Global **Ballast Water**
Management Programme

Global Project Task Force (GPTF)

Second Meeting

IMO, LONDON, 6-8 DEC 2000

Proceedings

Global Ballast Water Management Programme

GEF

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IMO

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

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The Global Ballast Water Management Programme (GloBallast) is a cooperative initiative of the Global Environment Facility (GEF), United Nations Development Programme (UNDP) and International Maritime Organization (IMO) to assist developing countries to reduce the transfer of harmful organisms in ships' ballast water.

The opinions expressed in this document are not necessarily those of GEF, UNDP or IMO.

Contents

Opening Address

by Mr. W.A. O'Neil, Secretary-General of IMO

Good morning. It is with much pleasure that I welcome you to the second meeting of the Global Project Task Force of the GloBallast programme. I am most pleased to note that in the five short months since the fist meeting in July this year, significant progress has been made, and that we are now ready to commence in-country implementation of programme activities.

The significance of the ballast water issue is not diminishing. It constitutes perhaps the most serious environmental challenge facing the global shipping industry this century. IMO, working closely with industry, is taking the lead in addressing this challenge, both through the GloBallast programme and the Ballast Water Working Group of MEPC. I am pleased to advise that the realisation of a new international convention to regulate the transfer of harmful aquatic organisms and pathogens, took another step forward in October this year, at the 45th meeting of MEPC. We are now confident that a diplomatic conference will be held in 2002/03 to agree on this new convention.

A major task that remains before us is the development and agreement of international standards and performance criteria for ballast water treatment. I understand that the GloBallast programme will make a major contribution to resolving this issue, through an international workshop on ballast water treatment to be held at IMO in March this year. This is an excellent example of the programme linking effectively with the activities of the MEPC Ballast Water Working Group. I look forward to the outcomes of this important workshop, and urge you all to make your best efforts to make it a success.

The number and complexity of tasks before us in implementing a global ballast water management system call for a strong training and capacity building effort. As shipping is an international industry, training and capacity building can only be effective through standardised systems on an international basis. The UN Train-X system provides a proven framework for this. I am pleased that the GloBallast programme has joined with the UN Train-Sea-Coast programme to develop and deliver standardised training packages in ballast water management for use in your countries and throughout the world. I am confident that this alliance between two UN programmes will facilitate the successful implementation of the existing IMO guidelines and help prepare for the forthcoming legal regime.

Implementation of a global ballast water management system also requires the development of legislative structures at the national level, and one of the key activities under the GloBallast programme is the revision of legislative regimes in your countries and the development of model legislation. I am encouraged that the GloBallast programme has joined forces with the World Maritime University in order to undertake this task. WMU is a highly successful university established under the auspices of IMO and has been instrumental in developing high quality maritime professionals throughout the world. It is most fitting that the programme should benefit from the expertise of WMU and I am confident that a very useful, easily adaptable set of model legislation will be developed from this project.

I would like to thank the members of the Programme Coordination Unit for an excellent performance this year; the level of output of this small three-person team has been outstanding. I would also like to thank the six pilot countries for your commitment to the programme and your hard work in developing your National workplans. Your involvement in this programme places you at the forefront of the drive to solve this critical global problem. I commend the vision of your governments for doing so. Thank you

Provisional Agenda

Venue: Conference Room 4, IMO Headquarters, London.

Wednesday 6 December 2000

Bilateral meetings PCU/Pilot Countries

Thursday 7 December 2000.

Meeting commences 09.00

Opening remarks (welcome message)

1. Adoption of the Agenda
2. PCU Progress Report
3. Country status reports and submission of the National Work Plans and Budgets for year 2001.
   - 3.1. Brazil
   - 3.2. China
   - 3.3. India
   - 3.4. Iran
   - 3.5. South Africa
   - 3.6. Ukraine

Friday 8 December.

Meeting commences 0900.

