development for LPCs**																						
3.2.5	**Develop country profile databases**																						
3.2.6	**Develop and maintain GloBallast GMEIS web portal**																						
3.2.7	**Launch and maintain national BWM websites**																						
3.3	**Stakeholder and public awareness of ballast water management and marine bio-invasion issues is raised and sustained**																						
3.3.1	**Stakeholder outreach to GB pilot regions, LMEs and Regional Seas**																						
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4.1	**Strategic partnership forged with shipping industry**																						
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4.1.2	**Hold biannual industry dialogues between GITF and the GloBallast Steering Committee**																						

4.2	**Globally agreed standards developed for ballast water technology test facilities**																						
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4.2.3	**Develop and disseminate standards and procedures manual for ballast water treatment equipment test facility standards**																						
4.3	**Solutions devised and best practices publicized on port-based reception facilities for ballast water tank sediments**																						
4.3.1	**Identify dry dock site and conduct feasibility study for pilot sediment facility**																						
4.3.2	**Construct and manage pilot sediment facility**																						
4.3.3	**Assess pilot facility operation and disseminate lessons learned**																						
4.4	**State of the art in Ballast water treatment technology solutions identified and publicized**																						
4.4.1	**Establish Ballast Water Innovation Fund and support innovative projects**																						
4.4.2	**Hold biennial global R&D forums and biennial technology conferences**																						

3 ADDITIONAL INFORMATION

3.1 Country Endorsement Letters, Co-financing Letters and Support Letters

(Electronic files attached and file names are given in brackets)

3.1.1 Index

ANNEX A: Country Endorsement / support letters by GEF National Focal Points (*File Name: ANNEX A - GEF OFP Endorsements (updated Oct 23)*)

No	Country	GEF NFP	Status	Date
1	Antigua & Barbuda	GEF OFP	Endorsed	25 May 2006
2	Bahamas	GEF OFP	Endorsed	12 April 2006
3	Chile	GEF OFP	Endorsed	17 March 2006
4	Colombia	GEF OFP	Endorsed	16 March 2006
5	Croatia	GEF OFP	Endorsed	20 July 2006
6	Djibouti	GEF OFP	Endorsed	09 April 2006
7	Ecuador	GEF OFP	Endorsed	09 March 2006
8	Egypt	GEF OFP	Endorsed	06 March 2006
9	Ghana	GEF OFP	Endorsed	02 August 2006
10	Haiti	GEF OFP	Endorsed	01 June 2006
11	Jamaica	GEF OFP	Endorsed	24 July 2006
12	Jordan	GEF OFP	Endorsed	03 June 2006
13	Libya	GEF OFP	Endorsed	26 August 2006
14	Panama	GEF PFP	Endorsed	09 March 2006
15	Peru	GEF OFP	Endorsed	23 March 2006
16	Sudan	GEF OFP	Endorsed	04 June 2006
17	Tunisia	GEF OFP	Endorsed	23 September 2006
18	Turkey	GEF OFP	Endorsed	21 September 06
19	Yemen	GEF OFP	Endorsed	24 June 2006

ANNEX B: Country Endorsement Letters by non-GEF Focal Points (*File Name: ANNEX B - non-GEF OFP Endorsements (updated Oct 23)*)

No	Country	Organization	Status	Date
20	Algeria	Ministry of Transport	Endorsed	03 July 2006
21	Angola	Ministry of Transport	Endorsed	21 July 2006
22	Anguilla	Ministry of Environment	Endorsed	24 May 2006
23	Argentina	Perfectura Naval Argentina	Endorsed	10 March 2006
24	Barbados	Ministry of Tourism & International Transport	Endorsed	31 August 2006
25	Belize	Ministry of Agriculture and Fisheries	Endorsed	30 June 2006
26	Benin	Ministry of Environment	Endorsed	21 August 2006
27	Brazil	Brazilian Navy	Endorsed	20 July 2006
28	Canada	Transport Canada	Endorsed	17 August 2006
29	Cayman Islands	Department of Environment	Endorsed	14 June 2006
30	China	Maritime Safety Administration	Endorsed	09 June 2006
31	Costa Rica	Advisor to GEF Focal Point	Endorsed	21 may 2006
32	Cote D'Ivoire	Ministry of Environment	Endorsed	23 June 2006
33	Cuba	Ministerio de Ciencia Tecnologia y Medio Ambiente (CITMA)	Expression of interest	15 June 2006
34	Dominica	Ministry of Agriculture and Fisheries	Endorsed	14 June 2006
35	Guatemala	Consejo Nacional de Areas Protegidas	Endorsed	16 June 2006
36	Guinea	Ministry of Environment	Endorsed	03 May 2006
37	I.R. Iran	Ministry of Roads and	Endorsed	20 May 2006

		Transport		
38	India	Ministry of Shipping, Road Transport & Highways	Endorsed	8 September 2006
39	Mexico	Ministry of Environment	Endorsed	31 May 2006
40	Morocco	Ministry of Environment	Endorsed	11 September
41	Netherlands	GEF Council Member	Endorsed	02 June 2006
42	Sao Tome and Principe	Ministry of Finance	Endorsed	10 February 2006
43	Sierra Leone	Ministry of Transport	Endorsed	3 April 2006
44	South Africa	Department of Transport	Endorsed	28 June 2006
45	Trinidad and Tobago	Ministry of Works and Transport	Endorsed	03 July 2006
46	Turks and Caicos Islands	Dept. of Environment and Coastal Resources	Endorsed	30 May 2006
47	Venezuela	Ministry of Infrastructure	Endorsed	10 May 2006

ANNEX C: Country Co-Financing Letters with Supporting Documents – PART 1 (*File Name: ANNEX C - Country Co-financing Part 1 (updated Oct 23)*)

