Terminal Evaluation

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Final Report

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A cooperative initiative of
the Global Environment Facility, the United Nations Development Program and the International Maritime Organization.

PREFACE

This report provides the terminal evaluation of the UNDP/GEF supported global project entitled *Removal of Barriers to the Effective Implementation of Ballast Water Control and Management Measures in Developing Countries* /GLO/99/G31) (Global Ballast Water Management Programme or GloBallast). The report is delivered in compliance with the Terms of Reference developed by IMO, who are tasked with executing the GloBallast Programme. The evaluation is based upon collected reference materials from the project, as well as a series of interviews carried out during evaluation missions to IMO HQ and the six GloBallast Pilot Countries, during November 5 – December 15, 2004. The conclusions and recommendations set out in the following pages are solely those of the evaluators and are not binding upon the project management & sponsors.

TABLE OF CONTENTS

Annexes

1. TOR
2. List of persons interviewed
3. List of documents reviewed
4. Questionnaire

EXECUTIVE SUMMARY

Brief description of the project

The full title of the project is "Removal of Barriers to the Effective Implementation of Ballast Water Control and Management Measures in Developing Countries" (The Global Ballast Water Management Programme, or GloBallast). The Programme is funded by GEF through the UNDP and is executed by IMO. The programme implementation began 1 March 2000, and was initially scheduled for a period of three years (2000-2003). The programme was extended until December 2004 because of the delay in the Diplomatic Conference for adoption of the International Convention for the Control and Management of Ships Ballast Water & Sediments (February 2004) and due to the significant work programme contained in the Project Document. The GloBallast Programme includes establishment of a project coordination unit, at the IMO headquarters in London, coupled with pilot country activities in Brazil, China, India, IR Iran, South Africa and Ukraine.

It is estimated that around 3-5 billion tonnes of ballast water are carried around the world by ships each year. While ballast water is essential to the safe operation of ships, it also poses a serious environmental threat, in that at least 4,500 to possibly more than 10,000 different species of marine microbes, plants and animals may be carried globally in ballast water each day. When discharged into new environments, some of these species can become invasive and severely disrupt the native ecology and have serious impacts on the economy and human health. The global economic impacts of invasive marine species have been reviewed by the GloBallast programme and are in the order of tens of billions of US dollars a year.

Context and purpose of the evaluation

In accordance with UNDP/GEF M&E policies and procedures, all regular and medium-sized projects supported by the GEF undergo a final evaluation upon completion of implementation. This constitutes the terminal evaluation for the GloBallast Programme and has been carried out to assess the relevance, performance and success of the Programme. The evaluation team has been tasked with assessing early signs of potential impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. It also expected for the team to identify/document lessons learned and make recommendations that might improve design and implementation of other UNDP/GEF projects.

Conclusions

GloBallast has been highly successful in building international support and momentum to fulfil the aim of removing barriers to the effective implementation of ballast water control and management measures in developing countries, in order to minimise the risk of transfer of invasive marine species. GloBallast has been an effective and professionally run programme that has made a real and lasting contribution.

The major success of the project can be considered in its catalytic impact. The participants in the 6 pilot countries, together with the Programme Coordination Unit (PCU), have:

- Achieved a high degree of country ownership among the 6 pilot countries, creating 6 centres of excellence on ballast water and marine invasive species issues.
- Served as a catalyst, mobilising substantial additional financing
- Developed sustainable country and region-based plans for ballast water management;
- Established the institutional arrangements and technical capacity needed for countries to implement the IMO ballast water management Guidelines;
- Enhanced stakeholder and public awareness of the environmental harm that marine organisms transported in ships ballast water can cause.

- Provided knowledge transfer on a global scale, including innovative demonstrations in developing countries, and the dissemination of best practices
- Aided considerably in the formulation of the IMO International Convention for the Control and Management of Ships Ballast Water & Sediments (BW Convention);

Within the evaluation are included a discussion of the strengths and weaknesses in project implementation. Positives clearly outweigh the negatives, with all project outputs carried out in a satisfactory to highly satisfactory manner, and project results very well received amongst stakeholders in the 6 countries, and their regions. The successful completion and replication of risk assessments, port biological surveys, legislative reviews and training courses at all 6 demonstration sites constitutes exemplary work by the PCU, pilot country participants, and consultants. The successful establishment of intergovernmental Regional Task Forces and adoption of Strategic Action Plans provided the framework to allow neighbouring countries in each region to work cooperatively to implement ballast water control and management measures and build on the lessons, experience and expertise of the six Pilot Countries. The discussion on weaknesses focuses attention on several issues: the overly ambitious expectations set out in the Project Document, a lack of verifiable indicators in the Project Document to track outcomes and impacts, and a few administrative difficulties with IMO that unnecessarily burdened project operations.

Recommendations

The evaluation team is aware that efforts are underway to develop a PDF-B for a second UNDP-GEF-IMO ballast water programme, (entitled GloBallast Partnerships). This is a welcome, and important opportunity to build on the considerable successes of the GloBallast Programme. The evaluation includes a series of recommendations for UNDP-GEF & IMO to consider with respect to a follow up project. An abbreviated list is provided here:

1. Facilitate a stakeholder workshop in early 2005 to bring together key actors, including from the GloBallast pilot countries, to brainstorm a mid and long term set of objectives for dealing with marine invasive species problems.
2. Expand the programme objectives to include the other major significant marine invasive species vector - hull fouling.
3. Ensure that project activities enhance the adoption of holistic port environmental management and coastal zone management programmes.
4. Continue to refine the GloBallast training module for use as an IMO Model Course, and for use by maritime training institutions and other maritime industry training centres.
5. Develop a comprehensive analysis of economic impacts of marine invasive species.
6. Challenge the private sector to drive treatment technology development, with IMO establishing the standards for testing and certifying ballast water treatment techniques.
7. Continue driving the scientific understanding of marine invasive species vectors, including analysis of the port conditions that factor into whether an invader takes hold.
8. Develop and agree ahead of time on management arrangements for the project at IMO, providing streamlined financial reporting, procurement, and travel arrangements, clear expectations of the support the project will get from IMO administration, and a distinct separation of tasks and expected outputs between the PCU and Ballast Water Secretariat.

Lessons learnt

Lessons learnt from GloBallast are likewise included, with the following abbreviated highlights:

1. Projects can benefit from taking a two-pronged approach to the management of demonstration sites. The first is to develop global mechanisms and templates for use by all sites. The second is to enable the Pilot Countries to develop their own country-specific activities. GloBallast demonstrates that country buy-in and financial support can be significantly increased when countries have the flexibility to shape the project to their specific needs.
2. Global projects dealing with "new" issues, requiring the coordination of multiple pilot sites, need sufficient time to develop. 3 years is insufficient. 5 years is preferable. These projects also need PCU's staffed sufficiently to achieve their objectives. GloBallast would have benefited from a larger PCU staff, composed of a team leader, 2 technical experts (e.g. environment, shipping, public relations; etc); project administrator (contracts, budgets, travels, etc) & two project secretaries.
3. The use of logical frameworks is essential, and no IW projects should commence without clear expectations for the development of a logical framework that establishes performance and impact indicators. An effective M&E programme is premised on the establishment of a logical framework and verifiable indicators. There also needs to be a monitoring plan developed as part of the initial ProDoc, which stipulates how the project will be monitored –internally and externally.
4. The setting up of international scientific advisory panels should be considered whenever a UNDP-GEF IW project includes the substantial collection, monitoring and reporting of scientific information. These panels can provide timely peer review of publishable materials, and help to establish R&D priorities.
5. There are pros and cons of tying an IW project closely to passage of specific legislation, in this case the BW Convention. It is very difficult to forecast the passage of laws and conventions. However, riding the coattails of a legal effort can help to build support for the linked legislation (as was the case with GloBallast) and then can spur rapid implementation.
6. It is useful to expand the baseline setting approach to other project aspects beyond port surveys and legislative analyses, to include public awareness raising, capacity building, and NGO involvement. Establishing baselines is essential for effective project monitoring.

Acronyms

ANVISA	National Agency of Sanitary Surveillance (Brazil)
APR	Annual Project/Programme Report
BAT	Best Available Technology
BEP	Best Environmental Practices
BOD	Biological Oxygen Demand
CFP	Country Focal Point
CFP-A	Country Focal Point Assistant
CME	Compliance, Monitoring and Enforcement
COD	Chemical Oxygen Demand
COSCO	China Ocean Shipping Company
CPTF	Country Project Task Force
CRIMP	Centre for Research on Introduced Marine Pests (Australia)
DSS	Decision Support System
EA	Executing Agency
EC	European Commission
EEZ	Exclusive Economic Zone
EU	European Union
EUR	Euro
FAO	Food and Agricultural Organisation of the United Nations
GA	General Assembly
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIS	Geographical Information System
GISP	Global Invasive Species Programme
GloBallast	Global Ballast Water Management Programme
GPTF	Global Project Task Force
HELCOM	Baltic Marine Environment Protection Commission (Helsinki Commission)
HoD	Head of Delegation
IA	Implementing Agency
IC	Incremental Costs (as defined by GEF)
ICES	International Convention on Exploration of the Seas
IEAPM	Sea Studies Institute of Admiral Paulo Moreira (Brazil)
IFI	International Financing Institution
IMO	International Maritime Organization
INTERTANKO	International Association of Independent Tanker Owners
IPPC	Integrated Pollution Prevention and Control Directive
IUCN	World Conservation Union
IW	International Waters
LEARN	Learning Exchange and Resource Network
LFA	Logical Framework Approach
MARPOL	International Convention for the Prevention of Pollution from Ships
M&E	Monitoring and Evaluation
MED	Marine Environment Division of IMO
MEPC	Marine Environment Protection Committee of IMO
MLW	Mean Low Water
MMA	Ministry of Environment (Brazil)
MoE	Ministry of Environment
MOU	Memorandum of Understanding
MTE	Mid-Term Evaluation
NGO	Non Government Organisation
NIC	National Information Centre

NPA	National Port Authority
NRC	National Research Council (USA)
PAC	Project Appraisal Committee (UNDP)
PBS	Port Baseline Survey
PCU	Project Coordination Unit
PDF-B	Project Development Facility (GEF)
Petrobras	Brazilian Oil Company
PIP	Project Implementation Plan
PIR	Project Implementation Review
PIU	Project Implementation Unit
PPER	Project Performance and Evaluation Report
ProDoc	Project Document
RA	Risk Assessment
RAP	Regional Action Plan
REC	Regional Environmental Centre
ROPME	Regional Organisation for the Protection of the Marine Environment
RPTF	Regional Project Task Force
SAP	Strategic Action Plan
SIGGTO	Society of International Gas Tankers and Terminal Operators
STAP	Scientific and Technical Advisory Panel (GEF)
STCW	Standards of Training, Certification and Watch keeping (IMO Convention)
TOR	Terms of Reference
TPR	Tripartite Review
UNCED	United Nations Convention on Environment and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Education, Science and Culture Organisation
UNOPS	United Nations Office for Project Services
USD	United States Dollar
WHO	World Heath Organisation
UV	Ultraviolet (radiation)
WSSD	World Summit on Sustainable Development
WWF	Worldwide Fund for Nature

1 INTRODUCTION

1.1 Purpose of the evaluation

As indicated in the Terms of Reference (TOR), the overall objectives of this Terminal Evaluation are to:

- Review progress towards the GloBallast Programme's objectives and outcomes,
- Assess the efficiency and cost-effectiveness of how the GloBallast Programme has moved towards its objectives and outcomes,
- Identify strengths and weaknesses in programme design and implementation,
- Provide recommendations on design modifications that could have increased the likelihood of success, and
- Recommend specific actions that might be taken into consideration in designing future programmes of a related nature.

1.2 Key issues addressed

Key issues for the evaluation were drawn up at the outset, included as part of the evaluation TOR and then further elaborated by the evaluation team. These key issues framed the discussions held with stakeholders and project participants.

1.2.1 Project formulation and implementation

The evaluation team looked at a variety of measures to gauge how the project was formulated and implemented.

- P**CU Management Effectiveness:** including overall management, financial and budget management, handling of relationships with the six pilot projects, and the timely completion of assignments.
- **Logical Frameworks and indicators.** The evaluation included a review of the management tools in place to gauge project performance and impact. In particular, the evaluation team considered whether:
  - a logical framework matrix was developed and used;
  - performance indicators were established;
  - specific goals and objectives were set and tracked for each pilot site.
  - participants at the pilot sites had the opportunity to participate in the development of local work plans and performance measures.
- **Institutional arrangements**: Each of the 6 pilot sites were visited and an effort was made to determine whether there were well-defined roles and responsibilities amongst the various institutions involved at each site. In particular the evaluation team was interested to determine the success of each country to put inter-ministerial mechanisms in place so that relevant governmental ministries had an opportunity to participate in the development of country ballast management planning.
- **Knowledge and Information management:** The evaluation team considered issues related to knowledge transfer. In particular, whether the data and information developed through the project was effectively shared amongst scientists and experts across the region, and whether lessons learnt in different regions and pilot sites were shared.
- **Stakeholder Participation:** The evaluation team was interested to consider how key stakeholders were brought into project planning and implementation, such as through advisory committees and workshops.
- **Public awareness and support:** the team sought to determine the extent to which the programme helped to improve public awareness in the 6 Pilot Countries and their regions, and the most effective tools used, (i.e. posters, brochures, print media, television, etc.). The evaluators reviewed the mechanisms established for public participation, of the general public, and those directly and economically involved (such as shipping companies and the fishing industry).
- **Adapting to change:** The evaluation team was interested to consider how project participants adapted to new conditions encountered during implementation. How did project implementation plans (PIPs) shift with the delays in convention development? How did they resolve the inception phase difficulties in get-

ting the impressed fund mechanisms established? What was the response to recommendations at the mid term evaluation?

- **Partnerships:** The evaluation team sought to determine the extent to which other organisations and donors were aware of and integrated into GloBallast activities. In particular, was there a concerted effort through the programme to identify related projects and make contacts to establish partnerships / coordination mechanisms.
- **Sponsor involvement:** We sought to determine what had been the involvement and management supervision of UNDP and IMO over the PCU and Pilot Country participants. Was sufficient support (financial, and information) given to the pilot countries to effectively execute assignments?

1.2.2 Impacts

The Team was interested to consider the impacts resulting from the GloBallast Programme, in areas such as:

- **Policy development.** The evaluators were interested to consider whether there were particular policy and regulatory changes in the six countries and their regions that could be attributed to GloBallast programme initiatives.
- **Regional cooperation.** A significant project output for GloBallast was to expand the country programme efforts regionally. We were looking to determine the extent to which the programme fostered improved formal and informal regional cooperation on ballast issues. Were there adequate mechanisms established to replicate activities in the six developing regions? Were regional working group developed and regular meetings held? Was there support developed for the programme also in neighbouring countries that were not recipients of programme funding? Were regional activities effectively supported by the PCU? Were lessons from one demonstration site shared across all six sites?
- **Environmental Impact:** A key indicator of success for IW projects is a demonstrable improvement in the environment. During the evaluation we sought to determine whether the programme had a positive impact (locally / nationally / regionally) with respect to reducing the negative environmental impacts associated with ballast water transfers. We were also interested to consider the extent to which the activities undertaken, including the environmental monitoring work, laid sufficient groundwork for there to be demonstrable environmental improvement in the future, (in this instance, through a reduction in the risk of species transfer through ship ballast).
- **Sustainability:** The evaluation team was interested to consider the likelihood that pilot site activities, outcomes and benefits will continue after completion of the GloBallast Programme. Questions were raised with the pilot countries as to whether efforts to implement the BW Convention depended on continued international donor assistance, and whether there were sufficient government and public support for the activities at the pilot site to expand the initiative to other country port facilities. In particular, given no guarantees of follow-on funding, the evaluation focused on issues of financial sustainability, and whether the countries were seeking alternative financial resources to keep the ballast programme going after the end of GloBallast.

1.3 Methodology of the evaluation

The evaluation was undertaken using desk reviews and interviews. Two evaluators were assigned by IMO, each of whom was directed to review the background literature and then embark upon a mission to visit key stakeholders. The six pilot sites were divided such that each evaluator visited three, and the evaluators also met jointly with IMO management, project staff and other key stakeholders in London. To prepare for the interviews, the evaluation team sent out a general questionnaire prior to the missions. Four of the six country focal points and/or assistant CFPs filled in the questionnaire in advance of the interviews, and all CFPs had sent the questionnaire to other persons in the country scheduled to be interviewed. A copy of the questionnaire is provided as an annex to this report (Annex II).

1.4 Structure of the evaluation

The evaluation took place during November and December 2004, just prior to the completion of the GloBallast Programme. The evaluation was structured in accordance with UNDP Guidelines for Evaluators. It covers the issues set out in the evaluation TOR, and takes into account the expectations of IMO and the implementing organisation.