4. NGO/Industry information papers regarding involvement in the ballast water issue.
5. Information on the proposed IMO/Pilot Countries MoUs
6. Global R&D Symposium
7. BWM Education and Training Packages
8. Ballast Water Risk Assessment
9. Legislation and regulations
10. Port Baseline Surveys
11. Guest Speaker: Mr. Ron Thresher, Director, Centre for Research on Introduced Marine Pests (CRIMP), Australia
12. Other business

Annotations to the Provisional Agenda

1. Adoption of the Agenda

1.1 The meeting will be invited to adopt the agenda of the second session.

2. PCU Progress Report

2.1 A briefing paper on the progress achieved in developing the project will be submitted by the PCU.

2.2 The meeting will be invited to consider the report and to provide advice on this matter. It is expected that, after a general exchange of views, UNDP and IMO will approve the report.

3. Country Status Reports and submission of the National Workplans, and Year 2001 Workplans and Budgets.

3.1 Pilot country representatives will be invited to present the status of the project implementation process in their countries and to introduce their National Workplans. The status reports will summarise the main activities from the monthly reports prepared for the period July – December 2000. The meeting will focus on the consideration of the National Workplans and the presenters are expected to be prepared to answer questions from the audience.

3.2 A separate document covering the different activities planned for next year will be introduced by each of the pilot country representatives. This will be an extract from the National Workplan with budget allocations clearly linked to the activities to be carried out during 2001.

3.3 Thirty minutes are allocated for each country presentation, with fifteen additional minutes for discussions.

3.4 A final session for the approval of the Country Status Reports, National Workplans and Workplans and Budgets for year 2001 will end this agenda item.

4. NGOs/Industry information papers regarding involvement in the ballast water issue.

4.1 The organizations with observer status will be invited to introduce their information papers focusing on their involvement or specific interest for matters relating to ballast water management and control. Possibilities of bi-lateral co-operation between NGOs/Industry representatives and participating countries will be explored and local contacts of members of various international associations and CFPs will be encouraged.

Fifteen minutes for each intervention and five minutes for discussion will be allocated under this item.

5. Information on the proposed IMO/Pilot Countries MoUs

5.1 The status of the proposed MoUs between IMO and the Pilot Countries will be introduced by the PCU. The Pilot Countries will be invited to comment on this agenda item and to provide advice on how the initially proposed document can by fine tuned to fit with the national regulations and laws.

6. Global R&D Symposium

6.1 A briefing paper on the organisation of the R&D Symposium will be submitted by the PCU. The specific mandate received from the Working Group on Ballast Water during MEPC 45 and the objectives of the symposium will be emphasized.

6.2 The meeting will be invited to comment on this agenda item and provide advice as appropriate. Specific comments will be encouraged from the MEPC and Working Group on Ballast Water Chairmen.

7. Ballast Water Management Education and Training Packages

7.1 A briefing paper on the proposal of the Train-Sea-Coast/Central Support Unit (TSC/CSU) for the development of the generic course packages on ballast water management and control will be submitted by the PCU.

7.2 The meeting will be invited to comment on the TSC/CSU proposal and provide advice as appropriate. It is expected that UNDP and IMO will approve the proposal submitted under this agenda item.

8. Ballast Water Risk Assessment

8.1 A briefing paper on procedures to conduct risk assessments and an outline of the related activities will be submitted by PCU.

8.2 The meeting will be invited to comment on this matter and to advise as appropriate.

9. Legislation and regulations

9.1 A briefing paper on the proposal developed by World Maritime University regarding the revision of the national legislation and regulations relating to ballast water will be submitted by PCU.

9.2 The meeting will be invited to comment on the proposal and indicate how they will use the output of this activity. It is expected that UNDP and IMO will approve the WMU proposal based on the comments made by the GPTF.

10. Port Baseline Surveys

10.1 A briefing paper on procedures to conduct port baseline surveys and organizational requirements in the pilot countries will be submitted by the PCU.

10.2 The meeting will be invited to comment on this matter and advise as appropriate.

11. Guest Speaker: Mr Ron Thresher, Director, Centre for Research on Introduced Marine Species (CRIMP), Australia.

11.1 A presentation on experiences achieved in dealing with ballast water management and related issues in Australia will be made by the guest speaker.

11.2 The meeting will be invited to ask questions and comment on the presentation with the aim of comparing experiences in dealing with ballast water issues.