No	Country	Co-financing Commitment by	Status
1	Argentina	Prefectura Naval Argentina	Confirmed
2	Bahamas	Port Department	Confirmed
3	Chile	DG Del Territorio Maritimo Y de Marina Mercante	Confirmed
ANNEX D: Country Co-Financing Letters with Supporting Documents – PART II (*File Name: ANNEX D - Country Co-financing Part 2 (updated Oct 23)*)			
4	Colombia	Ministry of Defence / DG Maritime	Confirmed
5	Croatia	Ministry of Sea, Tourism, Transport and Development	Confirmed
6	Egypt	Ministry of Environment	Confirmed
ANNEX E: Country Co-Financing Letters with Supporting Documents – PART III *(File Name: ANNEX E - Country Co-financing Part 3 (updated Oct 23)*)			
7	Ghana	Ministry of Ports, Harbours and Railways	Confirmed
8	Jamaica	Maritime Authority of Jamaica	Confirmed
9	Jordan	Ministry of Planning and International Cooperation	Confirmed
10	Sudan	Ministry of Environment	Confirmed
11	Trinidad and Tobago	Ministry of Works and Transport	Confirmed
12	Turkey	Prime Ministry- Secretariat for Maritime Affairs	Confirmed
13	Venezuela	Ministry of Infrastructure – Instituto Nacional de los Espacios Acuaticos e Insulares	Confirmed
14	Yemen	Maritime Affairs Authority	Confirmed

ANNEX F: Regional Coordinating Organization Co-Financing / support (*File Name: ANNEX F - RCO Co-financing (updated Oct 23)*)

No	RCO	Co-financing Commitment by	Status
1	CPPS	Secretary General	Confirmed
2	GCLME	Regional Director	Confirmed
3	PERSGA	Secretary General	Confirmed
4	RAC-REMPEITC	Director	Confirmed
5	REMPEC (MAP)	Director	Confirmed
6	RAC-SPA (MAP)	Director	Confirmed
7	ROPME	Coordinator	Confirmed
8	SPREP	Director	Confirmed

ANNEX G: Cooperating Agency Co-financing and Parallel Financing (*File Name: ANNEX G - Cooperating Agency Co-financing (updated Oct 23)*)

No	Organization	Co-financing Commitment by	Status
1	International Maritime Organization (IMO)	Director, Marine Environment Division	Confirmed

ANNEX H: Financial Institution and NGO Co-financing (*File Name: ANNEX H - Financial Institution and NGO Co-financing (Updated Oct 23)*)

No	Organization	Co-financing Commitment by	Status
1	European Bank for Reconstruction & Development (EBRD)	Senior Environmental Advisor	Confirmed
2	IUCN	Head, Global Marine Programme	Confirmed

ANNEX I: Private Sector Co-financing (*File Name: ANNEX I - PS Co-financing (Oct 23*))

1	BP Shipping	Director, Government and Industry	Confirmed
2	British Maritime Technologies	Managing Director	Confirmed
3	Vela Marine International	CEO	Confirmed
4	American President Lines (APL)	Vice-President	Confirmed

ANNEX J: Private Sector Financing (Co-financing + Parallel Financing) (File Name: *ANNEX J - PS financing - Co-financing and parallel financing (Oct 23))*

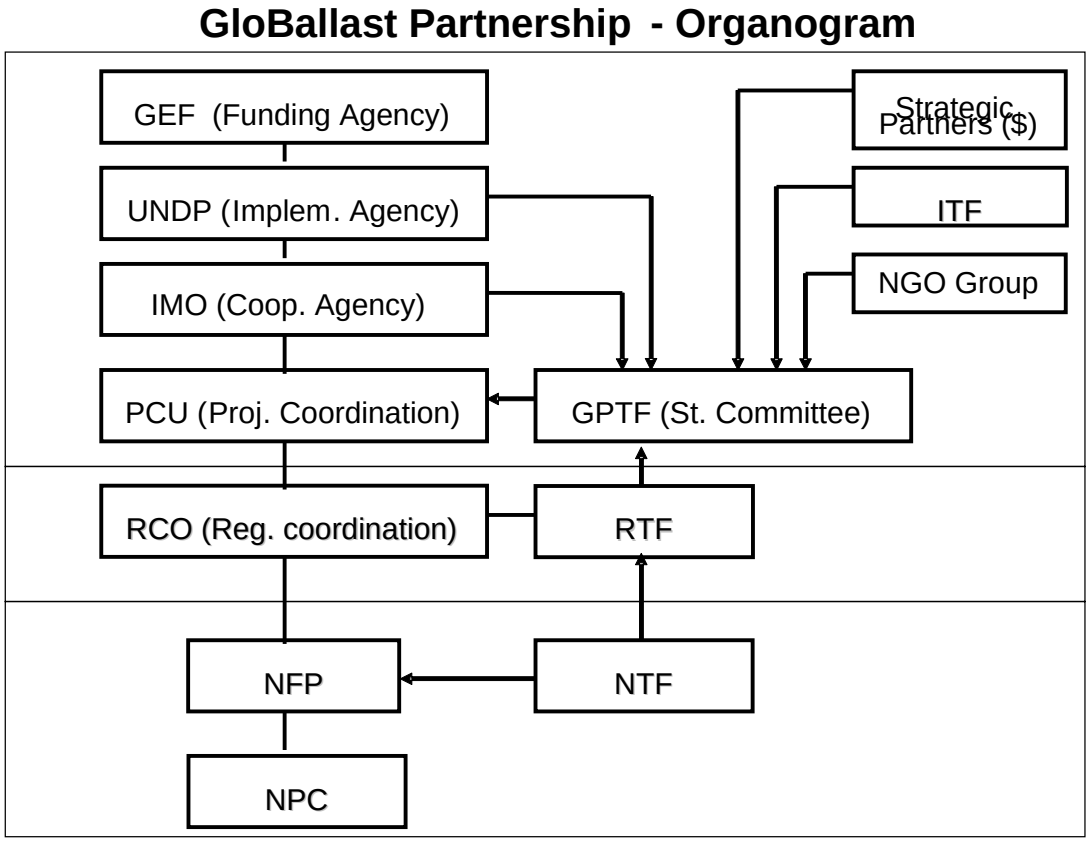
1	Degussa, Germany	Head, GCCAOP	Confirmed
2	ETI, USA	CEO	Confirmed
3	FTT, USA	CEO	Confirmed
4	IESE, Singapore	CEO and President	Confirmed
5	MetFil, Norway	Director, Development	Confirmed
6	NIOZ, Netherlands	Senior Scientist	Confirmed
7	NIWA, New Zealand	General Manager	Confirmed
8	NIWA, Norway	Research Manager	Confirmed
9	Optimarin AS, Norway	CEO	Confirmed