The use of stakeholder interviews as the lead vehicle for evaluation was done recognizing that GloBallast is a capacity building and "influencing" project, designed to build public awareness and stakeholder support, while developing institutional arrangements and capacity in the pilot countries.

At this juncture in the project cycle, at the conclusion of the project, and with a PDF-B under development for a possible follow-on project, the evaluation is designed to provide a final summation of project accomplishments, limitations and lessons learnt. It is also intended to provide recommendations for consideration by UNDP-GEF, and IMO as they consider further efforts to deal with minimising the threat of marine invasive species.

2 THE PROJECT AND ITS DEVELOPMENT CONTEXT

2.1 Project start and its duration

During the 1990's, countries such as the United States of America, and Australia, which had experienced major invasive species problems linked to discharge of ballast water, began to take steps to minimise there risks, through reporting mechanisms, and discharge restrictions. They encountered a major problem: the issue was not on the global environmental agenda. Most stakeholders, including governments, port authorities, shipping companies, fisheries and the public, were unaware of the potentially severe consequences of the ballast water transfer of unwanted marine organisms. Consequently, awareness of the ballast water issues constituted a major barrier to action and became an early priority for the project to address.

IMO's Marine Environment Protection Committee developed voluntary guidelines aimed at minimising the risk of introducing harmful marine organisms in ships' ballast water. These guidelines were seen as a necessary initial control measure, to be made mandatory once an international convention was in place. One of the challenges associated with the development of voluntary guidelines was the need to assist developing countries with their implementation, and to provide them with basic information from which to implement a risk management approach to the problem. This challenge led to the drafting of a concept paper, and PDF-B for a UNDP-GEF project focused on ballast water. The goals of the initiative were to:

- Reduce the transfer of harmful organisms in ships' ballast water;
- Create an initial Programme Coordination Unit in the IMO leading to the establishment of an ongoing ballast water management capacity at the IMO;
- Create effective ballast water management methodologies at the regional level, based on IMO ballast water Guidelines;
- Develop Decision Support Systems, including a 'tool kit' of ballast water treatment options and an array of management approaches; and
- Establish an effective communications system to rapidly communicate ballast water treatment methodologies and other ballast water management related information at the global level.

The GloBallast Project was approved on 5 October 1999 with a planned start date of 1 November 1999 and end date of 31 October 2002. The actual project commencement date was 1 March 2000 when the Chief Technical Adviser commenced duty as head of the PCU at IMO headquarters. The establishment of the PCU, the Global Project Task Force and Country Project Task Forces and the engagement of CFP-As and related institutional arrangements in each Pilot Country were in place and functioning within 6 months of project inception. The establishment of imprest accounts and mechanisms for the transfer of project funds took longer than expected (up to 18 months in one case), due to the complexities of international financial arrangements in some of the countries covered by the project.

Following a review of the PIP and budget, and in accordance with the provisions of the UNDP Programme Manual, it was agreed at the 3rd GPTF meeting in Goa, India in January 2002, to extend the project duration

by 12 months, until 29 February 2004. UNDP-GEF and IMO agreed additional time would be necessary to complete the programme in view of the ambitious work programme, initial pilot country administrative delays and especially delays in the linked IMO efforts to develop the BW Convention.

At the 5th GPTF meeting in London in February 2004, (11 months after the original end date), available figures showed actual disbursements of approximately US$ 5.2 million, representing 77% of the overall UNDP-GEF budget of US$ 6.72 million. At the GPTF 5th meeting, GEF invited the six Pilot Countries to consider a further extension to end of December 2004. This extension was considered necessary to complete outstanding activities. Approval of this additional extension meant that the end date was now some 26 months after the originally planned end date of 31 October 2002.

Not all of the activities under GloBallast will end in December 2004. Funding for pilot country and PCU activities, and the salaries of Country Focal Point Assistants (CFP-As), and all but one PCU staff member will end on 31 December 2004. One PCU professional, the Technical Adviser, is expected to remain working in London for an additional 5 months, until 26 May, 2005, in order to administratively close the project and ensure continuity with the planned PDF-B for a proposed follow-on project (entitled GloBallast Partnerships).

2.2 Problems that the project seeks to address

In the initial stages of the project design phase the main problem identified to be addressed was the harm being caused to marine ecosystems by marine organisms which had been transported in ships' ballast water and after discharge had become established in new marine environments. The focus of the project effort was driven by an expanding awareness of the environmental and health risks from shipping practices, through a series of studies conducted from 1975 to the mid 1990s. These studies included reviews of:

- The state of knowledge and levels of risk associated with the transplantation of non-indigenous organisms to fisheries and mericulture
- The human health risks associated with human exposure to toxic and disease-bearing non-indigenous marine organisms
- Infrastructure costs to remediate severe fouling of intake pipes and other sub-surface infrastructure vulnerable to fouling by introduced organisms

The following invasive species events were considered as compelling evidence of the causal relationship between ship ballast and invasive species infestations, and the resulting severe environmental and economic consequences:

- The introduction of the Eurasian zebra mussel (Dreissena polymorpha) in the North American Great Lakes, resulting in expenses of billions of dollars for pollution control and the treating of fouled underwater structures and water pipes
- The introduction of the American comb jelly (Mnemisopsis leidyi) to the Black, Azov and Caspian Seas, causing the near collapse of the commercially important anchovy and sprat fisheries
- The introduction of the Japanese brown kelp (Undaria pinnatifida) to Australia's Tasmanian waters, having a detrimental impact on the abalone and sea urchins fisheries
- The appearance of South-East Asian dinoflagellates of the Gymnodinium and Alexandrum to Australian waters, introductions which can cause paralytic shellfish poisoning.

2.3 Immediate and development objectives of the project

The first meeting of the GPTF held in London in July 2000 was informed by the PCU that, in consultation with IMO and UNDP-GEF, it had revised the Project Document (ProDoc) into a more practical Project Implementation Plan (PIP). The PCU noted that the ProDoc was not suitable as a day-to-day project management tool, and that its broad objectives needed greater specificity. The PCU streamlined the project and at the same time added other activities considered essential to successful implementation, e.g. risk assessments and port baseline surveys. The GPTF approved the PIP.

The broad development objectives were, over the long term, to assist developing countries to reduce the transfer of harmful organisms from ships' ballast water. In the nearer term, the objectives were to increase

adherence by these countries to the then current IMO voluntary guidelines on ballast water management, and assist these countries to prepare for the implementation of the IMO mandatory regime when it came in to force.

The PIP set out a series of seven (7) objectives, with corresponding activities and outputs, as seen in the table below.

Table 1: GloBallast Objectives and Activities

Objective	*Activity / Output*
Objectives 1 &1A: Programme Coordination & Management Ensure effective project coordination, management and support (information, communications, expert assistance, programme implementation capacity and evaluation and assessment) through establishment of an IMO based Programme Coordination Unit (PCU).	• Hire CTA / TA/PA • Organise and set up PCU • Create GPTF • Determine country lead agencies • Establish global resource information communications network • Evaluate and assess results
Objectives1B &1C Identification of, and provision of resources for, the establishment of a Lead Agency in each of the six participating countries; creation of Country Project Task Forces (CPTF)	• Establish 6 lead agencies and name CFP • Establish effective systems for communications and data transfer • Develop and implement national workplans
Objective 2: Communication, Education & Awareness Increase knowledge of and potential solutions for ballast water related transfer of non-indigenous organisms at the port, national and regional level, for each pilot site	• Establish 6 CPTFs • PCU and CPTFs to develop community assessment, education and information activities • Case studies at each pilot country demonstrating impacts of invasive marine organisms • Workshops directed by CPTFs to define and evaluate community assessment information, participation and education strategies • CPTF work plans developed for community assessment information, participation and education strategies • Provide resources to implement work plans • Create and implement generic and adaptable course packages
Objective 3 **Risk Assessment** Undertake an initial risk assessment at each pilot site to provide the level and type of risks of introductions at each pilot port, the resources and values that might be threatened and the management response required. Also undertake a port biota survey.	• Review information regarding current BW discharges and source ports • Make comparisons and determine existing and potential threats • Provide training/capacity building in risk assessment and port surveys • Determine optimum risk assessment and port survey methodology and adopt standard protocols • Provision of risk assessment and port surveys communicated to all stakeholders

Objective 4: Ballast Water Management Develop and implement generic and, to the extent possible, country and port specific programmes defining the measures necessary to increase compliance with IMO provisions, with special attention to achieving protection of identified, country-specific most sensitive values at risk.	• Implementation of effective ballast water management measures which reduce transfer of marine organisms • Translation and dissemination of IMO Guidelines • Development and delivery of training packages to targeted recipients • On going delivery by national/regional training units • Review existing legislation and make recommendations regarding implementation of voluntary guidelines • Bring together leading authorities on ballast water treatment R&D and establish clearing house on latest research and technologies, provide guidance on future R&D requirements • Development of Ballast Water Management Plans in each pilot country
Objective 5: Compliance Monitoring and Enforcement Generic and country specific compliance and monitoring programmes to ensure compliance with IMO provisions and protection of most sensitive values	• Development of generic compliance and monitoring systems • Support CPTF development of compliance and monitoring programmes • Support to create generic port, and country-specific manuals and appropriate reporting forms • Support to recruit and train lead agency compliance and monitoring officials • Support to purchase, test and refine analytical equipment. • Support CME implementation in pilot countries after adoption of Convention • Establish standards for BW sampling and train pilot country staff in techniques, hold international sampling workshop
Objective 6: Regional Replication Make provision, as appropriate, for the creation and operation of Regional or Sub-Regional Task Forces to increase regional level awareness, cooperation and eventual replication of project results across the region.	• Create regional support base • Create as appropriate regional and sub regional task forces • Provide for RPTF meetings and effective communications • Develop Regional Action Plan
Objective 7: Resources and Financing Identify opportunities for increased project self-financing during the project, financing after the three year project timeframe, and the initiation of a Donor Conference to secure the necessary additional financing to sustain implementation of IMO, participating country, regional and global efforts to implement IMO ballast water provisions	• Specific list of potential donors made available participating countries • Review opportunities for self financing of project components • Sponsor a donor conference & get loan and support commitments, including continuation support from IMO regular budget

2.4 Main stakeholders

The primary stakeholders for GloBallast were identified in the ProDoc, segmented into two groups: those at the international level, and those in each of the pilot countries. These stakeholders are set out in the following table:

Table 2: GloBallast Stakeholders

International stakeholders	Stakeholders in the Pilot Countries
• International Maritime Organization (IMO) • United Nations Development Programme/ Global Environment Facility UNDP/GEF • International Chamber of Shipping (ICS) • International Association of Independent Tanker Owners (INTERTANKO) • International Tanker Owners Pollution Federation (ITOPF) • Oil Companies International Marine Forum (OCIMF) • International Association of Classification Societies (IACS) • International Association of Ports and Harbours (IAPH) • International Cargo Handling Co-ordination Association (ICHCA) • Friends of the Earth International (FOEI)	• National and regional government maritime and port administrations • National and regional government environmental agencies • National and regional scientific/ fishery research agencies • National and regional fisheries agencies • National oceanographic institutions • National and regional quarantine inspection agencies • Maritime Universities, training Institutions and other marine research universities, • National ship owners associations • National and regional pollution control units • State owned and private oil companies

2.5 Results expected

The Project Document envisaged an end of project situation that can be summarized as follows:

1. Strong and continuing presence of a ballast water management capacity in 6 pilot countries supported by the IMO through absorption of the PCU activities;
2. A dramatic increase in the knowledge of the dangers of unmanaged ballast water discharges and remedies based on local port, country and regional settings that are consistent with IMO Guidelines;
3. Increased public awareness and support for ballast water management approaches;
4. A global resource information centre located in the office of the IMO with the capacity to undertake systematic and ongoing distribution of the latest and most effective approaches to ballast water management. The centre would maintain existing and increase high quality, reliable data and information on ballast water related issues and approaches;
5. Availability of project developed and tested education and training programmes to increase knowledge of the ballast water issue and impart the knowledge, skills and attitudes required;
6. IMO Coordination of a global network of the research efforts and experience of monitoring centres in relation to ballast water transfer;
7. Increased levels of protection and conservation of habitats and species of global significance;
8. Protection of aquaculture resources in and around coastal areas where ballast water exchange takes place;
9. Protection of commercial fishery and shellfish enterprises in and around coastal areas where ballast water exchange takes place;
10. Adoption of common regional approaches based upon the GEF/UNDP/IMO Project experience and approaches that are consistent with IMO Guidelines;
11. Minimization of the loss of coastal biodiversity and degradation of coastal environments;
12. Informed and effective developing country participation in the ongoing global deliberations on the ballast water management issue.

It was envisaged that upon completion of the project the above-mentioned results should create adequate conditions for the successful implementation of IMO Guidelines and the anticipated mandatory requirements

of the BW Convention. It was further expected that the six pilot countries would continue a leadership role at the regional and global levels.

The primary target beneficiaries were envisaged to include global populations in the immediate area who are dependent on the natural resources of coastal regions and the ecosystems of these coastal regions. The coastal zone population should benefit from each of the 'success criteria' listed in the project documents, which included improved water quality, improved human health, and protection for existing and planned future coastal resources, such as aquaculture. In the short-term, it was envisaged that governments and institutions would benefit from institutional strengthening as a result of networking, training programmes and the provision of key items of equipment and in particular from the development of action-based workplans. An increase in donor interest both during and after the life of the project was to be facilitated by the development of proper and thorough threat analyses, legislative and regulatory reviews, environmental assessments and pre-investment studies.

3 FINDINGS AND CONCLUSIONS

3.1 Project formulation

At the time of the PDF-B and formulation of the ProDoc, little was known about how to manage or treat harmful marine organisms transported in ships' ballast water, other than through ballast water exchange in the open sea. The complexities of the issue - coupling ship safety and environmental considerations, together with the absence of effective and economical treatment solutions, were factors in project conceptualisation and design.

At the time of project conceptualisation, there was an expectation that the IMO would soon develop mandatory ballast water management requirements within the context of an international convention. As it turned out, the effort proved far more complex than envisaged by IMO's Marine Environment Protection Committee (MEPC). A major difficulty for MEPC proved to be selecting and agreeing on appropriate standards for ballast water treatment while recognising the safety implications and limitations of ballast water exchange to ships at sea. The development of the BW Convention proved to be far more complex than any other maritime safety or marine environmental convention ever adopted by IMO.

3.1.1 Conceptualisation/Design *[1]

The project formulation for GloBallast can be considered generally well conceived and **satisfactory.** The goals and objectives set out in the ProDoc, and the activities selected to achieve them, were appropriate, and recognised the principal ballast water threats, as they were known at the time. Taking a pilot country approach, aimed at developing countries, offered the chance to establish feasible and economical strategies, that could build from hands on experience at demonstration ports, expanding country-wide and then regionally. The ProDoc established a suitable balance between IMO / PCU driven activities, and "bottom-up" approaches developed through the 6 Pilot Countries. Perhaps most importantly, the effort was launched under the imprimatur of IMO, offering the chance to directly engage maritime administrations and port authorities and the shipping industry in the search for effective solutions.

With the advantage of hindsight, it can be seen that certain aspects of the project formulation created implementation problems. The mid-term evaluation (MTE) for GloBallast provides important comments on the shortcomings of the project design, which remain valid at the project's conclusion. These include the project's too short duration, insufficient staff resources; and overly ambitious expectations on replication.

An additional structural weakness is demonstrated by the lack of attention paid to developing, tracking and measuring verifiable indicators. The GloBallast ProDoc set out 12 expected results. Missing are the tools to track and measure the achievement of these 12 results.

[1] All criteria with an * to be rated: Highly Satisfactory, Satisfactory, Marginally Satisfactory, Unsatisfactory

The GloBallast ProDoc could have provided more direction with respect to bridging the information gap on the economic impacts of ballast-borne invasive species occurrences. The ProDoc indicates merely that economic impacts should be considered within the case studies to be developed.

It is also worth considering a more general question on project design: was it too narrowly focused on ballast, and thereby neglected an opportunity to consider other significant shipping-based vectors, in particular hull fouling? Seen primarily as an instrument to assist developing countries to implement IMO ballast water guidelines as well as drive support for the BW Convention, the narrow focus was entirely logical. Seen as a mechanism to drive better shipping and port environmental management techniques, and to better understand the risks that shipping poses to marine biodiversity, the narrow focus on ballast water can be considered a constraint. It is important to note a very significant reason for the narrow focus on ballast water: the GEF OP10 (GEF operational plan) specifically identified ballast water transfer of invasive species as eligible for support. It did not include other vectors such as hull fouling. This larger question on project formulation will be further considered in the recommendations section, in the context of commenting on a potential follow-on project to GloBallast.