12. Other business

12.1 The meeting will be invited to consider other matters which may be raised under this agenda item.

Briefing Papers and Submissions

Agenda Item 2:
PCU Progress Report

1 Reporting Period

This progress report is for the period of 1 July to 30 November 2000.

2 General Comments

During the reporting period, the PCU have achieved the objectives assigned by the 1st GPTF meeting and outlined in the Project Implementation Plan (PIP).

In some cases, the activities were delayed due to poor cooperation from the Finance and Budget Section of IMO. The direct involvement of the Director, MED, was requested to avoid such problems in the future.

3 Programme Coordination Unit

3.1 Programme Management

A set of guidelines for the management of the GloBallast programme was agreed with the Director, MED and submitted to the Secretary General of IMO for information.

A set of internal arrangements for the management of the GloBallast programme was negotiated and agreed by the Director, MED and Director, Administrative Division and submitted to the Secretary General of IMO for information.

Operative meetings of the PCU staff have been held periodically for task assignments and appropriate timing of tasks.

A meeting for the evaluation of the Programme's progress was organised by the Director, MED and PCU staff.

A briefing meeting on the status of the project was organised by PCU staff with Senior Deputy Director, Sub-division for Pollution Response and TC co-ordination.

3.2 Human Resources

The consultants' register for accelerated recruitment procedure was finalised according to IMO requirements and submitted to the Advisory Panel on the co-ordination of Technical Cooperation Activities. After consultation with the Secretary General, it has been decided that, for the time being,

the proposal for the recruitment of consultants should follow the standard practices for IMO headquarters.

After eight months of activities, it has become obvious that the PCU human resources were underestimated. Preliminary discussions have taken place with UNDP, IMO-MED and IMO-TCD for the recruitment of an Associated Professional Officer as provided in the Project Document, paragraph 121.

Procurement of IT hardware, furniture and other office equipment and fittings have been completed.

3.3 Information and Communication Network

Maintenance of a contacts database of all major players in the programme. The database has been made available to all members of the GPTF to facilitate interaction and bilateral contacts.

Procurement, cataloguing and archiving of publications for the worldwide collection of introduced species through ballast water. The collection is hosted by the IMO Library and maintained with expert assistance from the Library staff.

The "Meeting Report" of the 1st GPTF meeting, including the meeting minutes, the approved Project Implementation Plan and Status Reports from the pilot countries was compiled and distributed to the GPTF members.

Developing and maintaining the links with other UN agencies that are developing ballast water introduced marine species databases and directories to share information and avoid duplication.

Links with other UN agencies with particular interest in ballast water issues (e.g. UN Division for Ocean Affairs and Laws of the Sea [DOALOS], Convention on Biological Diversity – The Global Invasive Species Programme, World Maritime University [WMU], World Health Organization – Global Task Force on Cholera Control), have been developed and maintained to avoid duplication.

The second edition of Ballast Water News has been designed, compiled and published and the third edition is being prepared for release in January 2001. The newsletter has enjoyed great appreciation from the scientific and shipping community as well as from the larger public. Around 1,000 readers from around the world have requested top be included on the mailing list. Ballast Water News has a global circulation of around 15,000 and is also available on the Internet (http://globallast.imo.org).

Distribution of the first press-release to major publishers and news organizations in the shipping sector with a very positive response from the specialised media.

Series of technical articles on ballast water matters prepared by PCU and published by world-wide specialist publications (e.g. Ballast Exchange of the West Coast Outreach Project, MERMS Bulletin of Malta Maritime Authority). Similar articles are under preparation for IAPH's widely distributed technical journal "Ports and Harbours".

A significant number of articles on ballast water transfers from specialised publications have been collected by PCU and distributed to the Country Focal Points in the pilot countries.

A comprehensive R&D Directory on Ballast Water treatment methods was prepared by PCU and distributed to the interested parties during MEPC 45 in October 2000. The Directory is also available on the programme's website (http://globallast.imo.org).

Compilation, design and development of the Programme website. The "GloBallast" website became operational in November 2000 (http://globallast.imo.org).

Maintenance of regular day-to-day correspondence with CFPs and other key players in the Programme.