ANNEX K: Strategic Partner Endorsements (*File Name: ANNEX K - Strategic Partner Endorsements(Oct 23)*

No	Organization	Support Letter by	Status
1	Black Sea Commission	Executive Secretary	Confirmed
2	Census of Marine Life (CoMl)/OBIS	OBIS International Committee	Confirmed
3	CIESM	Director General	Confirmed
4	Global Invasive Species Programme	Director	Confirmed

	(GISP)		
5	Guinea Current Large Marine Ecosystem Project (GCLME)	Regional Director	Confirmed
6	Intl. Chamber of Shipping (ICS)	Secretary General	Confirmed
7	INTERTANKO	Environmental Manager	Confirmed
	NEPAD	Regional Coordinator	Confirmed
8	World Conservation Union (IUCN)	Head, Marine Programme	Confirmed
9	UNESCO-IOC	Assistant Director General	Confirmed

3.2 GloBallast Partnership Organagram



3.3 Terms of References for key project staff and main sub-contracts

A. Terms of Reference: Chief Technical Advisor (CTA), Level – P5, International Hire

The CTA will be responsible for the overall co-ordination of all aspects of the GloBallast Partnership Project in general, and in addition he/she shall be responsible for the delivery of a number of technical activities involving training, capacity building in participating developing countries and liaise directly with the units established under the project, i.e., the Global Project Task Force (GPTF), Regional Project Task Forces (RPTFs), the National Project Task Forces (NPTFs), potential additional project donors, private sector, national focal points and the representatives of Global Environment Facility (GEF) partners, in order to co-ordinate the annual work plan for the Programme. While providing the necessary project management services for the Project, the CTA's main responsibilities will be in the role as an international ballast water management expert responsible for the delivery of the technical outcomes through technical assistance activities and coordination of all related activities identified in the GloBallast Partnership Project. The estimated number of staff-weeks for this position is 220.

The CTA will in particular:

1. Manage the GEF components of the Programme Co-ordination Unit (PCU), its staff, budget and imprest funds if any;
2. Prepare the annual work plan of the Programme on the basis of the Project Document, in close consultation and co-ordination with the GPTF, national focal points, GEF partners and relevant donors;
3. Co-ordinate and monitor the activities described in the work plan and provide progress reports to IMO and UNDP as per the project monitoring and evaluation plan;
4. Ensure consistency between the various programme elements and related activities provided or funded by other donor organizations;
5. Prepare and oversee the development of terms of reference for additional consultants and contractors when needed;
6. Co-ordinate and oversee the preparation of reports from the Programme;
7. Foster and establish links with other related GEF programmes and, where appropriate, with other regional international waters' programmes;
8. In the capacity as an international expert in ballast water management field, provide technical assistance and capacity building services to the to the participating developing countries with an aim to increase learning, evaluation and adaptive management, and to ensure ballast water management strategies are in place, legal, policy and institutional reforms developed and implemented at national levels.

Qualifications and Experience

Post-graduate degree in environmental science and engineering, marine engineering or a directly related field (e.g. marine science, natural resources economics, etc.). At least fifteen years experience in related fields, of which 8 years experience in ballast water management field and related capacity building activities. Experience as a senior project manager. Demonstrated diplomatic and negotiating skills; Familiarity with the goals and procedures of international organizations, in particular those of the GEF partners (UNDP, IMO, World Bank); Excellent knowledge of spoken and written English; and familiarity with the shipping industry and issues related to the industry in general; direct knowledge of or work experience in one or more of the participating countries would be an asset.

B. **Terms of Reference: Technical Advisor (TA), Level – P3, International Hire**

Under the supervision of the Chief Technical Adviser (CTA), the Technical Adviser (TA) will be responsible for the delivery of a number of technical activities that includes training, capacity building and coordination of the knowledge management and private-public partnership component of the GloBallast Partnership Project. He/she shall be responsible for activities aimed at the collection of information, exchange and networking between a wide range of project participants including government officials, scientists, non-governmental organizations and the public at large. He/she will work closely with institutional focal points, project lead agencies, specialized UN Agencies, international NGOs, national and local NGOs, and will co-operate and encourage the activities of other donors in the area of project communications. While providing the necessary project management services for the Project as requested by CTA, the TA's main responsibilities will be in the role as an international expert responsible for the delivery of the technical outcomes and coordination of all related activities. The estimated number of staff-weeks for this position is 220.