3.1.2 Country–ownership/Driveness

The origins of the programme design were driven by environmental concerns about the transfer of harmful marine organisms in ships' ballast water in ships trading internationally. The project concept identified ballast-borne invasive species to be an issue of global consequence, requiring actions from all maritime countries. This focused attention on the extent to which developing countries have recognized the importance of the issue. As indicated in the ProDoc (#22 p.11): "Work undertaken during the UNDP-GEF Project Development Facility (PDF-B: GLO/97/G41) phase of the project resulted in a finding that information about the dangers of ballast water transfer of non-indigenous organisms was poor to non-existent in many developing countries, and constituted a major barrier to action".

During the design stages of the project, IMO informed all MEPC participating countries of the intention to set up the GloBallast programme and sought expressions of interest from countries in each of the global development regions to participate as pilot sites in the programme. The countries were selected on their eligibility for GEF support, their willingness to participate in the project and their shipping demands and usage as either exporters or importers of ballast water. IMO undertook visits to each of the proposed pilot countries and also held meetings with their representatives to MEPC meetings at IMO in London.

Final selection required not only agreement by the national government, but also agreement by a range of other governmental and quasi- governmental agencies that included port administration. Each of the six pilot countries (Brazil, China, India, Iran, South Africa and Ukraine) endorsed the UNDP Project Document (GLO/99/G31/A/1G/19) which outlines the ten main elements of the project, which was approved by the GEF Council and signed by UNDP and IMO in 1999.

Country selection was very well-considered, as all six pilot countries came to the project with long maritime traditions, large scale port activities, competent marine research institutions, and strong financial capacity. In addition, all six countries have sufficient regional prominence to lead efforts to forge regional consensus on ballast water management.

Country ownership was further enhanced by the flexibility afforded each pilot country to develop country & port-specific management measures, and to launch special initiatives – for example focused on research into treatment techniques and on particular species infestations.

3.1.3 Stakeholder participation *

As seen from table 2, (section 2.4), there are numerous primary stakeholders identified for the GloBallast programme, representing government, shipping interests and environmental interests. By and large, the project was formulated in a **highly satisfactory** manner with respect to stakeholder participation. Key stakeholders were identified early on at the international level, and invited to participate as advisors through the annual GPTF meetings.

At the pilot level, stakeholder participation in the project design phase was also satisfactory, but uneven. In particular, there seemed to be little in the way of country participation from environmental NGOs. Evidence from the interview process suggests that the limited environmental NGO involvement in the pilot countries reflected several realities:

- A lack of environmental activism in some pilot countries.
- Many other significant environmental concerns at the local level;
- Ballast water management constituting a complicated and specialised invasive species vector with a difficult cause and effect calculus.

Based on interviews with representatives of international environmental NGOs, it appears that ballast water management also faces difficulties capturing the attention of NGO groups at the international level. It is noteworthy that GloBallast was successful in getting Friends of the Earth International and the World Conservation Union to participate on the GPTF.

One set of stakeholders not included in the project formulation is fisheries and mericulture interests. The impact of ballast born invasive species can be debilitating on fisheries (wild and penned) and shellfish beds. These then constitute stakeholders with a keen interest in the adoption of strict ballast (and hull cleaning) regulations. It is important to note that the PCU and pilot countries subsequently brought these interested parties to the table, with involvement in workshops and public awareness campaigns.

3.1.4 Replication approach

It is clear from the project documentation that replication was given prominence in project formulation. The proposed funding for a global resource centre to be located at IMO was a fundamental part of the strategy to bring about replication of project results. This centre would become responsible for assisting developing nations in more effectively managing ballast water control after the project completion.

Replication was envisioned at the country and region levels. The project was designed to develop regional replication mechanisms. It was anticipated that port specific ballast management activities would then be replicated by the countries in other ports, and expanded regionally, and serve as a model for countries in other regions. Component 6 in the Project Implementation Plan directs the project participants to: "Make provision, as appropriate, for the creation and operation of Regional or Sub-Regional Task Forces to increase regional level awareness, cooperation and eventual replication of project results across the region".

Replication was also envisioned through the development of a ballast water management training programme producing "adaptable training packages".

3.2 Programme Implementation

3.2.1 Implementation Approach *

Findings focused on the approach taken to implement GloBallast are set out in the following six subsections: logical frameworks, adaptive management, the use of information technologies, operational relationships, technical capacities, and country ownership. While each section details strengths and weaknesses, the overall evaluation of the implementation approach taken within the GloBallast Programme can be considered **satisfactory.** It is important to note that much of the implementation approach should be considered highly successful, however the evaluation team is concerned that at the time of the evaluation (November / December 2004) some project deliverables remained incomplete.

Logical Frameworks

The project was implemented without use of a logical framework matrix. As noted earlier, this aspect of project management was not stressed in the ProDoc, although passing reference is included in Section G: Monitoring, Reporting & Evaluation (#135, p 42). More importantly, no systematic effort was made to develop and verify indicators of project short and long-term impacts, in particular with respect to policy, legal and institutional reforms. Despite the ProDoc expectations for the setting up of such indicators (see Section G:

#132, Pg 42), no reference is made in the PIP on how this expectation was to be achieved, and no systematic approach to indicators development was carried out.

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The project team indicated in its PIPs what were the expected project outputs, matched against success criteria, with budgets, and an indication of responsible parties. Logical frameworks take this approach to the next echelon, establishing specific indicators for each criteria, clarifying how each measure will be verified, and considering risks and barriers to achieving success. This process, while time consuming, helps to weed out success criteria that are beyond reasonable project expectations. Significant efforts have also been made by the project team to translate the success criteria established in the ProDoc into measurable indicators included in the logical framework matrix provided for the annual PIR/APR. The project team emphasized that establishing specific indicators was a very challenging task as no specific previous experience was available and the results related to invasive species management become apparent in tens of years at minimum.

Adaptive Management

Adaptive management focuses on the extent to which project managers revise or reconsider activities and management arrangements in response to changing circumstances, or in response to monitoring and evaluation feedback.

In the first few months of implementation the PCU identified the need to streamline /simplify the Project Document's list of activities, remove some duplications, and stipulate specific pilot country activities that should be carried out in order to meeting project objectives. In particular, the project managers in London considered it useful for each pilot country to do a risk assessment and port base-line survey in its designated port. These changes were incorporated in the Project Implementation Plan approved at the first meeting of the GPTF in July 2000. The port surveys and risk assessments ended up being highly successful project outputs, and provide clear evidence of how project scope flexibility, in competent hands, can greatly enhance project success. In general, management of the GloBallast was sufficiently flexible to enable ongoing modifications to the PIP, based on pilot country and PCU recommendations, following GPTF approval.

Adaptive management has its risks; especially when changing circumstances significantly alter key objectives, project outputs and/or deadlines. It is in this context that one needs to consider GloBallast project outputs set against delays in the completion of the project. A number of programme extensions became necessary for a variety of reasons, including delays in the final passage of the BW Convention. The GPTF reviewed progress on an annual basis and where necessary re-scheduled / redesigned proposed activities. All project extensions were readily approved by the GPTF and sponsoring agencies (IMO & UNDP-GEF).

The original project end point, March 2003, was first extended to March 2004, then extended to the end of December 2004. A further 5 months extension (until end of May 2005) was approved for one member of the PCU , in order to complete remaining activities, administratively close the project and ensure continuity with the expected PDF-B for the proposed follow-on project.

With respect to project outputs, some activities are yet to be finished, although a vast majority of the originally intended activities are successfully completed. The case studies (Activity 2.3) have not been completed; port baseline surveys (3.2) are drafted but not yet published; National Ballast Water Management Plans from some of the pilot countries are not completed, (4.5), the Compliance Monitoring & Enforcement (CME) activity was re-designed, so the final output differs from original expectations. (Activities 5.2, 5.4,); and not all pilot countries have completed self-financing strategies (7.1). In section 3.3.2 (below), a component-by-component review of outputs is more fully considered.

Information Technologies

One of the key factors in the overall success of the project was the use by the PCU and the pilot countries of electronic information technologies. In meeting the Communication, Education and Awareness Raising project objective (No.2), the GloBallast Website http://globallast.imo.org/ provides extensive information, including treatment technologies and the range of information on options being considered, and an R&D directory which details ballast water related research being undertaken throughout the world. Other components include Legislation & Regulations, an extensive library of ballast water publications and copies of the Ballast Water Newsletter. As part of its "Clearing House" function the PCU has made available the GloBallast Monograph Series on the internet, in addition to awareness materials such as posters and pamphlets and an animation video. Extensive directories and databases are also available.

The GloBallast E-Forum, while part of the GloBallast website, is a separate internet based information sharing system aimed at improving communication and information. The E-Forum enables participants throughout the world to share news on new developments, express views, ask questions and receive answers on ballast water issues.

Electronic information technologies played a major role in the Risk Assessment component (No.3) including 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 pilot sites and their ballast water source and destination ports. A customized database was established providing tables and interfaces for storing and managing extensive information including risk species, taxonomic details, and bioregional distribution. The database permitted an extensive environmental matching and risk assessment. The risk assessments include the use of integrated geographic information systems (GIS) to manage and display risk assessment information for each port area, including areas of high vulnerability and sensitivity to invasive species.

Electronic information technologies were used across the pilot country activities, with a local GloBallast website created in each pilot country, linked to the IMO GloBallast site. All pilot sites confirmed that the use of electronic information technologies were of significant benefit to them and were effective in supporting project implementation. The use of email and the GloBallast E-Forum by the CFP and CFPA also enabled effective participation and monitoring. The PCU was of the view that greater use of the E-Forum could have been made by the pilot countries. It should be noted that not all pilot countries have been diligent in updating their web sites, with several including information more than 2 years out of date.

The project has done an excellent job of providing information materials in both electronic and hard copy formats. Posters of "the 10 of the most unwanted" and other ballast water information were prominently displayed in every ministry and research centre visited, and were viewed as highly effective information tools.

Operational relationships

Operational relationships among the institutions directly involved were varied, but can be characterised as productive, contributing positively to effective implementation and achievement of programme objectives.

The key project relationship was that between the PCU and IMO. The PCU was set up within IMO, operating as a distinct unit within the Marine Environmental Division. Based on interviews with IMO management, the PCU team and country stakeholders, it is evident the IMO arrangement provided a critical linkage to maritime administrations, port authorities and shipping industry concerns, and ensured a close connection between GloBallast activities and IMO's efforts to develop a new BW Convention. It must be noted, however, that implementation was somewhat hampered by cumbersome IMO administrative procedures. In their 2004 Annual Progress Review (APR), PCU staff noted that the project would have benefited from more streamlined and better designed project management and administrative support functions and modalities, to suite the extremely demanding workload and tight deadlines.

The operational relationships between the PCU and the pilot countries CFP and CFPA were described as excellent. In addition, the GPTF appears to have functioned very well as a decision making body for the project. The success here can be attributed to the high degree of professionalism among the participants, and the continuity of programme participants.

Operational arrangements for most of the pilot countries appeared effective and well considered. Brazil's arrangements were somewhat convoluted, with the spatial separation of multiple involved and responsible parties making implementation difficult. The CFP-A operated under the Navy (maritime authority), in Rio de Janeiro, who were responsible for handling the impressed account, however programmatic and decision-making authority was vested in Brazil's Environmental Ministry in Brasilia, where the CFP was located. For South Africa, the departure of the Country Focal Point from the Department of Environmental Affairs and Tourism (DEAT) in 2004 meant less direct involvement from DEAT, yet the change provided useful synergies with the Global Invasive Species Programme, where GloBallast operated in Cape Town. With respect to Ukraine, the steady rise of the CFP through the ranks of the State Department of Maritime and Inland Water Transport, provided excellent exposure for the ballast and IS issues, and ensured sufficient funding to keep the programme office operational and effective. After initial internal teething problems in the Islamic Republic of Iran, regarding the establishment of the impress account, relationships were effective as they were in both China and India throughout the project.

The operational relationships between the UNDP - GEF and IMO seemed to have worked well, the Evaluation Team is not aware of any difficulties in this area. UNDP/GEF personnel fully participated in the annual meetings of the GPTF providing overall guidance as well as being helpful in resolving particular issues. Their participation and active involvement helped the GPTF in its decision-making and the effective implementation and achievement of project components/activities.

Technical Capacities

Overall, the technical capacities of the persons involved in the project were excellent. The PCU was staffed with persons who are very knowledgeable and experienced in the field, and who have through GloBallast become acknowledged global experts. The participants at the pilot site level were of high technical calibre, and the PCU made good use of their expertise – for instance to stand in as GloBallast representatives at regional workshops and conferences. Project participants had generally high regard for the external consultants used, with particularly high marks given to the consultants hired to manage the port risk assessment activities.

Country Ownership / Driveness

In all pilot countries the Lead Agency was successful in obtaining its Government's support for the GloBallast Project during the programme, and there is high expectation that support will continue into the future. Each of the national governments has accepted financial responsibility for portions of the GloBallast budget. Each of the pilots can point to excellent examples of country ownership.

- Brazil has established a well-funded interministerial approach to combating the golden mussel infestation in the Pantanal wetlands.
- The Government of the Peoples Republic of China has committed to continue funding ballast water efforts and the Maritime University of Dalian has three ballast water treatment options being researched.
- The Government of India has committed US$600,000 for their ballast water activities to continue. The National Institute of Oceanography in Goa, India is investigating the establishment of a ballast water treatment testing facility, providing an electronic global ballast water reporting service and night time satellite monitoring for red tides
- The Islamic Republic of Iran's maritime administration has shouldered much of the administrative costs and has not sought reimbursement of its full imprest account. IR Iran has committed to a five-year strategy, which includes implementation of its National Ballast Water Plan. Iran has also committed US$ 750,000 for control and management of the Comb Jelly Fish in the Caspian Sea
- The South African National Ports Authority is independently funding port assessments at the remaining six ports, tied to its decision to seek ISO 14000 environmental certification for all port facilities.
- Ukraine has spearheaded the translation of IMO / GloBallast monographs into Russian.

As a result of the GloBallast Programme the Pilot Countries and many other developing countries significantly increased their involvement in the negotiations to develop the BW Convention – thereby enhancing country drivenness and ownership in relation to the BW Convention and the issue in general.

As a result of the GloBallast Programme all pilot countries have expressed their commitment to ratifying the BW Convention as soon as they can get Government/Parliamentary approval. Clearly the GloBallast Programme has enabled each of the six countries to be in a position to be among the world's first countries to ratify the BW Convention. In fact Brazil joined Spain in January 2005 to become the first two States to ratify the BW Convention. Some pilot countries have estimated it has reduced the likely time needed for ratification from 5 to 2 years. This is a very important point, as it means in these countries mandatory ballast water management will come into force much sooner than would otherwise have been the case, and as a consequence, additional protection of the marine ecosystems from the threat of invasive marine species in these countries will commence much sooner.

3.2.2 Monitoring and Evaluation *

Our assessment is that the monitoring and evaluation of Programme Implementation has been carried out in a **satisfactory** fashion. The desk reviews, coupled with interviews with stakeholders, project sponsors, the PCU and pilot country teams, lead us to conclude that requisite monitoring and evaluation procedures were set in place, consistent with UNDP/GEF and IMO reporting procedures. The terminal evaluation has uncovered no evidence of malfeasance, or examples of inappropriate activities and expenditures. The PCU management frequently communicated with Pilot Country participants and were aware of their progress. The PCU was also closely observant of external consultant activities, and exercised control over the quality of final outputs. In fact, the high expectations of the PCU with respect to output quality were a contributing factor to project output delays. A case in point is the failure to publish the expected case studies, which were deemed by the PCU staff to be not of high enough quality to publish without major revision, which the PCU had no time to manage.

Project oversight activities, including formal evaluations, can be grouped into three categories.

- Combined Annual Progress Reviews (APR) and UNDP/GEF Project Implementation Reviews (PIR)
- Periodic progress reviews and reports by the PCU to the GPTF meetings
- Formal evaluations of the project by independent consultants

The PCU delivered APR / PIR reports to UNDP/GEF, using the required format. The Evaluation Team has reviewed the APR / PIRs for 2002-2004. Each report includes a self-evaluation of project performance against established success criteria. The APRs provide brief details on project performance and lessons learnt. The PCU used these reports to indicate continuing difficulties operating under the administrative structures of the IMO. Also consistently noted in the APR / PIRs were the PCU concerns that project deliverable expectations outstripped available staff resources. While IMO did not alter administrative procedures in response to PCU concerns, it did fund a temporary administrative assistant position and a second technical expert.

The PCU provided detailed reports on progress at each of the GPTF meetings. The monographs detailing each GPTF proceedings are excellent presentations of project progress and issues. Especially noteworthy is the inclusion in each monograph of the minutes of the meeting, enabling participants and observers to consider the full GPTF deliberations and agreements.

A Mid Term Evaluation (MTE) was conducted in August/September 2002. The 4th Meeting of the GPTF was briefed on the findings and recommendations of the MTE. At its 5th meeting the GPTF reviewed the progress by the PCU and the six pilot countries in the implementation of MTE recommendations. Of these the PCU reported that action had been taken in response to most of the recommendations. The PCU noted that only four of the 17 issues remained open, reflecting their scheduling in the overall project timeline, including engaging in "round-robin" feedback processes (1.A); finalisation of case studies (1.C); review of possible financial mechanisms (2.E); and preparation of country-specific CME systems (3.A).