3.4 PCU Travel

During the reporting period, PCU continued programme inception visits to the pilot countries holding initial meetings with CFPs and members of the Country Project Task Force and delivering the standard Power Point presentation.

Participation in the Train-Sea-Coast Programme's Course Developer workshop and planning meeting at UN headquarters. The possibility of combining efforts with UN-DOALOS for the development of the training packages required by the project, using Train-X methodology , was explored with positive results.

Participation in the National Workshop Development Workshops in South Africa, China, India, Ukraine and Brazil. PCU representatives assisted and directly contributed to the elaboration of the National Workplan.

Participation in the first Biennial GEF International Waters Conference, organized by GEF with support from the World Bank, UNDP and UNEP. Extensive exchange of experiences among GEF – IW projects took place and a series of contacts have been made with other programmes, implementing agencies, donor countries and institutions.

Participation in the annual International Council for the Exploration of the Seas Science meeting in Bruges representing the programme at the special session on introduced marine species.

Mission to Cape Town, South Africa for hands-on training on mechanics and upkeep of the Programme website.

4 In-country Coordination Arrangements

The Ministry of the Navy, initially nominated as Lead Agency in Brazil, was replaced by the Ministry of Environment. Consequently, all the responsibilities have been transferred to the Ministry of Environment. A new Country Focal Point (CFP) was appointed and a CFP Assistant was contracted through IMO based on a Special Service Agreement.

The CFP for China was replaced as the original CFP was given different responsibilities. The newly appointed Deputy Director of the China Maritime Administration took over as CFP.

CFP Assistants have successfully accomplished their day-to-day tasks in China, India, South Africa and Ukraine. The CFP Assistants for Brazil has only recently been appointed (1 December 2000) and in the Islamic Republic of Iran, the recruitment of the assistant is fairly advanced.

The established Country Task Forces have had meetings in China, India, Iran and Ukraine, mainly to discuss and agree on the National Workplan. An international consultant has been recruited to work together with the members of the CPTF in Iran to complete the National Workplan. In China and India, the CPTFs has additional meetings to agree on the National Communication Plan.

The main efforts both in the pilot countries and PCU were oriented, during the reporting period, towards the compilation of the National Workplans. The draft plans elaborated in each country have been submitted to PCU and a number of comments have been provided. The comments have been addressed and the final version of each national plan, with workplans and budgets for 2001, are now submitted to the 2nd GPTF. Without the dedication of the CFPs and their Assistants, the Global Task Force would not have the opportunity to discuss and approve the National Workplans today.

5 Global Coordination Agreements

The minutes and the meeting report of the 1st GPTF have been published and distributed to the GPTF members.

All arrangements for the 2nd GPTF meeting were completed by PCU.

Official invitations were sent to the pilot countries, NGOs and industry representatives, other UN Agencies with particular interest in ballast water matters, chairmen of MEPC and Ballast Water Working Group and IMO Secretariat.

Travel and accommodation arrangements were made for the delegates to the 2nd GPTF meeting.

The Agenda and the supporting documents for the meeting were prepared, multiplied and distributed to the participants.

Venue, equipment and catering arrangements have been organised for the meeting.

6 Communication, Education and Awareness Raising

The corporate identity of the programme has been promoted through all the materials produced and distributed by PCU. Stickers with the Programme's logo have been produced and distributed to the pilot countries.

The first set of awareness raising materials in the form of a series of three posters have been produced and distributed. The posters had a visible impact on the targeted audience and the CFPs disseminated them among the specialised local media. Countries wishing to translate these posters should discuss this with the PCU TA.

PCU actively participated in the development of an educational video on ballast water management and control, by Videotel. Copies of the final product will be distributed to the pilot countries for their use in the training process.

The activities related to the case studies commenced and a reputable scientist under contract with PCU is currently working with three participating countries.

An awareness raising conference organised in London with generous support for the International Cargo Handling Co-ordination Association was attended by PCU. The positive media coverage of the event and the broad international participation made the one-day conference a real success.

Country Communication Plans have been developed in China, India and South Africa, and are currently being prepared in the rest of the countries. A set of awareness raising materials is currently being produced in South Africa. The pamphlets will be available for dissemination early next year.