The TA will have the following specific duties:

1. Generate and maintain a directory of all persons and institutions engaged in work related to the implementation of the programme;
2. Supervise data exchange and the maintenance of the data communications network between and among project related institutions and individuals;
3. Create, edit, and distribute a regular information bulletin on the programme;
4. Collect information on ballast water management options, related research projects and their results, as well as on new invasions of aquatic species, on related financial implications and on related remediation programmes;
5. Supervise the development of an electronic information and communications system as part of a global resource information centre;
6. Supervise the development and maintenance of information management strategies;
7. Develop and maintain a World Wide Web home page for project;
8. Consult in the creation of and supervise the creation of awareness and education programmes in each participating country;
9. Lead the development of a global marine electronic information system for ballast water management
10. Supervise the technical activities identified under the Global Industry Alliance which is the Private-Public Sector Partnership component of the GloBallast Partnership Project
11. Assist the CTA in delivering technical activities as per the Project Plan
12. Assist in the administration of other information-related communications systems as required by CTA.
13. Carry out any other tasks as requested by the Chief Technical Advisor of the Project.

Qualifications and Experience:

Post-graduate degree in marine science, information management, natural resources economics or a directly related field; At least five years experience in the international arena dealing with information exchange and marine scientific/environmental management projects; Experience in international communication technologies, computer data bases, web design and information systems; Experience in the development of awareness and training programmes; Excellent knowledge of spoken and written English; Familiarity with maritime transportation issues.

C. Terms of Reference: Administrative Assistant (AA), Level – G6, Local Hire

As part of the GloBallast Programme Coordination Unit (PCU), the AA will perform a variety of secretarial, coordinating, monitoring and administrative services to ensure the efficient daily running of the PCU and in support of project/programme activities. The AA will work within the PCU with a considerable degree of independence, ensuring the smooth functioning and continuity of the projects/programmes and will receive directions from the Chief Technical Advisor on technical matters. The estimated number of staff-weeks for this position is 220.

Typically, the incumbent will perform the following duties:

1. Draft correspondence and documents of an administrative nature in consultation with the CTA and TA.
2. Coordinate the procurement activities for the PCU and support the financial control and monitoring activities of the PCU.
3. Establish and maintain the filing system of technical documents and general internal and external correspondence. Establish and update a proper computerized information system on on-going activities, collaborating partners, activities of other international organizations related to the Project. Access and retrieve information from relevant databases and update as required. Support the TA in maintaining the GloBallast Information Clearinghouse.
4. Make administrative arrangements with regard to recruitment of additional consultants / experts for the Project
5. Assist in the organization of meetings held by PCU (Global Task Force Meetings, working groups, and symposia), i.e. make general administrative preparations, including providing logistical support to the delegates such as sending invitation letters and other advises as necessary and preparation of meeting documents. Provide administrative and secretarial support during the meetings.
6. Identify and recruit temporary office staff, if required, and provides briefing and guidance to any temporary staff on general office practices and procedures

Qualifications and Experience:

Equivalent to graduation from secondary school or equivalent technical or commercial school and specialized training preferably in administration / management related fields. Basic training in secretarial/administrative training, or equivalent work-related experience, including typing and proven skills on standard office software. Work with computerized systems and databases. Demonstrated managerial and communication skills. Considerable and progressively responsible experience in the secretarial/clerical/administrative field. Knowledge and practical experience in ERP systems desirable. Sound computer skills

3.4 Stakeholder Involvement Plan

Ballast water problems are inter-disciplinary in nature, so the success of the project depends on the full involvement of a broad group of stakeholders. Experience from the pilot phase has given a good indication of the main actors that be involved. Without precluding the participation of additional partners, the following types of institutions and organizations are expected to play a role:

International Organizations:

- Donor community and international financial institutions.

Environmental Organizations & Institutes

- National and regional marine research institutions
- Relevant NGOs

Regional and National Government partners:

- Maritime administrations
- Environmental agencies
- Ministries of agriculture (fisheries)
- Ministries of health (quarantine and sanitary services)
- Coast-guard and navy
- Parliamentary committees for environmental protection

Industry:

- Shipping and ports
- Oil and gas
- Mining

Each of these sectors is in turn discussed below, including mention of specific partnering organizations and their expected roles in the project.

3.4.1 International Organizations:

The three key players are GEF (funding), UNDP (implementing) and IMO (cooperating). In addition, UNEP is playing a supporting role with respect to its financial support for several of the Regional Seas that are GloBallast RCOs, including the Mediterranean and Caribbean regions.

EBRD is providing direct support to the Black Sea, Caspian and Baltic Seas countries, to carry out training on ballast water management using the IMO Model Course on Ballast Water management.

3.4.2 Environmental Organizations and Institutes

IUCN and Friends of the Earth were participants in the GloBallast pilot phase GPTF. They are continuing their involvement during the GloBallast Partnerships. IUCN has indicated a con-financing of $400,000. WWF has also expressed its support and will be a partner organization.

In addition to continued involvement through the GPTF, environmental organizations will in particular link with the efforts during GloBallast Partnerships to better understand the marine ecology through port baseline surveys and taxonomy.

3.4.3 Regional and National Government Partners

Key stakeholders at the national level will be involved through the establishment of National Task Forces. The National Focal Points, who will take responsibility for the implementation of the project in their respective countries, will act as chairpersons of the National Task Forces. .

National stakeholders will benefit from studies, workshops, training, reviews and legal and institutional analyzes. This is foremost a project designed to stimulate legal, policy and institutional reforms in partnering countries. The project will include extensive interaction with each country lead agency – which is assumed to be the maritime authority). Other government ministries, agencies and institutes that have responsibilities relevant to ballast water management are to be included in National Task Forces. The other participating agencies are expected to include: environment, transportation, agriculture (fisheries) health (quarantine and sanitary services), and port state control authorities (coast guards and navy).