Pilot country monitoring and evaluation was considered internally, through the submission of monthly project activity and financial reports. It has been reported that the submission of these reports was uneven. Work plans and terms of reference for the CFP-As were jointly overseen by the CFP's and the PCU.

Project oversight from IMO was carried out through normal IMO administrative procedures. GloBallast accounts have not been subjected to a detailed programme-specific audit, but were included in the annual or-

ganisation-wide external audit. The Organization was aware of the heavy workload and assisted in recruiting temporary administrative assistants and a new Technical Adviser

Despite UNDP-GEF programme management guidelines calling for the development of monitoring plans, none was developed for GloBallast.

3.2.3 Stakeholder Participation *

It is clear from project documentation, particularly the Proceedings and Minutes of the five GPTF meetings coupled with the Evaluation Team meeting with some [60] government and industry stakeholders that the operational relationship with stakeholders, including NGOs had a **highly satisfactory** level of achievement. This level of cooperation made a positive impact on programme implementation and the achievement of programme objectives.

a) Production and dissemination of information

The GloBallast project has been very successful in the production and dissemination of high quality publications and materials, which have had a major impact on the success of the project, particularly in raising public awareness, which was seen as the greatest barrier during the PDF-B phase. While the majority of the information was published by the PCU, many materials originated from the pilot countries and were then disseminated to stakeholders in their country and region. It is unnecessary to list all the many publications in this report (the list is available on the GloBallast website http://globallast.imo.org/. An example of the more essential publications printed in the GloBallast Monograph Series includes the following:

- The Ballast Water Risk Assessments for each pilot port
- Ballast Water Treatment R&D Symposium reports
- Guidelines & Standards for Ballast Water Sampling
- GloBallast Legislative Review
- GloBallast Workshop Reports
- The quarterly Ballast Water News
- GloBallast Website postings
- Posters and Pamphlets
- R&D Symposia Reports

The six pilot countries have made a significant contribution to the production and dissemination of information to country and regional stakeholders as well as the wider public and shipping communities. The websites of the pilot countries are also sources of local and regional published documentation see:

http://www.globallastwaterindia.com/

http://globallast-china.org/

http://www.globallast.od.ua/rus/

http://www.mma.gov.br/aguadelastro

http://www.global-ir-pso.com

http://www.ballastwater-sa.org/

At date of this report the PCU publication portfolio comprised 16 monographs, five GPTF reports, two R&D Directories, one Mid Term Evaluation Report, 17 quarterly newsletters, three brochures and eight different posters, giving a total of 52 different hard copy publications produced in a 45 month period since project inception on 1 March 2000. This equates to an average of more than one formally published product being produced by the PCU per month. Twelve more monographs (including this report) are currently near completion and will be placed as PDF files on the GloBallast we site in January 2005. The Pilot Countries also produced a large number and broad range of high quality publications and products, covering a broad range of issues.

Local resource users and NGOs

In each pilot country its Government appointed a lead agency and an MOU was entered into between the Government and IMO outlining project objectives, and roles and responsibilities. As part of Project Objective 1 (Component 1) each pilot country set up its own in-country coordination arrangements. This consisted of the Lead Agency, through the Country Focal Point, being responsible for an inter-ministerial and multi-sectoral Country Project Task Force (CPTF).

Although the role envisaged for the CPTF by the PCU (see Proceedings of GPTF 1st Meeting) was for it to be responsible for the development and implementation of information and educational activities, each CPTF took on much wider roles and responsibilities particularly in facilitating implementation of the various in-country activities outlined in the PIP. The CPTFs participated in project implementation and provided advice to the Lead Agency, which in turn was responsible for decision making. The CPTF also served to link project activities to other in-country stakeholders.

The CPTFs were a vital part of the project and without them the project would not have achieved many of its objectives. The CPTFs in each pilot country typically consisted of the following types of government and non-governmental organisations (NGO's)

- Shipping, Port, Maritime or Transport Administration
- Environmental Department/Agency
- Agriculture, Fisheries, and Quarantine agencies or departments
- Oceanographic/Fisheries Research organization
- Shipping industry representatives (owners, operators, builders, designers seafarers, training institutions etc)
- Universities and Research & Development institutions
- Environmental NGOs (where they exist in countries)

The CPTFs were instrumental in bringing industry and government together, as quoted by one shipping company representative " through working on the GloBallast project we now have a much better relationship with the maritime administration, this will serve us both well for the future, not just on GloBallast issues but on wider government/industry matters".

CPTFs were also instrumental in encouraging the shipping industry to participate in the project and to comply with the IMO Ballast Water Guidelines. Also to participate in the risk assessments at each pilot site by completing and lodging the IMO Ballast Water Report Forms and by practising ballast water management by exchanging ballast water at sea.

Through the CPTFs the Lead Agency was able to disseminate awareness raising material. In China 6400 copies of the IMO Ballast Water Guidelines, translated into Chinese were distributed to the shipping industry and other relevant organisations, and seminars were held in 8 port cities, attended by more than 500 participants from the core stakeholder group. After adoption of the BW Convention, China then translated the new Convention and distributed 1500 copies to the shipping industry.

In terms of capacity building, stakeholder participation was a the key factor in the port base line surveys and risk assessment activities, where scientists from local universities as well as other organisations such as port authorities and fishery research agencies obtained the knowledge and experience to continue this process in the future.

The approach used by the Programme in using local resources and NGOs and including them in the CPTF was an essential element in the programme, and clearly what was achieved would not have been possible without them. This was a clear programme 'strength', the Evaluation Team is not aware of any weaknesses with this approach.

Partnerships and Collaborative Relationships

The GloBallast Programme established a number of collaborative relationships with the organisations listed in the Stakeholders Section (2.4 above). These were key industry and environmental drivers in the implementation of the GloBallast Project. Organisations such as ICS, INTERTANKO, OCIMF, IUCN and FOEI

participated as observers in nearly all meetings of the GPTF, worked closely with the PCU and served as a link to their global member organisations; keeping them informed of the project but more importantly encouraging participation in the project where possible.

The PCU used the "Rationale for achieving reforms through a large marine ecosystem (LME) approach" in establishing regional relationships with a number of organisations, these included working with the Mediterranean Action Plan (MAP), the Permanent Commission of the South Pacific (CPPS) and the South Pacific Regional Environment Programme (SPREP) to develop regional strategies and activities on ballast water/invasive marine species control and management.

In addition, IMO is concluding an MOU with the Caspian Environment Programme (CEP) whereby CEP will work with IMO to undertake BW activities in the Caspian Sea. GloBallast also provided guidance to HELCOM in the methodologies and procedures for port baseline surveys and risk assessments.

All of the pilot countries established partnerships/relationships with regional organisations, and pushed the development of regional Strategic Action Plans (SAPs). Examples include: China through the State Oceanic Administration established links with the UNDP/GEF project Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), as well as working closely with Blue Bohai Sea Project. IR Iran established links with the CEP and was able use information from the GloBallast Project to assist the CEP in dealing with the *Mnemisopsis Leidyi* (Comb jelly) most likely introduced into the Caspian Sea from the Black Sea in ships' ballast water. This marine invasion caused substantial damage to the Caspian Sea fishery. In Iran alone the annual fish catch has been reduced from 90,000 tonnes to 15,000 tonnes. Iran also used the Regional Organisation for the Protection of the Marine Environment (ROPME) to establish a Regional Task Force. Brazil established linkages to the Environmental Working Group of MERCOSUR. South Africa established linkages to the Nairobi and Abidjan Conventions. Ukraine established linkages with the Bucharest Convention.

Involvement of Government

There was a high level of government participation across a range of disciplines amongst the pilot countries. The Evaluation team rates government involvement as **highly satisfactory.** The implementation of the GloBallast Project was based on MOUs being signed between IMO and the governments of the six pilot countries. The project could not have progressed as it did without the strong commitment of the governments of each of the six pilot countries.

Interestingly, as compared with many other UNDP-GEF International Waters Projects, GloBallast has been very successful in developing inter-ministerial coordination through the formal establishment of CPTFs in each country. There has been a high degree of inter-ministerial cooperation in the pilot countries, involving ministries of shipping and transport, port authorities, ministries of the environment, and human health ministries (focused on quarantine and ship-borne communicable disease). One can surmise that institutional barriers have been easier to breakdown in this instance because of the novelty of the issue, and its clear connection to environmental, human health and transport / shipping concerns.

3.2.4 Financial Planning

a) Programme costs

The following table constitutes an accounting of the GloBallast project budget, provided by the PCU as of 10 December 2004. It is important to note that during the GPTF-6, final project meetings, PCU staff were continuing to work with the IMO Finance Section to reconcile the project books, and determine final accounting.

Table 3: GloBallast Expenditures as of 10/12/2004

Activity	*Budget Revision– July 2004*	*Total Expenditure as of 10-12-2004*	*Remaining*	*%*
1.A.1 Human Resources	$1,277,725	$1,084,955	$192,770	84.9
1.A.2 Hardware, 1.A.3 Info/Communications Network 1.A.4 PCU Travel, 1.A.5 Programme. Evaluation & Review	$648,860	$584,587	$64,273	90.1
1.B.2 Support CPTF's and CFP Assistants, 1.B.3 CPTF Meetings, 1.B.4 National Work Plans	$1,237,961	$1215,990	$21,971	98.2
1.C.1 Global Project Task Force	$348,452	$268,105	$80,347	76.9
2.1 Programme. Identity, 2.2 Education & Awareness 2.3 Case Studies, 2.4 Country Comm. WorkShops 2.5 Implement. National Comm. Workplans	$982,996	$846,400	$136,596	86.1
3.1 BW Risk Assessment, 3.2 Port Baseline Surveys, Intl Port Survey Workshop. 3.4 Intl. Port Survey Workshop	$1,049,977	$1,049,896	$81	100.0
4.1 Translate/Disseminate IMO Guidelines, 4.2 BWM Education & Training Package, 4.3 Legislation & Regulations, and 4.4 Global R&D Symposium.	$408,391	$408,410	($19)	100.0
5.1 Develop CME Systems, 5.2 BW Sampling Equipment. 5.3 In-Country CME Personnel Training, 5.4 Implement CME Systems, 5.5 Intl. Ballast Water Sampling Workshop	$386,350	$356,714	$29,636	92.3
6.1 Form Regional Project Task Forces, 6.2 RPTF Meetings and study tours	$380, 349	$376,717	$3,632	99.0
7.2 National Resources and Financing; Donor Conference,	$60,000	$33,889	$26,111	56.5
8 Misc.	$106,300	$95,522	$10,778	89.9
Prior Year Savings	($167361)			
TOTALS	$6,720,000*	$6,153,824	$566,176	91.6

*10% of the project budget was paid to IMO to cover project support costs (AOS), bringing the total to US$7.392M.

Cost Effectiveness of Achievements

Cost effectiveness can be a fairly straightforward discussion when the project in question is designed as an investment, say to build a water treatment plant. When it comes to capacity and awareness building projects, the consideration of cost effectiveness is more difficult. Often, cost effectiveness in these instances gets measured against in-kind and matched funding. By this measure, GloBallast has done well, with an initial US$ 7.4 million UNDP-GEF grant expected to leverage US$2.8 million of in-kind support from the pilot countries, for a total project budget of US$10.2 million. In the below section (d) on co-financing, the leveraging effect of the project is further discussed. A notable achievement is the nearly US$ 2 million of additional in-kind and financial contributions to the ballast water management effort, raised by the PCU over the course of the project.

Other measures of cost effectiveness take into account the amount of money spent to achieve specific project deliverables. This aspect is somewhat difficult to discern at this point because of the aforementioned difficulty in obtaining final financial information. Anecdotal evidence suggests that printing costs were high.

The most important measure of cost effectiveness relates to the impact that the project has had on the pollution problem in question. If, through GloBallast, an alien species invasion could be avoided, the potential savings to fisheries and tourism could easily surpass the costs for implementing GloBallast. The problem is, the tools are not yet available to monitor the extent to which GloBallast has had a demonstrable impact by appreciably lowering the risk of ballast-borne invasive species. One stakeholder from an environmental NGO suggested that the true environmental impact and therefore the cost effectiveness of this project would not be known for 20 or 30 years. Nevertheless, the GloBallast Programme clearly acted as a catalyst for accelerating the Convention development process, which should in turn hasten ratification of the BW Convention. It is expected that widespread implementation of the Convention can reduce the risks of marine bioinvasion in the future.

Financial Management

Four issues appear to have had an impact on the Financial Management of the project:

- Delays in activity implementation in the first half of the programme resulting in continuing under-expenditure in the pilot countries for the first three years
- The project extensions and the consequential impact this had to the salary components of the budget, to the PCU and CFPAs
- Delays in financial reporting by the pilot countries and related delays in the availability of IMO Finance reports, resulting in budget adjustment decisions being made on inaccurate information
- Difficulties in financial reporting due to the changeover of financial accounting at IMO in the July 2004, including the adoption SAP financial accounting software

Because of the extension of the project with no additional funding being available it was necessary for the salaries budget to be adjusted several times; this was mainly achieved from under-expenditure by the pilot countries in the early part of the programme. It is noted however that IMO contributed $190,000 towards the salary and emoluments of the CTA.

In preparation for the last quarter of the project, in September, the PCU asked the Pilot Countries to provide outlines of planned expenditure of GloBallast funds for the remainder of 2004. The Pilot Countries were slow to provide their planned expenditures and some were received only in late November. Together with the planned PCU activities, a possible overall budget shortfall at the end of the year of around US$300K was then predicted.

A shortfall of $300K represents around 4% variation in the total GEF allocation of US$7.4 million, which is not unreasonable, given a project extension from three to five years without a budget increase, and the fact that the PCU has absorbed additional costs such as fully-funding the second PCU staff member from the beginning of 2004. The GloBallast budget has also been hit by decreasing value of the US dollar throughout this year (especially against the British Pound), leading to increased PCU costs in particular (esp. newsletter and monograph production and PCU travel). Other factors contributing to the shortfall include a surge in expenditures in some countries to use up as many funds as possible as the end of the project, and a 6 month delay in receiving from IMO Finance the final year end IMO audited accounts through 31 Dec 2003 (meaning the PCU were planning and operating without certainty for much of 2004).

In order to balance the final budget, the PCU during the final months has been working with the Pilot Countries to identify all non-essential activities and possible savings, including for the PCU. This includes removing the $200K GloBallast allocation for the TV Documentary and seeking additional shipping industry funds to make-up the shortfall (e.g. a recent meeting with BP Shipping – which met with a positive initial response). In addition, several planned activities, such as the Newsletter and publishing the final monographs on some project activities such as the port surveys, have been put "on ice" or will be handled as web-based PDFs only. The PCU has also been going carefully through the IMO Finance records to identify any discrepancies or miscalculations that might result in the “recovery” of project funds. The PCU believes that after belt tightening and record corrections are made, the remaining shortfall will be around $50-70K by the end of the year. This represents a 0.7 to 0.9% variation on the overall project budget, which is excellent for a

US$7.2 million global project involving 6 disparate countries over 5 years, during a period of significant dollar devaluation.

The necessary belt-tightening by the PCU has had repercussions in several of the pilot countries, which indicated that they are now left short of funds that have already been obligated. South Africa, for instance, expected funds would be available to continue helping Kenya to implement the developed survey for the Mombasa port. Funding was expected to complete the follow-up work i.e. to do the taxonomy of the specimens collected during the survey, and to run training workshops in those areas of taxonomy where it is required. South Africa is now seeking funding from IMO TC to complete this work.

The working arrangements between the PCU and the IMO Finance Section appear to have been at times problematic. Concern was raised by the PCU during the 6th GPTF meeting, that the PCUs close perusal turned up thousands of dollars in the IMO Ballast Water Project accounts that might have been misallocated, and may still be available to the project. The switch over of the IMO financing system into a new Enterprise Resource Management System during 2004 is the likely reason for these possible misallocations. In light of the uncertainties, it was suggested by the evaluation team that IMO undertake an external audit of the GloBallast accounts at the conclusion of the project, which the IMO Administrative Director readily agreed to do.

Co-financing

The co-financing efforts of the PCU and pilot countries have contributed to the success of the programme but more importantly demonstrate a commitment to the future and ongoing ballast water activity in the pilot countries. The GloBallast Project was predicated on the need for additional financing to be obtained during the course of the project to break the reliance on donor funding.

As noted above, project co-financing, through grants and in-kind contributions, constituted approx. 30% of the planned GloBallast budget. The efforts in raising in-kind support, cash donations, contributions etc, by the PCU was very successful in building additional funding. The following table is constructed based from self-reporting of the PCU on its fund raising efforts – after GPTF 3, 4, 5 & 6.