7 Risk Assessment

Early contacts and preparatory activities have been initiated by PCU. The risk assessment activities and port baseline surveys are planned for the first half of 2001.

8 Ballast Water Management Measures

PCU and the Train-Sea-Coast Central Support Unit have initiated development of the training packages based on Train-X methodology. A proposal on this matter will be submitted to the GPTF under item 7.

PCU and the World Maritime University have developed a common proposal for the revision of the national legislation and regulations regarding ballast water management and control. The proposals will be discussed more extensively under item 9.

A Global Ballast Water R&D Directory has been established and PCU has planned to hold a R&D Symposium at IMO Headquarters in March 2001. Along with the representatives from pilot countries, leading scientists from around the world will be invited to attend the symposium and the following workshop. The activity will be further presented under item 6.

9 Compliance, Monitoring and Enforcement

Early contacts and preparatory activities have been initiated by PCU. An international consultant will be recruited in 2001 to develop a CME system suitable for the participating countries. The implementation of the CME system is planned for the second-half of 2001.

10 Regional Cooperation and Replication

A draft letter from the Secretary General of IMO to the maritime administrations of the Black Sea countries calling for increased cooperation on Ballast Water issues has been prepared through PCU. Missions aimed at the creation of regional support for the work of the project have been planned for early 2001.

The recent IMO/IPIECA Regional Workshop for West and Central Africa (WACAF) meeting in Angola was used as an opportunity to initiate regional contacts and to raise regional awareness by the South African CFP in November 2000.

The CPTF and the Lead Agency in Iran took the initiative of requesting the introduction of the ballast water matter as a distinctive item on the agenda of their next meeting of the Regional Organisation for the Protection of the Marine Environment (ROPME). PCU will be invited to deliver a presentation on the introduction of unwanted organisms through ships' ballast water.

11 Resources and Financing

PCU is currently considering possibilities to join forces with other UN Agencies to identify common activities which may be developed for the benefit of the participating countries (e.g. UN-DOALOS, CBD, WHO, etc).

A common concept paper was initiated together with IUCN in an endeavour of joining efforts for the development of alternative methods for the treatment of ballast water.

Agenda Item 3:
Country Status Reports

For the period of July to December, 2000

Brazil

Activity	Tasks Undertaken
Day-to-day management/administration/reporting	Preparation of the national Workplan
Organization of CPTF meetings	Organisation of the workshop (November 22 to 24) to develop the National Workplan
GPTF related activities	Attend to the 1st GPTF meeting in July
Communication/Awareness Raising activities	Organizing the visit of the PCU's consultant Mr. Gollash Accomplish of: • First Seminar on Port Environmental Management (150 persons encompassing Port Authorities and Representatives of Port Authorities, one section regarding ballast water) – August 2000; and • IEAPM's Seminar (160 persons – universities, NGOs, Federal Government, State Agencies, etc.) November 20 to 22, 2000.
Risk Assessment activities, including collection of ballast water reporting forms and data management.	
Port Baseline Survey activities.	
Education/Training activities.	Developing 01 training for the Port Sector (with the Ministry of Transports) approaching environmental concerns to apply in 2001. Another one is under development with Train-Sea-Coast Brazil. Both training are broader than ballast water issue.
Legal activities.	
Progress with National Ballast Water Management Plan	
Compliance Monitoring and Enforcement activities, including ballast water sampling.	
Regional Cooperation and Replication activities.	
Progress with national contributions to the programme/self financing activities.	Allocating US$500,000 for the year 2001 to the Environmental Port Agenda(one of the themes is ballast water).
Country-specific activities under National Workplan, not covered by Global PIP:	
Other duties assigned by Country Focal Point/ PCU	
Other/Miscellaneous	

National Workplan Summary Table

(Note: Programme activities that are not the responsibility of CPTFs are not shown – only national activities are shown)