A series of training activities are scheduled, which will involve experts from various disciplines, including:

- **Law**: training in maritime and ballast water related law.
- **Port control and procedures compliance**: training in risk-based compliance monitoring and enforcement.
- **Port baseline survey research**: training to carry out surveys
- **Taxonomy**: co-sponsored training to prepare experts to carry out marine IAS taxonomy activities.

3.4.4 Industry

GloBallast Partnerships recognizes that industry must play a crucial role in any effort to improve ballast water management. A Global Industry Alliance (GIA) is being established parallel to the project in order to provide advice and support as the project gets implemented. During the PDF-B effort, three major shipping companies have pledged $50,000 per year to seed the GIA Fund, which will be sued to support activities identified in Outcome (4) of the DPD, including:

- sponsoring an industry forum for consultations back to back with the GPTF meetings.
- Supporting efforts to establish standards for the operation of treatment technology testing facilities
- Supporting a pilot effort to develop options for sediment facilities
- Sponsoring an innovation fund for promising new technologies
- Co-hosting periodic R&D forums.
- Sponsoring development and dissemination of ship-based ballast management & reporting (industry sponsored effort to develop on-board ballast management plans

Cooperation with the International Association of Independent Tanker Owners (INTERTANKO), Oil Companies International Marine Forum (OCIMF), and International Chamber of Shipping Limited (ICS), whih was developed during the GBP pilot phase, will be continued.

3.4.5 Consultations

During the PDF-B phase, regional workshops / meetings were held in the high priority regions to discuss GBP participation, to secure engagement and commitment from the Governments, to identify and agree on the regional coordinating organization (RCO) and to identify key stakeholders and partners, including shipping industry. These meetings were held as given in the table:

Region	*Venue*	*Date*
Mediterranean	Protoroz, Slovenia	November 2005
Red sea and Gulf f Aden	Jeddah, Kingdom of Saudi Arabia	November 2005
West and Central Africa (GCLME region	Accra, Ghana	February 2006
Wider Caribbean	Caracas, Venezuela	February 2006
South East Pacific	Guayaquil, Ecuador	February 2006

Meeting of the Mediterranean countries were organized under the auspices of MAP, in conjunction with the MAP-COP meeting in Slovenia. Separate discussions were then held with the two regional organizations, REMPEC and RAC/SPA, who were identified as the potential RCOs in the region. A draft implementation strategy for the region was discussed and it was agreed that REMPEC would take the lead RCO role in the region with the support of RAC/SPA in specific activities.

In the Red Sea and Gulf of Aden region, which was identified as the highest priority region in the Global Inception workshop, the consultant undertook a detailed fact finding mission to discuss the project with key stakeholders in the countries as well as to identify the current status of ballast water management in these countries. This was followed by a regional meeting of the government and industry representatives from the PERSGA member states, hosted by PERSGA. This meeting also established a Regional Task Force and adopted a Regional Action Plan for Ballast Water Management, which included participation of the PERSGA countries in GloBallast Partnerships.

In the West and Central Africa region, the consultation process started with a regional meeting organized by the GCLME PCU with participation of key government representatives from all GCLME countries. The meeting participants also developed a regional action plan and agreed to form a regional task force to implement the action plan. The meeting participants also unanimously agreed that GCLME would be the ideal body to act as the regional coordinating organization for the implementation of GBP.

The Wider Caribbean Regional Meeting was held in Venezuela, with strong participation from a dozen wider Caribbean countries, and including a large number of maritime industry representatives. The meeting was organized under the auspices of RAC-CAR and REMPEITC. The meeting participants reviewed the various issues associated with ballast water transfer of organisms in the region, identified high priority needs and potential strategic partnerships, and indicated their strong support for GloBallast Partnerships.

All of the South East Pacific Countries (CPPS region) plus Argentina participated in a consultation meeting organized by the CPPS Secretariat. All member countries of CPPS and Argentina agreed to promote and participate in GloBallast Partnerships and all members subsequently provided written endorsement letters for the project.

Parallel to the regional/country level consultations, the PCU during the PDF-B period carried out numerous discussions with potential strategic partners, including the private sector. A representative sampling of meetings is mentioned below:

- Baltic Region: Meetings at the HELCOM maritime group meeting, Klaipeda, Lithuania
- Caspian Region: Participation in the Caspian Environment Program Regional Inception Meeting for Ballast Water Management

- Global: Participation in the International Waters Meeting held in Brazil to discuss partnerships with other sister GEF projects such as LMEs
- Global: Attendance at the 3rd Oceans Forum held in Paris to discuss partnership opportunities with various other Ocean related organizations
- Global: Participation in the World Maritime Technology Conference to engage interest and support from the technology developers and maritime industry
- Global: Co-organized an industry round table in partnership with the Lloyds to seek interest form maritime industry in participating in the Global Industry Alliance
- Regional: Met with representatives of the European Bank for Reconstruction and Development (EBRD) to mobilise interest and support of an FI in participating in the project with a special emphasis on Eastern European Countries.
- Private Sector: Set up meetings with potential industry partners including BP shipping, Wallenius Marine, Vela International Marine, British Maritime Technologies, Shell, NOL Singapore and Maritime and Port Authority of Singapore on forming a Global Industry Alliance for ballast water management.

Private / NGO: Met with organizations involved in the development of maritime electronic highways as well as global marine information systems to identify potential strategies for developing a GloBallast Marine Electronic Information System (GMEIS).

Activities planned during implementation and evaluation, including topics, groups involved, and outcomes.