Table 4: Co-Financing and Contributions – GloBallast – UK Office 2001-2004

PCU	*Contribution*	*Amount (US$)*
PCU (2001)	• Support in-kind from the UN Division of Ocean Affairs and Law of the Sea to assist development of the Train-X ballast water management training modules	500,000
	• Funds from IMO Technical Cooperation Fund for the Baltic Regional Workshop on Ballast Water Management.	24,000
	• Support in-kind from the international shipping industry and R&D community who covered their costs to present and participate in the 1st International Ballast Water Management R&D Symposium and Standards Workshop	60,000
	• Staff time from the World Maritime University for the Legislative Review Project	7,000
	• Support in-kind from IMO to host the 1st International Ballast Water Treatment R&D Symposium and Standards Workshop	5,000
	• Discount on ballast water training videos from Videotel for distribution to pilot countries	2,500
	• Discount on publications from International Chamber of Shipping & INTERTANKO for distribution to pilot countries	1,000
PCU (2002)	• US State Department, for the Eastern Baltic	34,000
	• IMO TC Fund for a regional workshop in Africa	30,000
	• Offer from UNDP Film Unit for the GloBallast TV Documentary	100,000
	• Support from IMO for the dissemination of Ballast Water News	25,000

	• (approx.) for participation of presenters in seminars, conferences and other relevant events from various sources including the shipping and oil industries and third party countries interested in ballast water issues.	42,000
PCU (2003)	• IMO – salary and emoluments of the CTA for the extended period of the project	190,000
	• Support from IMO to the 2nd R&D symposium	5,000
	• Various sponsors – to publish the 2nd R&D symposium proceedings	3,600
	• Various sources – international experts to travel, attend and present at seminars, conferences, and workshops organised by GloBallast	60,000
	• 60k from Australia and 10k from New Zealand to organise the 1st International Ballast Water Risk Assessment Workshop hosted and sponsored by the Australian Government	70,000
	• Free labour from interns / MSc student placements within the PCU	10,000
	• Contribution from IUCN to the production of the Ballast Water News	20,000
	• Contributions from GISP and UNEP to the joint poster "preventing pests"	6,000
	• Support from various sources for PCU and Pilot Country travel to meetings, seminars, conferences, etc.	60,000
PCU (2004)	• From IMO Technical Cooperation Fund for the East Asia Port Survey replication in Vietnam	40,000
	• (approx.) staff time from New Zealand as expert support to the East Asia port survey replication.	10,000
	• (approx.) staff time from Australia as expert support to the East Africa port survey replication	10,000
	• Contribution from IUCN to support the East Africa port survey replication	5,000
	• Contribution from IUCN – cash and staff time contribution to the production and distribution of Ballast Water News.	10,000
	• Support from various sources for PCU and Pilot Country travel to meetings, seminars, conferences, etc.	10,000
	• Contribution from Singapore to host the 2nd South Asia Regional Task Force meeting	5,000
	• Offer from Vela Shipping (Saudi Aramco) for the GloBallast TV Documentary	200,000
	• Offer from Wallenius Lines / Alfa Laval for the GloBallast TV Documentary	50,000
	sub total for PCU	**1,595,100**

The Pilot Countries have been highly successful in meeting their co-financing expectations. At project conception, the in-kind contributions were expected to reach US$ 2.8 million. Below is set out the self-reported country contributions at project's end. The Pilot Countries far exceeded the expected figure, together reporting in excess of US$4.3 million raised in co-financing and in-kind contributions.[2] Together with the additional co-financing generated by the PCU, this suggests US$ 6 million or more raised, thereby approaching a 50/50 split with GEF and IMO financing.

Table 5: In-kind contribution expectations set in the GloBallast ProDoc

Initial Expected Government Inputs (in-kind)			
Brazil	155,000	Iran	145,000
China	920,000	South Africa	380,000
India	900,000	Ukraine	300,000

[2] The Pilot Countries contribution is likely higher than reported, as many faced difficulties when estimating their in-kind support and quantifying the various contributions from their governments in US Dollars. China's lower in-kind figure reflects this quantification difficulty, rather than a lower level of activity.

	Total	2,800,000

Table 6: Pilot Country self-reporting of in-king contributions and co-financing

Brazil	
Activity / Source	*Amount US$*
• Project of Conservation and Sustainable Use of Brazilian Biological Diversity (PROBIO) and National Fund for the Environment (FNMA) approved financial support to the Federal University of Paranaguá for the project " Ballast Water: risk assessment, monitoring and management plan of exotic species on Port of Paranaguá"	120,000
• Project within the National Fund for the Environment (FNMA) for a bibliographical research on the invasive species in Brazil	50,000
• Contribution supporting two international workshops held in Brazil, from the Brazilian federal Ministry of Environment (MMA), Alianca Navegacao e Logistica Ltd International Marine Paints, National Union of Shipping Companies (Syndarma) Petrobras Transport SA, Transpetro and the National Agency of Health Surveillance Agency (ANVISA)	23,600
• Support from the National Council for Scientific and Technological Development (CNPq) for scientific researches regarding the physiology and behaviour of the Golden Mussel	330,000
• Support from the National Council for Scientific and Technological Development (CNPq), under the Water Resources Sectoral Fund for the project "Development of control measures for the golden mussel dispersion in the Alto Rio Paraguay basin"	38,500
• Support from the Foundation of Science and Technology (FUNITEC) (Santa Catarina State) for a project developed by Vale do Itajai University, to inventory ballast water discharged at the port of Itajai.	3,200
• Ministry of Environment (MMA)in-kind support for financial cooperation: ad hoc consultant to support the Programme development and implementation.	32,000
• MMA In kind project cooperation: Office for the CFP Crew	4,000
• Directorate of Ports and Coasts (DPC) in kind project cooperation: Office providing for the CFP-A	3,340
• DPC Financial project cooperation: Phone, fax and mail.	3,200
• Admiral Paulo Moreira Marine Research Institute (IEAPM) In kind project cooperation: Imprest account operation, finance accompaniment and control (preparation of cash-books and related documents).	16,000
• 42 taxonomists/specialists from 14 institutions: In kind project cooperation: Identification of species collected in the port biota survey	192,000
Total	**$815,840**

China	
Activity / Source	*Amount US$*
• Establishment of CPTF	$3,400
• Operation of CFP Office	$46,000
• CFP's domestic travel for attending GloBallast Activities	$10,800
• Case study	$3,800
• Port biological survey (providing the survey team)	$6,500

• Risk assessment (team's availability, in-city transport, working lunch etc.)	$9,650
• 8 seminars under communication plan (providing inter-city transport and accommodation for 520 participants)	$32,000
• Two deliveries of the Training Package (providing inter-city transport and accommodation for participants from other cities)	$16,000
• Regional cooperation	$3,050
• The 4th GPTF Meeting in Beijing 2002	$6,300
• Holding the China-ASEAN Seminar on Ballast Water Management (providing air-tickets, and DSA for all ASEAN participants and other fees for the seminar)	$57,000
Total	**$194,500**

India

Activity / Source	*Amount US$*
• In-kind contribution for the Country Project Task Force Meetings	2,174
• In-kind contribution for the Workshop	1,739
• International Meetings	5,652
• In-kind contribution for the Presentation to Stake Holders at various ports	1,609
• In-kind contribution for the Port Base Line Survey, Facilities for meet (space, transport, audio visual, hospitality, etc.)	26,086
• In-kind contribution for the administrative and logistic support to CFP & CFP [A]	11,725
• Government of India has approved 'in-principle' the continuation of the ballast water project in India	600,000
• Government of India through the Department of Biotechnology has funded a research initiative by the National Institute of Oceanography (Goa) and the National Centre for Cell Science (Pune) for Molecular Characterization of Microbial and Invertebrate Diversity of Indian West Coast	150,000
Total	**$798,985**

IR Iran

Activity / Source	*Amount US$*
• PSO (sponsoring agency) has allocated resources to allow continuation of the programme for 2005 and beyond. Plans are for the PSO to replicate BW Risk Assessment and Port Biological Baseline Studies in other Iranian Ports.	1,171,000
• The PSO has provided considerable in-kind and cash contribution for the various activities of the programme	
Total	**$1,171,000**

South Africa

Activity / Source	*Amount US$*
• Component 1; CFP time; Assistant CFP time, office, computer & peripherals; local transportation, CPTF meetings, lead agency costs; national activities	207,000
• Component 2; DEAT in house printing, communications. Awareness info. distribution, R&D sector participation in materials development; NPA materials distribution, attendance at launch function, delivery of presentations on behalf of GloBallast: SAMSA dissemination of materials, attendance at events: Universities; venues and support for presentations, participation and materials dissemination; Shipping Industry: attendance at functions & material dissemination; other: community schools and aquariums – outreach programmes, R&D materials development.	63,000

• Component 3: DEAT data and resources, permits, sampling & field support, equipment, taxonomic assistance, background data, GISW system maintenance; NPA: facilitation of surveys, staff support, direct funding for port survey replication, preparations and participations at workshops; Universities: Student field camps, sampling and sorting & taxonomy, equipment and consumables, meetings;	172,500
• Component 4: DEAT, NPA, SAMSA, Universities and shipping industry staff participation at workshops	36,000
• Component 5: DEAT, NPA, SAMSA, Universities and shipping industry staff participation at meetings and conferences	62,000
• Component 6: DEAT & Universities - staff time for presentations and support for Mombasa survey development	28,500
Total	**$569,000**

Ukraine *Activity / Source*	*Amount US$*
• Meeting to establish Country Programme Task Forces and agree its constitution, Odessa, 29 May 2000;	**3,000**
• Support under sub-component 1.B: In-country Arrangements, incl. support for Lead Agency and CFP (USD 160K), CPTF meetings and CFP-A (USD 55K), development of NWP (USD 10K), country-specific activities, such as BWEEMS (USD 3K), TRANSZUK project (USD 12K) Bacteriological Survey in Odessa Port (USD 12,5K) and establishing Black Sea Invasive Species database (USD 7,5K);	**260,000**
• Support under component 2: Communication, Education and Awareness Raising, incl. support for case study (USD 20K), development and implementation Country Communication Workplan (USD 20K), holding National Awarenes Rising Seminar (USD 12K), participation in seminars and meetings (USD 6K), web-site support (USD 10K), lecturing (USD 10K), translation (USD 15K), TV documentary (USD 15K), country-specific awareness rising materials (USD 14K), communication consultant (USD 6K);	**128,000**
• Support under component 3: Risk Assessment & Port Biota Surveys, incl. support for BWRA (USD 10K), port baseline survey (USD 25K), participation in the 1st International Port Survey Workshop (USD 4K);	**39,000**
• Support under component 4: Ballast Water Management Measures, incl. translation and dissemination of IMO BWM Guidelines (USD 2K), in-country training in BWM (USD 30K), legislative review (USD 15K), implementation of IMO A.868 Guidelines in Ukrainian ports (USD 25K);	**72,000**
• Support under component 5: Compliance Monitoring and Enforcement, incl. participation in CME Workshop (USD 4K), development National BWM strategy (USD 10K), participation in the 1st International Ballast Water Sampling Workshop (USD 7K);	**21,000**
• Support under component 6: Regional Cooperation and Replication, incl. establishing Black Sea Task Forces (USD 10K), organization of two regional conferences (USD 24K);	**34,000**
• Support under component 7: Resources and Financing, incl. securing government funds to implement initial activities of the National BWM Strategy in 2005-2006;	**30,000**
• In-kind support under Country Specific Activities, incl. 2nd Port Baseline Survey in Odessa Port (USD 20K), regional Port Baseline Survey Seminars (USD 3K), translation of IMO BW Convention, 2004, into Ukrainian and providing of ratification procedure (USD 3K), adopting and implementation of National Education Programme on BWM (USD 50K), system on BW Reporting Forms analysis in Ukrainian Ports since 2001 (USD 100K), amendment to the National Programme for Conservation and Rehabilitation of the Black Sea (USD 30K).	**206,000**
Total	**793,000**

Total indicated co-financing from the Pilot Countries:	**$4,342,325**

3.2.5 Execution and implementation modalities.

As noted earlier, there has been a high level of expertise within the PCU, extending also to the pilot sites. The project benefited from low team turnover, amongst PCU staff and the CFPs and CFPAs. This enabled a core team to get organised, understand well the subject, and work in a coordinated fashion.

The previous Chief Technical Adviser was appointed to a permanent position within the IMO Secretariat, as Head, Office of Ballast Water Management (OBWM), and assumed full-time duties on 1 March 2004. While the main responsibility of this position is to act as Secretariat to the International Convention for the Control and Management of Ships' Ballast Water & Sediments, he also provided backstopping for the GloBallast project, and directly contributed to and supported the completion of GloBallast activities, focusing in particular on the GloBallast Training Package.

The previous Technical Adviser was promoted to Chief Technical Adviser - assuming full responsibility for the overall management and coordination of the project on 1 March 2004.

A replacement Technical Adviser was recruited and commenced duties at the end of May 04. The PCU therefore comprised only a single professional for three full months during a critical and transitional stage of the programme.

A Temporary Administrative Assistant continued to be used to support the Principal Administrative Assistant. This approach presented some in-efficiencies in that 'temps' invariably move-on after fixed periods. Such turnover breaks continuity and creates time lags, as the replacement 'temp' has to come up to speed with procedure and processes. The PCU engaged about 10 different temps during the project. Given that the need for the Administrative Assistant was clearly demonstrated and justified early in the project, it would have been more effective and efficient for the Project Document to provide for the establishment of a proper fixed-term position that might have been filled by a single candidate throughout the project.

Selection of persons for two of the significant project activities: baseline port biological surveys and risk assessments, was judged to be highly successful, both in the selection of international consultants and the selection of experts at each of the 6 pilot sites. It was noted, however, by the PCU that the selection of consultants to manage the risk assessment activities took over a year. While the circumstances for the award of this contract were particularly complex, and delays were in part caused by the difficulties of the selected contractor to work in one of the Pilot Countries, it was felt that this was an excessive delay for the selection of a contractor to carry out one of the key project activities. IMO administration and the PCU indicated that some consideration was given during the later stages of the project to set up a "pre-screening, pre-approval" process to obviate the need for convening procurement panels every time short term consultants were needed. This should be considered for IMO follow up projects after GloBallast.

3.3 Results

3.3.1 Final Deliverables & Publications

Notwithstanding the fact that the vast majority of deliverables/outputs (more than 50 including reports, directories, newsletters, courses and other publications) were delivered on time and disseminated during the implementation of the project, a handful of deliverables remained pending while the evaluation was taking place, the Evaluation team asked the PCU to provide a timeline for final project deliverables. The tables are set out below:

Table 7: Publication of final GloBallast deliverables

Item	*Deliverable*	*Timeline*
1	Global BW Treatment R&D Directory – 2nd Edition	PDF on web site 1 Dec 04. Hard copy released 6 Dec 04.
2	Report on the Brazil Port Survey Workshop	Final draft ready mid Jan 05.
3	Report on Melbourne Risk Assessment Work-	Final draft ready mid Jan 05.

	shop	
4	6 Reports on the Pilot Country Port Surveys	Final drafts ready mid Jan 05.
5	Report on the Tehran CME Workshop	Final draft presented to 6th GPTF.
6	Report on Global Review of Economic Impacts	Final draft presented to 6th GPTF.
7	Report on Global Review of Self -Financing Mechanisms	Final draft presented to 6th GPTF.
8	Terminal Evaluation Report	Final draft ready late Jan 05.
9	6th GPTF Report	Final draft ready late Jan 05.
10	Ballast Water News 18 and 19 (Jul-Sept 04 and Oct-Dec 04).	Cancelled due to budget constraints.

It has been noted by the PCU that due to budget constraints, all of the above except Item 1 will only be published as PDF files on the GloBallast web site. In early 2005, the remaining member of the PCU (Jose Matheickal) will consider with the IMO Publishing Unit the possibility of publishing other reports through the IMO system, whereby they would be sold as per regular IMO publications to cover costs / generate income. It is recommended that all of the GloBallast Monograph Series published should be included now into the IMO Publications system and placed in the IMO Publications Catalogue. If possible, funds generated should go back to GloBallast activities rather than to the IMO General Fund. Re-prints could be made where demand is high for certain monographs.

Table 8: Other GloBallast Deliverables

Item	*Deliverable*	*Timeline*
1	Web-based Country Profiles Database*	Database structure finalised and demonstrated at MEPC 52 Full-system on-line and active ready for Country Inputs by 30 March 05.
2	Ongoing management, maintenance and further development of the web-based Information Clearing House, including: • Country Profiles Database • BW Treatment R&D Directory • IMO Library BW Collection • GloBallast E-Forum	Ongoing / permanent
3	GloBallast Partnerships PDF-B Budget & Work plan	Submit to UNDP-GEF by 17 Dec 04.
4	IMO – Caspian Inter - Agency Agreement	1 March 05.
5	Training Package: IMO is looking to take on the finalisation of the GloBallast Training Package including possible adoption as a standard IMO course.	Early to mid 2005
6	BBC Ballast Water TV Documentary	early 2005

3.3.2 Attainment of objectives *

As a general overview of the end of project achievements, the Evaluation Team confirms that the 12 key project results identified in the Project Document listed below have been largely accomplished. We also confirm that adequate conditions have been created for the successful implementation of the IMO Guidelines and the new IMO Convention, and that the six demonstration countries are in strong position to continue in a leadership role on ballast water issues at the regional and international level.