Workplan Component	Tasks to be undertaken	Responsible Party	Timeline												Budget (US$)
			J	F	M	A	M	J	J	A	S	O	N	D	
National Workplan	• Implement National Workplan														
Communication, Education and Awareness Raising	• Assist local case studies and to communicate findings to all stakeholders.														
	• Hold in-country communication workshop to develop communication plan.	IEAPM													6,000
	• Implement country communication plan.	IEAPM													35,000
Risk Assessment	• Identify and map most sensitive environmental resources and values.	CFP													2,000
	• Collect all existing information on environmental conditions in the port (physical, chemical and biological).	CFP													2,000
	• Collect all existing shipping data, especially on source ports.	CFP													---
	• Collect all existing information on ballasting and deballasting patterns	CFP													---
	• Assist the PCU and consultants with the risk assessment.	CFP													---
Port Baseline Surveys	• Collect all existing information and previous studies on the distribution of biota in the port, including presence/absence of introduced species.	IEAPM													8,000
	• Identify all in-country marine science and field survey capabilities.	Biology Institute - UFRJ													---
	• Work with PCU and consultants to develop and initiate port baseline surveys.	Biology Institute - UFRJ													30,000
Ballast Water Management Measures	• Assist PCU to hold fist training course in application of IMO guidelines.	Train Sea Coast Brazil													17,000
	• Arrange for continuation of such training through local maritime institute.														
	• Compile all existing domestic legislation and regulations on ballast water.	CFP													
	• Contract consultants to review existing legislation.	CFP													10,000
	• Participate in the international workshop on Legislation and Regulations.														
	• Implementation any recommendations from the legislation review.														
Compliance Enforcement & Monitoring	• Implement compliance, enforcement and monitoring arrangements with support and advice from PCU and consultants.														
Regional Activities	• Form cooperative relationships with neighbouring countries and share lessons.														
	• Assist the PCU to establish RPTF and participate actively in this group.														
Resourcing & Financing	• Develop and implement in-country arrangements for the long-term, ongoing resourcing and financing of ballast water management activities.														

China

Activity	Tasks Undertaken
Day-to-day management/administration/reporting	1. Report of the 1st CPTF Meeting and decisions of the 1st GPTF Meeting were circulated to all CPTF Members and relevant authorities and organizations. 2. National Workplan and Communication Workplan were drafted by the CFPA in English and Chinese through consultation with CPTF Members and field study at the demonstration site. 3. Bank Account was opened and available in October 2000 for implementing the programme. 4. Daily communication has been maintained between CFP, CFPA and PCU. 5. Monthly work reports have been submitted to PCU as required.
Organization of CPTF meetings	1. Workshop for development of National Workplan and Communication Workplan was organized 20-21 Sept. 2000. Most CPTF Members attended the workshop.
GPTF related activities	1. National Workplan has been revised according to the comments made by PCU and submitted to 2nd GPTF Meeting.
Communication/Awareness Raising activities	1. Country Communication Workplan has been completed. Introduction of the GloBallast Programme has been carried by three magazines and newspapers. 2. IMO Resolution A.868 (20) in Chinese has been ready for printing and delivery to the shipping companies and ships. 3. Preparation for Education and Awareness Campaign (8 seminars nationwide) has started.
Risk Assessment activities, including collection of ballast water reporting forms and data management.	1. IMO ballast water reporting form was applicable to the 4 ports in North Bohai Sea in on 15 August 2000. About 700 reporting forms have been collected up to now. 2. Information on shipping patterns is being collected. 3. A small software is being prepared for analyzing the collected information of ballast water.
Port Baseline Survey activities.	1. General plan is included in the National Work Plan and a detailed plan will be made early 2001.
Education/Training activities.	1. Plan has been made and included in the National Workplan. 2. COSCO has started its work for education of its personnel on board.
Legal activities.	1. Plan for legal activities is included in the National Workplan. No specific action taken at present.
Progress with National Ballast Water Management Plan	1. Ships of COSCO have been provided with Ballast Water Management Plan Onboard.
Compliance Monitoring and Enforcement activities, including ballast water sampling.	1. Plan has been made and included in the National Workplan. 2. Ballast water sampling was made onboard some ships for analyzing.
Regional Cooperation and Replication activities.	1. Plan has been made and included in the National Workplan. No specific action taken at present.
Progress with national contributions to the programme/self financing activities.	1. Commitments have been made by the Administration to support the activities under the programme and continuation of implementation of IMO Resolution 868 (20) and future legal instrument.
Country-specific activities under National Workplan, not covered by Global PIP: 1. Red tide information to captains 2. Research on the impact of chemical treatment of ballast water by using chlorine compounds 3. Development of new ship-borne ballast water treatment device	1. Some research work has already been done by the relevant organizations. 2. General plan has been included in the National Workplan. 3. Detailed plans for carrying out the three activities are being made.
Other duties assigned by Country Focal Point/ PCU	
Other/Miscellaneous	