During the Inception Phase, stakeholders at the several levels will be involved in initial preparations and decision making leading up to the GPTF Inception Meeting. At the national level, the National Task Forces will meet to agree on the national work plan and consider draft results of the rapid assessments being carried out. Also during the inception phase, the national focal points in each region will meet as a Regional task Force to share information and discuss regional aspects of ballast water management. Then at the global level, the GPTF Inception Meeting will be held, with decisions and agreements made on the work plan and activities to be carried out during the 5 year project.

It is planned that in addition to getting the direct involvement of stakeholders in the National Task Forces, partner countries will also involve stakeholders through the several stakeholder meetings that are planned for consideration of the draft National Ballast Water Management Strategies NBWMS). These stakeholder meetings at the national level are included as activity 2.4.3 in the Project Log Frame, (Section II, Part II).

During the mid term and final evaluations, the independent evaluators will receive a list of stakeholders at the global, regional and national levels. A select number of partner countries will be visited during each evaluation to hold interviews with the stakeholders and participants. The evaluations will be timed so as to enable the opportunity for the evaluators to participate in some of the NTF and RTF meetings, to see first hand the level of stakeholder involvement.

Long-term involvement of stakeholders in decision making and implementation

Ultimately, it will be the national governments that are called upon to maintain a long term involvement in ballast water management and marine coastal protection. Sustainability requires that legal policy and institutional reforms are carried out. In particular, long term involvement at the national level will be greatly enhanced if countries ratify and implement the Ballast Water Management Convention. GloBallast Partnerships is specifically focused on this LPIR effort.

Equally important for long term success is the close cooperation and active participation of the maritime industries. It is essential that the pace of research and development continue and even escalate, so that cost-effective treatment technologies are tested and ready for installation. It is

also critical that streamlined compliance procedures are established with industry to ensure that ballast water management does not become an undue burden and delay on shippers and port managers. The development of the Global Industry Alliance should help to ensure longer term involvement of the shipping industry in this effort. The GIA is directly supporting and linked to, but independent of, the GEF GloBallast Partnerships project. It is expected that the alliance will continue as a marine invasives –focused partnership between IMO and the shipping industry through the course of GBP and beyond.

Impacts on beneficiaries and vulnerable groups, especially indigenous communities, women, and displaced households.

There is a tendency for many marginal members of coastal-based societies to live immediately adjacent to the seas and to depend on subsistence fishing and mariculture for their food and livelihoods. The invasive of alien marine species can therefore have a direct effect on their health and well being. To the extent that alien species can out-compete and otherwise decimate local fish populations, as for instance is occurring with the comb jellyfish infestation in the Caspian Sea, this can be debilitating to subsistence fishermen. Also, periodic blooms of toxic algae & dinoflagelates, which may be linked to ballast management, puts a direct health threat into the equation, for local populations that ingest contaminated shellfish.

GloBallast Partnerships, by working to reduce the risk of IAS transfer through shipping, should have a positive impact on vulnerable coastal populations by reducing the chances that biological invaders can arrive with their accompanying economic and health risks. National governments, during their rapid risk assessments, and then NBWM Strategy development efforts, will consider the health and economic consequences of current and potential future marine bio-invasions, and will take note of the particular vulnerabilities of marginal populations (poor, displaced).

3.5 Summary of the Ballast water Management Convention

The major elements of the Ballast Water Management Convention are summarized below:

3.5.1 General Obligations

Under Article 2 General Obligations, Parties to the Convention undertake to give full and complete effect to the provisions of the Convention and the Annex in order to prevent, minimize and ultimately eliminate the transfer of harmful aquatic organisms and pathogens through ships' ballast water and sediments. Parties are also given the right to take, individually or jointly with other Parties, more stringent measures with respect to the prevention, reduction or elimination of the transfer of harmful aquatic organisms and pathogens through ships' ballast water and sediments, consistent with international law. It is also stipulated that Parties have the responsibility to ensure that ballast water management practices do not cause greater harm than they prevent to their environment, human health, property or resources, or those of other States.

3.5.2 Reception Facilities

Parties undertake to ensure that ports and terminals where cleaning or repair of ballast tanks occurs, have adequate reception facilities for sediments.

3.5.3 Research and Monitoring

The Convention calls for Parties individually or jointly to promote and facilitate scientific and technical research on ballast water management; and monitor the effects of ballast water management in waters under their jurisdiction.

3.5.4 Survey, Certification and Inspection

Ships are required to be surveyed and certified (Article 7 Survey and Certification) and may be inspected by port State control officers (Article 9 Inspection of Ships) who can verify that the ship has a valid certificate; inspect the Ballast Water Record Book; and/or sample the ballast water. If there are concerns, then a detailed inspection may be carried out and "the Party carrying out the inspection shall take such steps as will ensure that the ship shall not discharge Ballast Water until it can do so without presenting a threat of harm to the environment, human health, property or resources." All possible efforts shall be made to avoid a ship being unduly detained or delayed (Article 12 Undue Delay to Ships).

3.5.5 Technical Assistance and Regional Cooperation

The Convention encourages Parties, to provide support for those Parties which request technical assistance to train personnel; to ensure the availability of relevant technology, equipment and facilities; to initiate joint research and development programs; and to undertake other action aimed at the effective implementation of the Convention.

3.5.6 Management and Control Requirements for Ships

Ships are required to have on board and implement a Ballast Water Management Plan approved by the Administration (Regulation B-1). The Ballast Water Management Plan is specific to each ship and includes a detailed description of the actions to be taken to implement the Ballast Water Management requirements and practices. Ships must have a Ballast Water Record Book (Regulation B-2) to record when ballast water is taken on board; circulated or treated for ballast water management purposes; and discharged into the sea. It should also record when ballast water is discharged to a reception facility and accidental or other exceptional discharges of ballast water.