It is instructive to consider the attainment of objectives set against the expected end results, as considered in the original project document. In the following table are included 12 expectations for what the situation should be once GloBallast has been completed.

A detailed assessment on the attainment of each project objective is as follows:

Objective 1: Establish effective programme coordination, management and support mechanisms at the national, regional and global levels.

Objective 1.A – Establish a PCU and a Global Information & Communication Network at IMO

Result: Objective 1.a has been achieved in a **highly satisfactory** manner. The PCU was established some four months after the project start date and has proven to be an effective coordination unit. It has successfully carried out assignments with a high degree of professionalism. It is a testament to the widely recognised quality of the GloBallast effort that PCU management remain in high demand to lecture on ballast issues in international forums.

It has been noted by some pilot country participants that the PCU management kept up an ambitious travel schedule, with many travels for international speaking engagements which, while enhancing the GloBallast effort, were not directly tied to project outputs. It was noted by pilot country participants that the extent of travel sometimes made more difficulties to communicate with PCU members. This concern about PCU travel needs to be viewed in the context also of its benefits. In particular, opportunity provided for engaging additional stakeholders, securing co-financing (both now and for future), raising awareness, gathering intelligence for the Global Information Clearing House, staying 'on-top-of the issues' and generally catalysing action by others (see regional replication achievement)

In relation to establishing a global information and communication network, this can be seen as a highpoint in the GloBallast programme. The PCU together with the pilot countries have established an extensive network consisting of websites, library and numerous publications. Of particular relevance to this objective is the excellent website.

Objective 1.B – Establish and support a Lead Agency, Country Focal Point and multi-sector Country Project Task Force (CPTF)

Result: This objective was achieved in a **highly satisfactory** fashion, during the early phase of the project. While the pilot countries selected differing agencies, i.e. some selected the maritime safety administration, some the environmental agency, nevertheless each has had a positive impact. The country focal points and their assistants have been essential and effective participants. The CPTFs were instrumental in achieving wide support for the project both from other government agencies and a wider stakeholder community.

The mere fact that inter-ministerial and multi-sector CPTFs were developed, and met on a regular basis, can be seen as a significant project success. The project CPTFs had to overcome logistical problems relating to capital and port city separation in each of the countries, and required that individual agencies and organisations commit some of their own funds for participation. As with all such efforts, there were differing levels of activity and participation amongst different task force members in the different pilot countries. The key is for the function of CPTF meetings to shift from information dissemination to decision taking. It was noted by one pilot country that there would have been significant benefit in having hands-on experts in ballast water management/operations to participate as active member of the CPTF.

Objective 1.C: Establish and support a Global Project Task Force to review the programme and to advise the general directions to be followed.

Result: A **highly satisfactory** rating is provided for the evaluation of the Objective 1.C outcomes**.** Setting up of the GPTF was achieved early in the project with the first task force meeting in London in July 2000, four months after the commencement of the project. The PCU has effectively supported the GPTF throughout the project, and interviewed stakeholders have expressed the opinion that the GPTF meetings have been well attended and well managed. A review of the GPTF meeting minutes suggests that the principal roles of

the GPTF meetings were to review progress for the previous year and review and approve PCU and Pilot Country plans and budgets for the forthcoming year, and for information exchange. Little information has been provided to suggest that the GPTF was used as a tool to exert external direction over the project. Given the perceived successes of the PCU in managing the project, it may be considered that the GPTF participants were not needed to serve in a more directive capacity. However, the project delays, PCU work overload and IMO administrative difficulties could have been taken up more directly as issues for GPTF consideration and resolution.

Objective 2: Develop and implement communication, education and awareness – raising programmes and activities about ballast water threats and solutions at the port, national and regional level, for each pilot site.

Result: The evaluation team has considered the objective 2 achievements as **highly satisfactory**, recognising that with respect to awareness raising, viewed as the greatest barrier to global action on the threat of ballast-borne invasive marine species, the project's outputs were of exceptionally high quality. From the wealth of information generated by the project, it can be surmised that this barrier has been lowered as a result of GloBallast, especially in the pilot countries. Also, due to the publicity raised through the project, including the actions of the pilot countries, as well as through IMO and UNDP, interested persons in other countries around the world have access to considerably more information on threats and responses. It is important to note that no effort was made within GloBallast to quantify changing perceptions, or to gauge the extent that the GloBallast "marketing" campaign had an effect. Consideration should be given in future IW projects with significant public awareness raising components to utilise commonplace market survey techniques in order to gauge the effectiveness of awareness raising efforts.

Objective 2 also includes activities relating to the development of case studies. Here the Evaluation Team is concerned that the Case Studies conducted at several pilot sites quite early in the project, were not completed. The drafts reportedly needed significant revision, and the PCU has no time to take on this task. The PCU should have pushed the consultants to bring the reports to the required standard, and payment should have been withheld until the reports achieved the expected quality level. The evaluation team notes that the PCU commissioned an additional case study looking at economic impacts of ship-vector marine invasion events. The task was carried out during the last months of 2004, and the initial findings were presented at the 6th GPTF. The resulting Initial Scoping Study provides a useful starting point, but provides only a preliminary review of economic impacts. The report includes quite useful recommendations; such as to build a more extensive data-base of economic impacts using University resources, including PhD scholarships, and to develop a centralised database of invasive species information.

Objective 3: Undertake an initial risk assessment and information gap filling exercise at each pilot site to provide a clear understanding of the level and types of risks of introductions that each port faces, as well as the most sensitive resources and values that might be threatened, and the management responses required.

Result: Highly Satisfactory. This objective consisted of several parts; Port Baseline Surveys, Ballast Water Risk Assessments and an International Port Survey Workshop. From an environmental management viewpoint this objective was the most important element of the project. Each of the assignments within the objective were carried out according to plan, the implementation has been viewed as exemplary across the board, and the results are being replicated within the pilot countries, their regions, and in other countries. The final outcome from the Risk Assessment consultancy is a high quality published set of risk assessment monographs for each demonstration port. The port baseline surveys have likewise been successfully carried out, with survey reports now in the draft final report stage. These surveys have provided important data on the extent of alien species in the port areas.

An envisaged outcome of the GloBallast Project was to provide a choice to the demonstration countries to use a simple decision support system and the risk assessment data to determine whether the ballast water in ships coming to their ports posed a risk. If the ships' ballast water did pose a risk the port or maritime administration could then take some action such as recommending the ship perform some form of ballast water

management in accordance with the IMO Guidelines. Regrettably this aspect appears not to have been implemented.

Objective 4: Develop and implement generic and country/port specific plans, with defined ballast water management measures, to increase compliance with IMO Guidelines and protect identified, country specific most sensitive values at risk

A major focus of the GloBallast Project was to assist the pilot countries to implement the IMO Ballast Water Guidelines, objectives 3, 4 and 5 were aimed at this aspect. Objective 4 was divided into the following four sections: Translate/Disseminate IMO Ballast Water Guidelines, BW Management Education Packages, Legislation and Regulation Review and Global R&D Symposiums.

Results: Highly Satisfactory. Each of the objective's four components was successfully completed, and the results have been highly appreciated within the Pilot Countries and their wider regions. While the overall objective in terms of protecting identified, country specific most sensitive values at risk was only partially achieved, the project was instrumental in setting the Pilot Countries, and their regions, on a course to accomplishing this objective.

The PIP stresses that the development and implementation of the actual ballast water management measures that are necessary to minimise the risk of introduced marine species constitutes the 'back bone' of the programme at each pilot site. It is these measures that will produce the practical benefits of the programme. The Evaluation Team, reviewed the National Strategic Plans, and was impressed with the extent of Country adoption of ballast water management measures. One important area for future focus will be the development of port specific plans that define the ballast water management measures to be adopted and implemented at each port. Port visits and discussions with port officials lead us to conclude that the baseline surveys and risk assessments were perceived to be useful, one-off efforts, and there is a much better appreciation now of ballast water issues, however the assessments have not led substantial port management changes, other than the continuing collection of ballast reporting forms. An interesting and notable exception to this port follow through may come from South Africa, with the linkage of ballast water management to its ISO 14000 accreditation programme for each port. This linkage to the setting of ISO environmental standards for port management deserves further consideration.

TRAIN –X methodology used to develop the training package was tested in each of the pilot countries and after each training session improvements were made to the package to the extent where it is now ready for wider distribution and use. All the objectives of the course were attained and the responses of the participants to the opinion questionnaire were extremely positive. For some groups of participants the course was an 'eye-opener', for others an avenue to confirm and expand existing knowledge. Several pilot country participants noted that the training programme greatly benefits from using experienced trainers with hands on shipping and ballast water management experience. Train – X developers are to be commended for their thorough course evaluations, and follow up to revise the training programme in light of lessons learnt.

There is a great demand for further deliveries of the training programme both at national and regional levels. During IMO's STW Sub-Committee Meeting in January, India, China and Ukraine offered to provide free-of-charge the Model Courses for Ballast Water Management. This was highly appreciated by the participants. The future Model Courses will be based on the various modules of the GloBallast Training Package and the three countries will use the experience they have accumulated through their national deliveries of the course. IMO is currently preparing a new regional delivery of the package in West Africa, fully funded by the GCLME project of UNIDO. IMO has also secured funds for an international workshop hosted by China to update and upgrade the content of the course. IMO is also currently considering technical support for regional deliveries in the ROPME Sea Area and South America.

The Legislation and Regulation review was of significant aid to the pilot countries in building legal expertise and capacity and in helping them prepare for ratifying and implementing the new Ballast Water Convention. The Legislative Review also served to generate research and broader comparisons regarding legal and administrative systems and the first international workshop on legal aspects of ballast water management and control held in Malmo, Sweden provided a unique opportunity for cross-fertilization among the six Pilot Countries and for further dissemination of legal aspects related to transfer of invasive species. One country believed the Legislation and Regulation Review has helped reduce the time it will take them to ratify by one

year, as they now have a template of legislation, which is designed around that country's legislative requirements. In hindsight, it would have been useful to update the legislative review at the conclusion of the project, to track the extent of legislative change already as a result of GloBallast activities.

The R&D Symposiums were particularly helpful to the development of the draft BW Convention. The first R&D Symposium provided the opportunity for the world's top marine biologists and other scientists to come together for the first time to address the issue, particularly the complex issue of ballast water standards. The outcome of these symposiums greatly assisted MEPC in determining standards.

Information provided to the Evaluation Team suggests that the pilot countries were largely successful in increasing the rate of compliance with voluntary reporting methods by ships entering their ports, (quoted compliance rates were from 55% to over 90%). Nevertheless, no ports have adopted a threat assessment approach, (i.e. using the systems provided in the Risk Assessment activity to determine if there was a risk posed to sensitive areas on either a random basis or a ship by ship basis). Compliance with IMO Guidelines should include the sampling and analysing of ships' ballast water. This is occurring at some, but not all pilot ports. It is noteworthy that Ukraine samples ships on a routine basis, Brazil undertook a major sampling effort to sample at 9 ports a long the coast (using its own funds with a little support from GloBallast) and China is using the risk assessment results to target ships for sampling and has held training in sampling.

It is noted that the training programme for ballast water sampling took place in April 2003 and this workshop provided the countries with comprehensive guidance on the sampling equipment to purchase as well as sampling methodologies. Unfortunately, three countries did not proceed with sampling projects. Additional consideration is given of the valid reluctance of some port managers to mandate what are after all 'voluntary' Guidelines, at least until a convention is ratified and legislation is in place. Nevertheless, it would have been a high mark for the project had there been at least one port ready to implement a risk-based strategy of ballast water monitoring and sampling.

Objective 5: Develop and implement generic and country / port specific compliance monitoring and enforcement programmes, to increase compliance with IMO Guidelines and protect identified, country specific most sensitive values at risk.

This objective was divided into five activities: development of compliance monitoring and enforcement systems, purchase of ballast water sampling equipment, in-country CME personnel training, implementation of CME systems in each pilot country, participation at an international ballast water sampling workshop.

Results: Satisfactory. Many of the expected outcomes were achieved, although the final results were not met in the form and manner originally intended**.** The PIP stresses that effective implementation of country/port specific ballast water management measures requires compliance monitoring and enforcement systems to be set in place. Each of the 6 pilot states has made progress in developing legislation and developing sampling and monitoring systems, however many of the efforts are at initial stages, with legislation still pending. A comprehensive module on CME training was developed as part of the Introductory Course on Ballast Water Control and Management and successfully delivered in all six countries.

As a result of the delays in finalising the draft ballast water convention, and consequential delay in holding the diplomatic conference to adopt the new convention, the PCU and the GPTF were concerned that they did not know what would be in the convention and therefore did not know what would need to be enforced, so were hesitant in carrying out this Objective. Due to these concerns, the GPTF agreed with the PCU's recommendation to delay development of a CME system, pending completion of the BW Convention. Objective 5 was then reformulated and the newly identified activities were implemented in the time remaining after the BW Convention was approved in February 2004. The Evaluation Team acknowledges the reasons for the delay, but note that it meant some original CME expectations were not met, in particular the development of decision support systems at demonstration sites**.**

It was agreed with the GPTF to do a scoping study on what a CME System entails. The study was carried out in the latter part of 2001 and discussed at the 3rd GPTF. Agreement was then reached to delay proceeding further until after a final draft text of the BW Convention was approved by MEPC. Unfortunately, this did not occur until MEPC 49, in July 2003. During this period of uncertainty, before the BW Convention was approved, the PCU provided information on CME systems (the scoping study) to the demonstration countries

so that they could introduce CME measures if they wished. The matter was further discussed at the 5th GPTF where it was agreed to hold a CME workshop. In the intervening period, the PCU provided ad hoc assistance to countries for developing their own specific CME systems, provided information and support, developed a generic CME system and associated capacity building materials, and prepared standardised guidelines for ballast water sampling. A distinct module on CME was included in the Introductory Course on Ballast Water Control and Management, which was delivered to all the six Pilot Countries.

The CME workshop was held in Tehran in September 2004, and the results were presented to the 6th GPTF. The five-day workshop, including presentations, on-ship demonstrations and brainstorming sessions, brought together two participants from each GloBallast Pilot Country, a number of additional delegates from the host-country Iran, experts from a number of other countries including USA, Australia, Netherlands, Singapore and Norway. In total, there were 34 participants from 11 countries. "The workshop concluded that developing a flexible, practical and effective CME system for ballast water management is the next most important step in (the) fight against ballast water mediated marine bio-invasions. The workshop also concluded that electronic monitoring and reporting systems as well as rapid diagnostic tools would have the potential to be reliable, effective and practical CME tools for ballast water management. Paper based audits such as Newcastle Verification Method as demonstrated during the workshop, but with certain modifications could form the basis of a first-step approach to Pilot Country Specific CME systems. The workshop also decided that Pilot country representatives would take home the lessons learned in order to start designing country specific CME systems" (CME Workshop Report).

Objective 6: Where appropriate, establish and support Regional Project Task Force to increase regional awareness and cooperation and eventual replication of programme results

This objective was divided into two activities; Form Regional Project Task Forces (RPTFs) and develop a schedule of RPTF's, that can also provide opportunities for study tours by personnel from neighbouring countries.

Results: Highly Satisfactory. In terms of regional replication, Regional Task Forces have been formally established and Regional Action Plans officially adopted in all 6 regions, in several cases under the auspices of official inter-governmental bodies (ROPME, MERCOSUR, Nairobi and Abidjan Conventions, Bucharest Convention) and in others the links have been established with such bodies (PEMSEA, SACEP).

In 4 regions actual regional replication of activities has commenced under the Regional Action Plans (even though this was not required by the ProDoc within the project timeframe). This includes port survey replication and training in Africa, East Asia and Black Sea and regional training courses in Africa, South America and East Asia.

Further, a number of non-GloBallast target regions, including developed, industrialised regions, have adopted or are adopting the GloBallast approach, and have developed or are developing GloBallast-style regional arrangements, including Baltic (HELCOM), Pacific Islands (SPREP), Caribbean (CEP), Mediterranean (MAP) and South East Pacific (CPPS). Similarly, GloBallast has assisted a number of GEF-IW LME projects to integrate replication of GloBallast-type activities into their ProDocs, including Benguela Current, Guinea Current and Yellow Sea LMEs.

Most of the regional projects have gained sufficient momentum that they should have no difficulties continuing after the end of the GloBallast project. The Evaluation Team understands that while the intended study tours did not take place, neighbouring countries are keen to commence activities under the SAPs, providing funding can be obtained.