National Workplan Summary Table

(Note: Programme activities that are not the responsibility of CPTFs are not shown – only national activities are shown)

Workplan Component	Tasks to be undertaken	Responsible Party	2000		2001				2002				2003	Budget (US$)
			7-9	10-12	1-3	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3	
National Workplan	• Implement National Workplan 1. Red tide information to captains 2. Research on the impact of chemical treatment of ballast water by using chlorine compounds 3. Development of new ship-borne ballast water treatment device	1. Liaoning MSA and EPC 2. Dalian MU 3. Dalian MU		 X X	XXX XXX XXX	XXX XXX XXX	XXX XXX XXX	XXX XXX XXX	XXX XXX XXX					$35,000 $40,000 $36,000 Contingency $17,000 Total: $125,000
Communication, Education and Awareness Raising	• Assist local case studies and to communicate findings to all stakeholders.	China MSA & EPC			XXX	XXX	XXX							
	• Hold in-country communication workshop to develop communication plan.	China MSA & CPTF	XX	X										$2,000
	• Implement country communication plan.	China MSA, CNSC & EPC		XX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		$100.000
Risk Assessment	• Identify and map most sensitive environmental resources and values.	Liaoning MSA & OMRC		X	XX									$1,000
	• Collect all existing information on environmental conditions in the port (physical, chemical and biological).	Liaoning MSA & OMRC		X	XXX									$1,000
	• Collect all existing shipping data, especially on source ports.	Liaoning MSA		X	XXX									
	• Collect all existing information on ballasting and deballasting patterns	Liaoning MSA		X	XXX									$2,000
	• Assist the PCU and consultants with the risk assessment.	Liaoning MSA			XXX	XXX	XXX							$1,000
Port Baseline Surveys	• Collect all existing information and previous studies on the distribution of biota in the port, including presence/absence of introduced species.	OMRC			XXX	XX								$10,000
	• Identify all in-country marine science and field survey capabilities.	China MSA & OMRC			X	XX								$5,000
	• Work with PCU and consultants to develop and initiate port baseline surveys.	OMRC				XX	XXX	XX						$45,000

Workplan Component	Tasks to be undertaken	Responsible Party	2000		2001				2002				2003	Budget (US$)
			7-9	10-12	1-3	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3	
Ballast Water Management Measures	• Assist PCU to hold first training course in application of IMO guidelines.	COSCO & Dalian MU						X	X					$5,000
	• Arrange for continuation of such training through local maritime institute.	Local MSAs							XX	XXX	XXX	XXX		$25,000
	• Compile all existing domestic legislation and regulations on ballast water.	China MSA				XX	XX							$2,000
	• Contract consultants to review existing legislation.	China MSA					X	XXX						$15,000
	• Participate in the international workshop on Legislation and Regulations.	CPTF												$5,000
	• Implementation any recommendations from the legislation review.	China MSA & CPTF								XXX	XXX	XXX	XXX	$3,000
Compliance Enforcement & Monitoring	• Implement compliance, enforcement and monitoring arrangements with support and advice from PCU and consultants.	Liaoning MSA & Dalian MU					XX	XXX	XXX	XXX	XXX	XXX	XXX	$120,000
Regional Activities	• Form cooperative relationships with neighbouring countries and share lessons.	CPTF						XXX	XXX	XXX				$10,000
	• Assist the PCU to establish RPTF and participate actively in this group.	CPTF									XXX	XXX	XXX	$ 80,000
Resourcing & Financing	• Develop and implement in-country arrangements for the long-term, ongoing resourcing and financing of ballast water management activities.	CPTF										XXX	XXX	