The specific requirements for ballast water management depending on the ballast capacity and year of construction are summarized in the following table:

Table I. Requirements for Ballast Water Management as per IMO BWM Convention

Ship construction	Ballast capacity (cubic metres)	Control required
Before 2009	1500-5000	At least meet BWES or BWPS up to 2014 then BWPS
Before 2009	<1500 or >5000	At least meet BWES or BWPS up to 2016 then BWPS
In or after 2009	<5000	at least meet BWPS
In or after 2009 but before 2012	5000 or more	at least meet BWES or BWPS up to 2016 then BWPS
In or after 2012	5000 or more	at least meet BWPS

(BWES = BW Exchange Standard, BWPS = BW Performance Standard)

Under Regulation B-4 Ballast Water Exchange, all ships using ballast water exchange should, whenever possible, conduct ballast water exchange at least 200 nautical miles from the nearest land and in water at least 200 meters in depth, taking into account Guidelines developed by IMO. In cases where the ship is unable to conduct ballast water exchange as above, this should be as far from the nearest land as possible, and in all cases at least 50 nautical miles from the nearest land and in water at least 200 meters in depth. When these requirements cannot be met, areas may be designated where ships can conduct ballast water exchange. All ships shall remove and dispose of sediments from spaces designated to carry ballast water in accordance with the provisions of the ships' ballast water management plan.

3.5.7 Additional Measures

A Party, individually or jointly with other Parties, may impose on ships additional measures to manage the ballast water and sediments. In these cases, the Party or Parties should consult with adjoining or nearby States that may be affected and should communicate their intention to establish additional measure(s) to the Organization at least 6 months prior, except in emergency or epidemic situations. When appropriate, Parties will have to obtain the approval of IMO to implement such additional requirements.

During the Convention development process, considerable efforts were focused on development of appropriate standards for ballast water management. There is a ballast water exchange standard and a ballast water performance standard.

3.5.8 Ballast Water Exchange Standard

Ships performing ballast water exchange shall do so with an efficiency of 95 per cent volumetric exchange of ballast water. For ships exchanging ballast water by the pumping-through method, pumping through three times the volume of each ballast water tank shall be considered to meet the standard described. Pumping through less than three times the volume may be accepted provided the ship can demonstrate that at least 95 percent volumetric exchange is met.

3.5.9 Performance Standard

Ships conducting ballast water management shall discharge less than 10 viable organisms per cubic meter greater than or equal to 50 micrometers in minimum dimension and less than 10 viable organisms per milliliter less than 50 micrometers in minimum dimension and greater than or equal to 10 micrometers in minimum dimension. In addition to this, the discharge of the indicator microbes shall not exceed the concentrations specified in Regulation D-2.2 of the Convention (i.e. Toxicogenic Vibrio cholerae (O1 and O139) with less than 1 colony forming unit (cfu) per 100 milliliters or less than 1 cfu per 1 gram (wet weight) zooplankton samples; Escherichia coli less than 250 cfu per 100 milliliters; Intestinal Enterococci less than 100 cfu per 100 milliliters). Ballast Water Management Systems must be approved by the Administration in accordance with IMO Guidelines (Regulation D-3 Approval Requirements for Ballast Water Management Systems). Ballast Water Management systems which make use of Active Substances to comply with this Convention shall be approved by the Organization.

3.5.10 Ballast Water Management Prototype Technologies

These provisions allow for ships participating in a program approved by the Administration to test and evaluate promising Ballast Water Treatment Technologies to have a leeway of five years before having to comply with the standard in regulation D-2.

3.5.11 Review of Standards

Under regulation D-5 *Review of Standards by the Organization*, IMO is required to review the Ballast Water Performance Standard, taking into account a number of criteria including safety considerations; environmental acceptability; practicability; cost effectiveness and biological effectiveness.

3.5.12 Entry into Force

The Convention will enter into force 12 months after ratification by 30 States, representing 35 per cent of world merchant shipping tonnage (Article 18 Entry into Force).

3.6 Outcome/Activity Comparison: Concept Note and Project Document.

Component/activity	Concept Note project description	Match with Log Frame
Component 1	Identification of the most appropriate strategies	Set as Outcome 1, Learning, evaluation and adaptive management
Activity 1.1	Review existing information regarding the quantity and quality of ballast water discharges in the targeted countries and determine the existing and potential threats posed by unmanaged ballast water discharges.	Fully covered under the rapid assessment – output 2.2: Risk-based, rapid status assessment reports are developed and used to guide country activities.
Activity 1.2	Conduct an initial assessment of the legal and institutional structures related to ballast water management in the targeted countries.	Covered under Output 2.2
Activity 1.3	Develop a National Action Plan (NAP) that identifies and outlines the most appropriate strategies to reduce the rate of aquatic bio-invasions caused by invasive species in ships' ballast water.	The NAPs (now termed NBWMS) are handled under Output 2.4: National Ballast water Management Strategies (NBWMS) devised and implemented.
Outcome 1	Most appropriate strategies to address the ballast water issue tailored to the specific needs of the targeted countries identified and agreed upon.	This outcome will be achieved under Outcome 2: Ballast Water Management Strategies in place, with legal, policy and institutional reforms developed, implemented and sustained at national level.
Component 2	Implementation of legal, policy and institutional reforms at national level.	Covered under Output 2.5, within outcome 2.
Activity 2.1	Facilitate the establishment of institutional arrangements at national level for enhanced cross-sectoral participation in the implementation of the NAP.	Handled under Activity 1.1.5, and then further established during the NBWMS activities, in particular stakeholder workshops (2.4.3)
Activity 2.2:	Develop communication and awareness-raising programs.	Fully covered under Output 3.3
Activity 2.3	Establish national information management centres linked to the existing databases on invasive aquatic species at regional and international level.	Provided for through creation of the GMEIS, Output 3.2
Activity 2.4	Develop risk assessment programs and decision support systems.	Developed under the CME activities, (Output 2.7)
Activity 2.5	Develop and implement compliance monitoring and enforcement systems	Provided for through Output 2.7
Activity 2.6	Adapt and implement the generic capacity building package for ballast water management and control	Covered under Output 2.1