Objective 7: Identify and secure opportunities for self financing of the programme during its lifetime and for the sustainable continuation of IMO, global, regional and national efforts to implement IMO ballast water management provisions

This objective included deliverables such as a list of potential donors made available to participating countries, the review of opportunities for self financing of project components, and the sponsoring of a donor con-

ference in order to get loan and support commitments, including continuation support from the IMO regular budget.

Result: Satisfactory. While the international donor conference did not occur, other significant self-financing activities have taken place, which bode well for future ballast water management activities in the 6 pilot countries and at IMO.

With respect to the donor conference, the GloBallast Project Implementation Plan and budget included a $50K provision for a Donor Conference to be held towards the end of the project, with a view to seeking and securing funding sources for future global ballast water activities. In 2004, the PCU sought advice from several sectors as to examples of successful donor conferences that had been held by other projects, and none could be identified. Given the wide variety of political and economic environments across the six Pilot Countries and the vital need for the Pilot Countries to develop national-level self-financing and sustainability mechanisms, through discussion with the Pilot Countries and UNDP-GEF, it was decided that National Self Financing Workshops would be more useful. The total budget for this activity was therefore increased to $60K and allocated as $10K per country to hold their respective workshops. This was reflected in budget Revision F submitted to UNDP-GEF for approval. As the overall project budget constraints began to emerge in late 2004, this was cut to US$5K per country. China held its Self-financing Workshop on 6-7 December 2004 in Beijing, with participation from the shipping industry and other related authorities and organizations. India and Iran have indicated they plan to host self- financing conferences after the GPTF 6. South Africa cancelled its donor conference due to timing and lack of funds. Brazil and Ukraine do not intend to hold conferences.

Despite the fact that the donor conference activity was not carried out, the results are most satisfactory due to the significant co-financing achieved by the 6 countries, and the planned continuing efforts of the pilot countries. The results of self-financing efforts in each Pilot Country were reported at the 6th GPTF, and noted in the previous discussion on co-financing in this report. (section 3.2.4)

On behalf of the whole programme, South Africa has coordinated a consultant review of self-financing mechanisms for BW management already in place around the world. The final draft of the report was presented at the 6th GPTF. This should allow countries to assess options and select those that may be suitable for implementation in their contexts.

It is clear that continued financial support from IMO will be provided. IMO has established and allocated funds for a Secretariat to handle the ratification process for the BW Convention and to establish necessary operational guidelines. IMO is committed to continuing to serve as the lead organisation for solutions to the problem of ship-carried invasive species.

3.3.3 Sustainability *

The future augurs well for continuation of many activities that GloBallast has instigated and/or assisted in developing. The strong prospects for continuation provide the basis for a **highly satisfactory** rating on sustainability. First and foremost, there can be expected not only a continuation of interest, but in fact expanded interest in ballast water issues as result of the approved BW Convention. GloBallast played a catalytic role in the eventual completion of the BW Convention, with the pilot countries serving as leading proponents.

Strategy Setting

In terms of strategy setting, GloBallast has had notable success in the development of regional strategic action plans, country plans, and port management plans.

Establishing Financial and Economic Instruments

GloBallast pilot countries have had considerable success in developing financial instruments and mechanisms for the continuation of project efforts. These successes are discussed earlier in Sections 4.2.4 and 4.3.1.

There has been growing interest from shipping and marine technology companies in the ballast water discharge issues, driven by the GloBallast effort, and especially the new BW Convention. It is noteworthy that Vela International Marine, (Saudi Aramco), Wallenius Lines and BP-Shipping have agreed to provide financial support for the development of a BBC documentary on the subject. Private sector support is building – especially in the development of new technologies to deal with the technical hurdles of monitoring and BW treatment.

Mainstreaming programme objectives

GloBallast shows evidence of effectiveness in mainstreaming its objectives into the wider community – especially driving changes in the way that shipping and port managers are considering their environmental responsibilities. An issue that in the past was considered solely a question of ship safety has now been recognised as having significant environmental consequences.

3.3.4 Contribution to upgrading skills of the national staff

The project has had substantial success in developing a high skill level amongst the involved persons in the pilot countries. In many ways, this project has established country participants as international experts, with hands on experience on the developing of ballast water management programmes. The monthly and annual reports of the PCU and Country Teams include a sizeable number of requests accepted to speak internationally on the issue of ballast management.

4 CONCLUSIONS

GloBallast has been highly successful in building international support and momentum to fulfil the aim of removing barriers to the effective implementation of ballast water control and management measures in developing countries, in order to minimise the risk of transfer of invasive marine species. Globallast has been an effective and professionally run programme that has made a real and lasting contribution.

The major success of the project can be considered in its catalytic impact. The participants in the 6 pilot countries, together with the PCU, have:

- Achieved a high degree of country ownership among the 6 pilot countries, creating 6 centres of excellence on ballast water and marine invasive species issues.
- Served as a catalyst, mobilising substantial additional financing
- Developed sustainable country and region-based plans for ballast water management;
- Established the institutional arrangements and technical capacity needed for the pilot countries to implement the IMO ballast water Guidelines;
- Enhanced stakeholder and public awareness of the environmental harm that marine organisms transported in ships ballast water can cause.
- Provided knowledge transfer on a global scale, including innovative demonstrations in developing countries, and the dissemination of best practices; and
- Aided considerably in the formulation of the BW Convention.

It is instructive to reflect on the accomplishments of GloBallast viewed against the end-of-project results envisaged in the original Project Document. GloBallast has achieved, or made positive steps, towards each of the 12 expected results.

Table 9: Project results and achievements

Expected Result:	*Achievement*
Strong and continuing presence of a ballast water management capacity in 6 pilot countries supported by the IMO through absorption of the PCU activities	***Achieved***
A dramatic increase in the knowledge of the dangers of unmanaged ballast water discharges and remedies based on local port, country and regional settings that are consistent with IMO Guidelines	***Achieved/ Positive Steps***
Increased public awareness and support for ballast water management approaches	***Achieved***
A global resource information centre located in the offices of the IMO with the capacity to undertake systematic and ongoing distribution of the latest and most effective approaches to ballast water management. The centre would maintain existing and increase high quality, reliable data and information on ballast water related issues and approaches	***Achieved***
Availability of project developed and tested education and training programmes to increase knowledge of the ballast water issue and impart the knowledge, skills and attitudes required	***Achieved***
IMO Coordination of a global network of the research efforts and experience of monitoring centres in relation to ballast water transfer	***Achieved***
Increased levels of protection and conservation of habitats and species of global significance	***Positive steps***
Protection of aquaculture resources in and around coastal areas where ballast water exchange takes place	***Positive steps***
Protection of commercial fishery and shellfish enterprises in and around coastal areas where ballast water exchange takes place	***Positive steps***
Adoption of common regional approaches based upon the GEF/UNDP/IMO Project experience and approaches that are consistent with IMO Guidelines	***Positive steps***
Minimization of the loss of coastal biodiversity and degradation of coastal environments	***Positive steps***
Informed and effective developing country participation in the ongoing global deliberations on the ballast water management issue	***Achieved***

5 RECOMMENDATIONS

The PCU, together with the IMO Ballast Water Secretariat, have been developing a PDF-B concept paper for a follow-on ballast water project. Entitled: "GloBallast-Partnerships", the PDF-B builds from the present project, using the existing pilot countries to anchor a regionally based programme. The Concept paper for the PDF-B as drafted provides a logical set of plans and expectations, and the evaluation team supports this effort to obtain further UNDP-GEF funding. The following are additional recommendations for UNDP-GEF and IMO to consider as the PDF-B gets finalised:

a) Consideration should be given by IMO, through its Marine Environment Protection Committee, to host a workshop / working conference in 2005 to bring together key actors, including individuals from the GloBallast pilots, to draw up a 5-10 year plan for dealing with maritime invasive species issues. With GloBallast just completing, the BW Convention in place, and hull fouling issues very much under discussion, it would be useful for IMO to spearhead such a "visioning" effort, that could help to further define the objectives and actions within a follow-on UNDP-GEF sponsored project.

b) It is important to keep the GloBallast effort under the imprimatur of IMO, however IMO should pay some attention to the administrative issues raised during the just completed project. Within the GloBallast Programme we have observed an excellent project PCU, operating under the highly respected IMO label.

c) For any follow-on UNDP-GEF project, there should be a distinction drawn between IMO Secretariat functions relating to implementation of the BW Convention and GEF assistance towards capac-

ity building for environmental protection in developing countries. The practical matters of getting states to ratify and implement the BW Convention should not drive the activities of a follow on project.

d) The ballast water issue is responsible for perhaps half the risk of spreading invasive species through shipping activities. A significant additional aspect concerns hull fouling. In fact, with the prohibition on previously used hull paints due to toxicity, the vector-related problems of hull fouling are likely increasing. Consideration should be given by UNDP-GEF to expanding the objectives to include also hull fouling.

e) A follow-on project should fit within the context of integrated coastal zone management. The wider goal should be to support comprehensive environmental planning and management at the ports and within coastal waters. Port managers need to consider ballast water as part of an integrated monitoring and control programme that includes pollution caused by land-based activities and run-off, ballast water and sediment management, hull fouling, the handling of bilge and grey waters, and emergency management related to oil and chemical spills.

f) The training programme developed under GloBallast has provided a replicable introductory course that gives general information. It will be useful now to consider specific training programmes for ports and maritime personnel, and environmental / health enforcement personnel. IMO should develop the Train – X ballast module into one of its standard training courses.

g) A growing chorus of scientists are indicating that mid-ocean exchange of ballast is at best a stop-gap interim solution. The key is to find effective treatment solutions, (including so-called no ballast, continuous exchange processes). There is a compelling argument for the private sector to play the leading role in developing new technology solutions for treating ballast water, nevertheless, there should be a role for GEF in helping IMO to continue reviewing the standards and protocols for testing and certifying ballast treatment techniques.

h) An important UNDP-GEF project function should be to continue driving the scientific understanding of marine invasive species vectors, including analysis of the port conditions that factor into whether an invader takes hold. Evidence suggests that depleted fisheries and polluted waters may enable certain invaders easy entry. If so, then this adds to the already significant economic and environmental rationale for maintaining healthy fisheries and reducing land-based and marine pollution sources.

i) A follow on ballast water project should make a concerted effort to identify the economic impacts of action / no action when it comes to implementing ballast water treatment solutions. The Initial Scoping Study developed during the final stages of GloBallast provides a useful starting point for the work that is needed. It is important to note that such economic analyses provide an additional motivation for efforts to combat marine invasive species. Not only are they damaging to local biodiversity, but also the invasive species exact a significant economic cost.

6 LESSONS LEARNED

6.1 The design and implementation of IW projects

a) The use of logical frameworks is essential, and no IW projects should be allowed to commence without clear expectations for the development of a logical framework that establishes performance and impact indicators.

b) Adaptive management requires that project managers are flexible, and able to revise project activities, and even project objectives, in light of changing circumstances. GloBallast is a good illustration of how a project team can successfully adapt - in this case to the delays in passage of the IMO BW Convention. Care is needed to ensure that all project revisions are duly approved and made part of the Project Implementation Plan.

c) There is a need for clear expectations and open communications between PCUs and pilot countries, especially relating to the level of funding to be provided, and in-kind contributions from the pilots. GloBallast was very successful in its country and regional achievements, and included sig-

nificant mobilization of co-finance from the countries; nevertheless there was an uneven local disbursement, with one country spending 1/10th as much money on country-specific activities as several other countries. This disparity was not planned, and is a reflection of differing levels of co-financing, differing levels of accomplishment, and widely varying project costs (and accounting) among the pilot countries.

d) GloBallast demonstrates that global projects dealing with "new" issues, requiring the coordination of multiple pilot sites, need sufficient time to develop. 3 years is insufficient. 5 years is preferable. In particular, when setting up projects that include country pilots, additional inception time is necessary to get the country operations fully mobilised.

e) PCUs need to be staffed appropriately. A US $ 7 million, multi-year, capacity building focused project like GloBallast would have benefited from a minimum 6 member PCU staff, composed of a team leader, 2 technical experts (e.g. environment, shipping, public relations; etc); project administrator (contracts, budgets, travels, etc) & two project secretaries. Anything less will ensure that the team is overworked and/or deadlines are missed.

f) When UNDP-GEF projects are managed within other large organisations, (in this case IMO), PCU managers should keep an independent financial accounting of project receipts and disbursements, which can be matched against expected project deliverables. This can enable the PCU to utilise up to date financial information for project planning purposes.

g) Public awareness campaigns in UNDP-GEF IW projects need to be made more professional, borrowing techniques from business and political marketing, including the use of surveys and focus groups. Selling invasive species prevention is not like selling soap, however environmental public awareness campaigns can benefit from a better understanding of multiple audiences, how to effectively and efficiently reach them, and how to track whether your message is having the desired impact.

h) Projects can benefit from taking a two-pronged approach to the management of demonstration sites. The first is to develop global mechanisms and templates for use by all sites. The second is to enable the country pilots to develop their own country-specific activities. Country buy-in and financial support can be significantly increased when Countries have the flexibility to shape the project to their specific needs.

i) The setting up of an international scientific advisory panel should be considered whenever a UNDP-GEF IW project includes the substantial collection, monitoring and reporting of scientific information. Scientific advisory panels can provide timely peer review of publishable materials, and help to establish R&D priorities. They can also help in the selection process of competent consultants, help to guard against plagiarism and limit the overload of PCU technical experts.

j) PCU team participants need up front training on important aspects of managing UNDP-GEF IW projects. Especially training in the setting of logical frameworks and the tracking of indicators is important. Training in financial management and reporting requirements should also be provided.

k) The success of country pilot efforts is usually a factor of the team's ability to operate. GloBallast shows that assigning a project CFP that is at a medium government level (i.e., Deputy or Director) can assure that the CFP has enough time to be involved, and enough "clout" to get things done. Enlisting a fully paid CFP-A is also effective, in that it enables the project to rely fully on an in-country expert to lead the effort.

l) GloBallast has demonstrated the pros and cons of tying an IW project closely to passage of specific legislation, in this case the BW Convention. It is notoriously difficult to forecast the passage of laws and conventions. However, riding the coattails of a legal effort can help to build support for the linked legislation (as was the case with GloBallast) and then can spur rapid implementation, including development of guidelines. One of two decisions needs to be made. Either the project needs to be distinct and separate from the legislative work, so that it can be successfully completed even with no success on the legislation; or the project design needs to permit a great deal of flexibility with respect to project start-up and conclusion.

m) Recognizing the high cost of global travel, and the need in such projects to communicate frequently, future projects should consider the greater use of teleconferencing tools for regular project management meetings, and some training activities.

n) The currency fluctuations of the last several years, especially relating to the devaluation of the US dollar against many major currencies, have had a significant negative impact on GloBallast and other IW projects that include significant expenditures in the strengthening currencies. This consideration needs to be factored into project planning. It can be done in several ways. Easiest is a prioritisation of project outputs, and recognition that lower priority outputs will be dropped if currency fluctuations reduce the "buying power" anticipated in the original budget. A more financially difficult response would be to establish a financial contingency fund for longer-term projects that could only be activated if certain pre- selected financial criteria were reached (e.g. a 15% strengthening of the in-country currency against the dollar).

6.2 Monitoring & Evaluation for IW projects

a) An effective M&E programme is premised on the establishment of a logical framework and verifiable indicators. There also needs to be a monitoring plan developed as part of the initial ProDoc, which stipulates how the project will be monitored –internally and externally. This includes the procedures to be set in place for monitoring the performance of pilot sites.

b) The GloBallast Programme early on commenced port surveys to determine a biological baseline from which to consider future invasive species risks. A legal baseline was also developed, highlighting where each pilot country was with respect to statutes, orders and regulations that relate to ballast water management. In the future, consideration should be given to expanding this baseline setting approach to other project aspects, such as public awareness raising, capacity building, and NGO involvement. Establishing baselines is essential for effective project monitoring. If the project team cannot determine the current environmental status, the economic impacts, the extent of public support, or the existing legal structures, it will not be possible to determine the extent of project success.

c) Consideration should be given to identifying one or more external M&E participants early on, to help ensure that a proper monitoring plan is established at the outset of the project, to lead mid term and terminal evaluation teams, and to participate in the ongoing annual review cycle. Such an M&E "manager" could be selected from within the ranks of UNDP's evaluation unit, or contracted out. Such an approach would reduce the time required for evaluators to get up to speed with the project, provide better continuity and consistency of project appraisals, and significantly improve the replication of best practices and knowledge sharing on lessons learnt.

ANNEX 2

GloBallast Terminal Evaluation Questionnaire.

The following questionnaire was sent to all pilot country focal points, with a request that they disseminate to all stakeholders selected for interviews. Each of the CFPs and CFPAs had reviewed the questions. Written responses were provided from Brazil, China, India and Iran.