	developed during the demonstration phase of GloBallast	
Activity 2.7	Promote the ratification and implementation of relevant international instruments (e.g. Ballast Water Management Convention, UNCLOS, CBD, etc.).	The BWMS development (2.4), and legal reform effort (2.5) are designed to take into account the BW Convention. The CBD and other Convention issues will also get taken into account through (2.4), as well as in training for port baseline surveys and reporting on marine invasives reports (3.1)
Activity 2.8	Disseminate and share project results, best practices and lessons learnt through publications, dedicated websites, IW: LEARN, GEF IW Conferences, etc.	Knowledge management and the dissemination of project results is covered within Output 3.3.
Outcome 2	Legal, policy and institutional reforms to minimize the impact of invasive species in ships' ballast water implemented	This outcome is handled directly through the LPIR outputs and activities within Outcome 2
Component 3:	Development of suitable mechanisms to ensure financial sustainability	Financial sustainability has been infused through many of the outputs, with specific focus through Output 2.3, on economic aspects. In addition, the NBWMS effort will require that Country's consider financial sustainability for the strategies devised.
Activity 3.1	Ensure sustainability of project intervention by identifying most appropriate governmental organizations for the long-term co-ordination of ballast water management and control.	The participating countries are expected to identify appropriate government organizations first as the project lead agency and focal points get appointed (1.1.5) and then through the NBWMS development effort, (2.4)
Activity 3.2	Facilitate the implementation of specific measures (financial and institutional) to sustain the reforms (e.g. port fees, government contributions, involvement of private sector, etc.).	Output 2.3 covers the economic aspects. In addition, the development of the Global Industry Alliance (4.1) and related activities are designed to ensure private sector participation. and outputs
Outcome 3	Financial and institutional mechanisms to support control and management of ships' ballast water identified together with responsible government agencies.	Fully covered within Outcome 2.
Component 4	Integration of ballast water management into broader effort to control invasive aquatic species at the Large Marine Ecosystem (LME) level.	LME participation is facilitated through the RCO structure (Activity 1.1.3). In addition, the project provides for outreach to other Regional seas and LMEs as covered under Activity 1.1.7.
Activity 4.1	Establish co-operative links at national, regional and international level, with organizations involved in control of IAS (e.g. IUCN, GISP, UNEP, etc.).	Cooperative links at the global level are expected through the GPTF (Activity 1.1.2). task Forces will also be developed at the regional (1.1.4) and national (1.1.5) levels. Stakeholder workshops will be held as the countries

		develop their BWMS, which involve key stakeholders, including NGOs.
Activity 4.2	Exchange experience and share project results, best practices and lessons learnt using established mechanisms for addressing invasive species and biodiversity issues.	Cooperative links and shared project results provided for through the GMEIS and web portal development (3.2.6, 3.2.7). Project participants will promote GloBallast in regional and international forums (1.1.7). Newsletters, print publications and the BBC Documentary on ballast water will be disseminated (3.3)
Outcome 4:	Integrated approach to marine vectors for control of introduction of invasive species to new environments at LME level.	The integrated approach is included across the various outcomes, especially in completion of Outcomes 2 &3
Component 5:	Development of effective monitoring and evaluation indicators for ballast water management and control measures	CME indicators are included in the CME output (2.7), with the specific activity 2.7.1 designed to develop a CME framework, with indicators,
Activity 5.1:	Identify the most appropriate institutional arrangement for consolidating and reporting on agreed indicator or monitoring and evaluation of ballast water management and control measures.	This will be established as part of the overall NBWMS development effort, covered under 2.4
Activity 5.2:	Develop process, environmental status and stress reduction indicators for ballast water management and control	During the rapid assessment effort, and NBWMS effort, consideration will be given to these indicators. It should be noted that the review of status and stress indicators, etc. is typically utilized when there are multiple pollution sources and the direct relationship is unclear. With Ballast Water, the vector, pathway and potential harm are not in dispute. The issue is how to effectively mitigate the risks.
Activity 5.3:	Harmonize procedures for reporting on process, environmental status and stress reduction indicators at regional level.	The development of global and regional tiers will enable harmonisation. Development of the rapid assessments, NBWMS, and legal reforms (see Outcome 2) will all build from global templates.
Outcome 5	Monitoring, evaluation and reporting processes in place	Monitoring and evaluation is covered under Output 1.2. It is important to note that there will also be a separate evaluation mechanism for implementation of the CME (see Activity 2.7.4)

SIGNATURE PAGE

Country: _____

UNDAF Outcome(s)/Indicator(s):

_____

(Link to UNDAF outcome., If no UNDAF, leave blank)

Expected Outcome(s)/Indicator (s):

_____

(CP outcomes linked t the SRF/MYFF goal and service line)

_____

Expected Output(s)/Indicator(s):

_____

(CP outcomes linked t the SRF/MYFF goal and service line)

_____

Implementing partner: _____

(designated institution/cooperating agency)

Other Partners: _____

_____

Program Period:_____

Program Component:_____

Project Title:_____

Project ID: _____

Project Duration: _____

Management Arrangement: _____

Total budget: _____

Allocated resources: _____

- Government _____
- Regular _____
- Other:
  - Donor _____
  - Donor _____

Agreed by (Government): _____

Agreed by (Implementing partner/Cooperating agency):_____

Agreed by (UNDP):_____