1. Effectiveness of the programme in removing barriers to the implementation of ballast water control and management measures:

   - Awareness raising – has the Globallast programme helped to improve public awareness in your country / region, and what have been the most effective tools (i.e. posters, brochures, print media, television, etc.)
   - Public participation – what mechanisms have been provided for public participation – both amongst the general public, and those directly and economically involved (such as shipping companies and the fishing industry).
   - Transfer of knowledge – has there been an emphasis on knowledge transfer? In particular, have the data and information developed through the project been shared amongst scientists and experts across the region? Have lessons learnt in different regions and demonstration sites been shared?
   - Policy development – recognising that the Programme has included a legislative review with recommendations – can you point to particular policy and regulatory changes in your country / region as a result of the Globallast programme initiatives?
   - Regional cooperation – has the programme fostered improved regional cooperation on ballast issues? Please indicate the formal and informal regional cooperation efforts underway and how well they are working.
   - Financial sustainability – has the Globallast Programme helped to establish within the country / region a recognition that local government and industry funding is needed to tackle the problem?

2. How have project participants adapted to new conditions encountered during implementation?

   - To your knowledge, have there been significant changes in the programme objectives, outputs and activities during implementation? If so, how did the project management and participants adapt? And were the changes appropriate?
   - Did the lengthy period required for adoption of the *Convention for the Control and Management of Ship's Ballast Water and Sediments* have a significant impact on the project? And what changes were made to project implementation as a result of this delay?

3. Were there adequate mechanisms established to replicate activities in the six developing regions?
   - Was a regional working group developed?
   - Were regular regional meetings held?
   - Did the participating countries send the same persons to each regional meeting? Or was there significant turnover and inconsistency in participation?
   - Were regional activities effectively supported by the PIU?
   - Were lessons from one demonstration site shared across all six sites?

4. With respect to institutional arrangements:
   - Were there well-defined roles and responsibilities amongst the various institutions involved in the local demonstration site?
   - Were inter-ministerial mechanisms put in place (country / region) to ensure buy-in from key governmental ministries? (i.e. transportation; environment; fisheries; research organisations.)

5. Partnerships with other organisations and donors:
   - Are there other organisations and donors working in the country / region on issues related to the Globallast programme?
   - What cooperation mechanisms are in place between related projects in the region?
   - Was there a concerted effort through the programme to identify related projects and make contacts to establish partnerships / coordination mechanisms?
   - Have other donors expressed their interest to support future ballast programmes in the region?

6. Consider and comment on the efforts of UNDP and IMO in support of the implementation of the GloBallast Programme.
   - Was sufficient support (financial, and information) given to the demonstration site to effectively execute assignments?
   - Did there appear to be close coordination between UNDP & GEF with respect to project direction and control?

7. Environmental Impact:
   - Has the programme had a positive impact (locally / nationally / regionally) with respect to reducing the negative environmental impacts associated with ballast waters?
   - Is it possible to quantify environmental improvements in the country / region as a result of the demonstration site activities?

8. Sustainability:
   - What is the likelihood that demonstration site activities, outcomes and benefits will continue after completion of the GloBallast Programme?
   - Are efforts to implement the new Convention on ship ballast dependent on continued international donor assistance? Or are there national / regional organisations in place to continue funding the effort.
   - Is there sufficient government and public support for the activities at the demonstration site to expand the initiative to other country port facilities?
   - What key factors require attention in order to improve the sustainability and replication of project outcomes?

9. Logical Framework:
   - Have you received and reviewed the project's logical framework matrix?

- To your knowledge, have performance indicators been effectively used as a management tool?
- Were specific performance measures developed and monitored for each demonstration site?
- Did the participants at the demonstration sites have the opportunity to work with the Globallast programme staff in London on the development of local work plans and performance measures?

10. Information technologies and internet-based communication techniques:
    - How would you rate the information technologies and internet-based communications techniques used for Globallast?
    - Is the web-site user friendly and does it include useful information for the general public?
    - Do the IT systems effectively support project implementation, participation and monitoring as well as other programme activities?

11. What do you view are the main lessons that have emerged from the project, in terms of:
    - country ownership;
    - regional cooperation and inter-governmental cooperation;
    - stakeholder participation;
    - adaptive management processes;
    - efforts to secure sustainability; and
    - the role of M&E in programme implementation.

12. Stakeholder Participation:
    - What mechanisms have been used by the PIU and demonstration sites for information dissemination on programme implementation?
    - How have key stakeholders been brought into the project planning process (such as through workshops, newsletters, etc.)
    - What are the main lessons that have emerged from the demonstration site efforts, in terms of:
        - the involvement of local resource users and NGO's
        - the involvement of local and national entities and the effects these had on the programme
        - other government institutions in programme implementation and the extent of government support of the programme.

13. PCU Management Effectiveness:
    - What were the roles and responsibilities between the PIU and demonstration sites concerning participation in the selection, recruitment, and assignment of experts, consultants and counterpart staff
    - Were the Country Focal Points given clear and timely definitions of their tasks and responsibilities?
    - Was the provision of budgets and funding done in a timely and effective manner?
    - Are there any significant issues concerning the PIU's timeliness in terms of assistance to the demonstration sites for TOR development, the hiring of consultants and other programmatic issues?
    - How would you rate the overall performance of the PIU?

ANNEX 3

MISSION INTERVIEWS

Evaluators:
Mr. Alan Fox,
Mr. Michael Julian

Interviewee	*Position*		*Date & place of interview*
UNDP			
Mr. Andrew Hudson	Principal Technical Advisor, International Waters program, Global Environmental Facility, United Nations Development Programme, New York, USA	AF & MJ	(by phone), 9 November, 2004
IMO			
Mr. Jean-Claude Sainlos	Director, Marine Environment Division, International Maritime Organization	AF & MJ	9/11/2004, London, UK
Mr Dandu Pughiuc	Head, Office of Ballast Water Management Global Ballast Water Management Programme International Maritime Organization		
Mr. Roger Jones	Director, Administrative Division, International Maritime Organization		
Mr. David Edwards,	Director, Technical Cooperation Division, International Maritime Organization		
Miss. P Richards	Head, Finance Section, Administrative Division, International Maritime Organization		26/11/2004, IMO London
Mr. L. Gunnestedt	Head, Human Resources Section, Administrative Division, International Maritime Organization		26/11/2004, IMO London
Mr. Maw Tun	Work Programme and Budget Officer, Budget Section, International Maritime Organization		26/11/2004,IMO London
GloBallast PCU			
Mr. Steve Raaymakers	Chief Technical Adviser Programme Coordination Unit Global Ballast Water Management Programme International Maritime Organization	AF & MJ	8-9/11/2004 London. UK
Mr Jose Matheickal	Technical Adviser Programme Coordination Unit Global Ballast Water Management Programme International Maritime Organization		
Ms. Christine Gregory	Principal Administrative Assistant Programme Coordination Unit Global Ballast Water Management Programme International Maritime Organization		
Brazil			
Mrs Oneida Freire	Manager Integrated Coastal & Marine Management Ministry of Environment		16/11/2004, Brasilia
Mr Robson José Calixto	Coastal & Marine Management Adviser Integrated Coastal and Marine Management Ministry of Environment		16/11/2004, Brasilia

Mr Alexandre de C. Leal Neto	Country Focal Point Assistant GloBallast - Brazil	AF	15/11/2004, Rio de Janeiro
Mr. Eduardo Oliveira	GEF Focal Point - Brazil		16/11/2004, Brasilia
Mr. Daniel Lins Menucci	Deputy Director, Ports, Airports, Borders & International Affairs, Ministry of Health		16/11/2004, Brasilia

China			
Mr. Zheng Heping	Country Focal Point (First), Deputy Director General, China Maritime Safety Administration.	MJ	15/11/2004, Beijing
Mr. Xu Guoyi	Country Focal Point (Second), Deputy Director General, China Maritime Safety Administration		16/11/2004, Beijing
Mr. Zhao Dianrong	Focal Point Assistant, GloBallast Programme, China Maritime Safety Administration.		16-17/11/2004, Beijing, Dalian
Dr Bin Wang	Director, Management and Supervision, Department of Marine Environmental Protection, State Oceanic Administration.		16/11/2004, Beijing
Mr Fan Enyuan	Deputy Director Research Institution, Fishery Bureau, Ministry of Agriculture		16/11/2004, Beijing
Ms Cao Xin	State Administration of Quality Control, Entry-Exit Quarantine and Inspection		16/11/2004, Beijing
Ms Xiang Yang	General Manager, International Maritime Affairs Office, China Classification Society.		16/11/2004, Beijing
Ms Li Guanyu	Department of International Cooperation, Ministry of Communications.		16/11/2004, Beijing
Mr. Zhu Xiwang	Senior Engineer, COSCO Shipping Company.		16/11/2004, Beijing
Dr. Zuwen Wang	Professor**,** President Dalian Maritime University.		19/11/2004, Dalian
Dr Sun Peiting	Professor, Vice President, Dalian Maritime University.		19/11/2004, Dalian
Dr. Yin Peihai	Professor, Dalian Maritime University.		19/11/2004, Dalian.
Mr. Dang Kun,	Professor, Dalian Maritime University		19/11/2004, Dalian
Mr. Song Yongxin	Assistant Professor, Dalian Maritime University		19/11/2004, Dalian
Mr. Chen Xuan	Dalian Maritime University.		19/11/2004, Dalian
Mr. Jiang Yuewen	Professor, National Marine Environmental, Monitoring Center, Institute of Marine Environmental Protection, State Oceanic Administration, Dalian.		19/11/2004, Dalian
Mr. Wang Lijun	Professor, National Marine Environmental Monitoring Center, Institute of Marine Environmental Protection, State Environmental Monitoring Center.		19/11/2004, Dalian.
Mr. Ma Hong Wei	Chief Engineer, Dalian Ocean Shipping Co.		19/11/2004, Dalian
Mr. Zhang Jiuxin,	Deputy Director,Liaoning Maritime Safety Administration, Dalian.		19/11/2004, Dalian
Mr. Liu Yan	Senior Officer,Liaoning Maritime Safety Administration, Dalian.		19/11/2004, Dalian
Ms. Xu Xiaoman	Senior Officer, Liaoning Maritime Safety Administration, Dalian.		19/11/2004, Dalian
Dr. Bai Mindong	Professor, Director, Environmental Engineering Institute, Dalian Maritime University		19/11/2004, Dalian

India			
Mr D.T. Joseph	Secretary (Shipping), Ministry of Shipping, Road Transport & Highways, Department of Shipping with The Government of India,		22/11/2004, Mumbai
Dr. P Mistra	Dy. Chief Surveyor with The Government of India, Directorate General of Shipping		23/11/2004, Mumbai
Mr. Ajoy Chaterjee	Country Focal Point, Chief Surveyor with The Government of India & Chief Examiner of Engineers, Directorate General of Shipping		22/11/2004, Mumbai
Dr. Geeta M Joshi	Country Focal Point Assistant, Directorate General of Shipping,		22/11/2004, Mumbai
Dr. A.C.Anil	Scientist & Head Marine Corrosion & Material Research, National Institute of Oceanography,		22/11/2004, Mumbai
Mr. A.R. Rao	Development Advisor (Ports), Ministry of Shipping, Road Transport & Highways, Department of Shipping, Government of India.		22/11/2004, Mumbai
Dr. V.S. Somvanshi	Director General, Fishery Survey of India, Ministry of Agriculture.		22/11/2004, Mumbai
Mr. Bharat Nimbarte	Regional Officer, Maharashtra Pollution Control Board.	MJ	22/11/2004, Mumbai
Captain S. B. Kundagi	General Manager, The Shipping Corporation of India Ltd.		22/11/2004, Mumbai
Captain T.D. Hazari	Director, The Shipping Corporation of India.		22/11/2004, Mumbai
Captain G.D.J. Fernandez	Superintendent (Quality & Safety), Essar Shipping Ltd.		22/11/2004, Mumbai
Mr. U.B. Ranadive	Senior Principal Surveyor, Indian Register of Shipping.		22/11/2004, Mumbai
Mr.V.K. Sood	Advisor (Technical), Mercator Lines Limited.		22/11/2004, Mumbai
Mr V.K. Ramabhadran	Advocate High Court, Mumbai.		22/11/2004, Mumbai
Captain Subhash Kumar	Deputy Conservator, Jawaharlal Nehru Port Trust.		22/11/2004, Mumbai
Captain Jitendra Misra	Sr. Dock Master, Jawaharlal Nehru Port Trust		22/11/2004, Mumbai
Captain A.W. Karkare	Chief Ports Officer, Maharashtra Maritime Board		22/11/2004, Mumbai
Mr. Thekkekere Narayana	Principal, Maritime Training Institute, The Shipping Corporation of India.		22/11/2004, Mumbai
Mr. Jaikishen Dhar	Principal, LBS College of Advanced Maritime Studies & Research, Ministry of Shipping, Government of India		22/11/2004, Mumbai

IR Iran			
Mr. Hassan Taymourtash	Country Focal Point, Director General of Safety & Marine Environment Protection, Ports & Shipping Organisation.		11/11/2004, Tehran
Eng. Ahmad Parhizi	Country Focal Point Assistant, Head of Safety and Marine Environment Protection, Ports & Shipping Organisation	MJ	11th, 13th and 14th November 2004, Tehran
Eng. Nasser Kayvanrad	Marine Environment Expert, Ports & Shipping Organisation		11/11/2004, 13/11/2004, Tehran
Dr H Negarestan	Senior Marine Ecologist, Iranian Fisheries Research Organisation.		13/11/2004, Tehran

Dr Seyed Aminollah Taghavimotlagh,	General Manager of Fisheries Affairs Department, Iranian Fisheries Co. (SHILAT).	MJ	13/11/2004, Tehran
Mr. Mohsen A Golshani	General Manager of Fishing Harbours, Iranian Fisheries Department, Ministry of Agriculture.		13/11/2004, Tehran
Mr. F Mohsen Pourian	Deputy for Fishing & Fishing Harbours, Iranian Fisheries Department, Ministry of Agriculture.		13/11/2004, Tehran
Dr Mohammad Saeid Hossiein	Director General, Marine Environment Bureau, Department of Environment		13/11/2004, Tehran
Captain M. Bahrami	Safety & Quality Department, National Iranian Tanker Company.		13/11/2004, Tehran
Captain A. S. Torabizadeh	Group Manager of Maritime Relations, IRI Shipping Lines		13/11/2004, Tehran

South Africa			
Dr Lynnette Jackson	Country Focal Point GloBallast – South Africa Director GISP – the Global Invasive Species Programme	AF	24/11/2004, Capetown,
Mr Adnan Awad	Country Focal Point Assistant GloBallast – South Africa		23-25/11/2004, Capetown
Ms. Leticia Greyling	Manager, Environmental Research and Best Practices, National Ports Authority of South Africa		(by phone)
Mr. Larry Hutchings	Biodiversity Department. Department of Environmental Affairs and Tourism		24/11/2004, Capetown,
Ms. Mirriam Tenjane	Environment, Health and Safety Portfolio Manager, Saldanha, National Ports Authority of South Africa		25/11/2004, Saldanha,
Mr. André van Niekerk	Principal Officer, South African Maritime Safety Authority, Saldana		24/11/2004, Saldanha,

Ukraine			
Mr. Vladimir Rabotnyov	Country Focal Point, GloBallast – Ukraine, Director, State Department of Maritime and Inland Water Transport, Ministry of Transport and Communications of Ukraine	AF	11/11//2004, Kierch
Mr. Roman Bashtannyy	**Country Focal Point Assistant, GloBallast – Ukraine, Head of Shipping Safety Standards Division, State Enterprises "Information & Analytical Centre for Shipping Safety", State Department of Maritime and Inland Water Transport, Ministry of Transport and Communications of Ukraine**		11-13/11//2004, Kiev - Kierch - Odessa
Mr. Sergey Limanchuk	Former CFP-A, Lead Scientist, State Enterprises "Information & Analytical Centre for Shipping Safety", Odessa		12/11//2004, Odessa
Dr. Boris Alexandrov	Director, Odessa Branch, Institute of Biology of the Southern Seas, National Academy of Sciences of Ukraine		12/11//2004, Odessa
Dr Sergey Dyatlov	Head, Department of Water Quality Problems Odessa Branch, Institute of Biology of the Southern Seas, National Academy of Sciences of Ukraine		12/11//2004, Odessa
Captain Alexander Sagaydak	Executive Director, ALPHA-Navigation Company, Chairman, The Nautical Institute, Ukrainian Branch		13/11//2004, Odessa
Dr. Anatoliy Andryushchenko	Director, Closed Joint-Stock Company "Engineering Center TRANSZVUK"		12/11//2004, Odessa
Mr. Alexander Kurushin	Biologist, Closed Joint-Stock Company "Engineering Center TRANSZVUK"		12/11//2004, Odessa

Other Stakeholders			
Mr. Roger Lankester	Friends of the Earth International (FOEI) Oceans Division, London, UK	AF, MJ	26/11/2004 London, UK

Mr. David Tongue	Marine Manager, International Chamber of Shipping, London UK	AF, MJ	9/11/2004 London, UK

ANNEX 4

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