CMFC-China Maritime Service Center
EPC - Environment Protection Center
MSA - Maritime Safety Administration
MU - Maritime University

OMRC-Ocean Monitoring and Research Center

India

Activity	Tasks Undertaken
Day-to-day management/administration/reporting	1. CFP (A), s office established 2. Filing system started and maintained. 3. Accounts book maintained and monthly report submitted. 4. Drafting of all outgoing letters and dispatched them.. 5. Monthly progress report sent on 20th of every month. 6. Initial Preparation for workshops and meetings. 7. Other day to day activity performed.
Organization of CPTF meetings	1 CPTF meeting organized in the month of June 2000. 2 New members are also inducted into the list. 3 2nd CPTF meeting organized in September 2000 and report prepared and forwarded. 4 Workshop on national work plan organized and report drafted. 5 Workshop on communication work plan organized and report prepared.
GPTF related activities	1 1st GPTF meeting attended in July 2000. 2 Started communicating with other GPTF members.
Communication/Awareness Raising activities	1 Distribution of Newsletters, IMO voluntary guidelines, Posters on the issue supplied by PCU, Personal meetings with media and stakeholders. 2 Drafting of proposed three monthly Newsletters for India. 3 Article given to local (DG shipping) magazine. 4 Desingning of Local Poster on the subject and article printed in college magazines.
Risk Assessment activities, including collection of ballast water reporting forms and data management.	1 Drafted Ballast water reporting form and sent to ports with necessary instructions. 2 Data on ballast water transfer and shipping pattern being generated and all data compiled in Microsoft Excel
Port Baseline Survey activities.	ACTVITY NOT STARTED
Education/Training activities.	ACTVITY NOT STARTED
Legal activities.	ACTVITY NOT STARTED
Progress with National Ballast Water Management Plan	ACTVITY NOT STARTED
Compliance Monitoring and Enforcement activities, including ballast water sampling.	ACTVITY NOT STARTED
Regional Cooperation and Replication activities.	ACTVITY NOT STARTED.
Progress with national contributions to the programme/self financing activities.	1 Dialogue started with port officials and Govt. of India.
Country-specific activities under National Workplan, not covered by Global PIP:	ACTVITY NOT STARTED
Other duties assigned by Country Focal Point/ PCU	1 Drafting of National Work plan and sent for printing 2 Development and drafting of National communication work plan template. 3 Personal meeting with new CPTF members and to appraise them about the issue and convince them to contribute by becoming the CPTF members.
Other/Miscellaneous	1 Arrangement for holding the workshops and meeting. 2 Designing of letterhead, Visiting cards, Envelopes etc and sent for printing.

National Workplan Summary Table

(Note: Programme activities that are not the responsibility of CPTFs are not shown – only national activities are shown)

Workplan Component	Tasks to be undertaken	Responsible Party	Timeline												Budget (US$)
			J	F	M	A	M	J	J	A	S	O	N	D	
National Workplan	• Implement National Workplan	CFP, CFP (A), CPTF and Consultants													25000 + 25000 + 15000 + 25000= 90000/ (See Activities)
Communication, Education and Awareness Raising	• Assist local case studies and to communicate findings to all stakeholders.	NIO,FSI AND PORTS													
	• Hold in-country communication workshop to develop communication plan.	CFP AND CFP(A)													US $ 15000/
	• Implement country communication plan.	CFP,CFP(A),CPTF and Consultants													US $ 45000/ (30000+15000) 1.A.4.
Risk Assessment	• Identify and map most sensitive environmental resources and values.	NIO													US $ 25000/ (From 1.A.4)
	• Collect all existing information on environmental conditions in the port (physical, chemical and biological).	NIO													
	• Collect all existing shipping data, especially on source ports.	Ports													
	• Collect all existing information on ballasting and deballasting patterns	Ports													
	• Assist the PCU and consultants with the risk assessment.	CFP,CFP(A) AND NIO													
Port Baseline Surveys	• Collect all existing information and previous studies on the distribution of biota in the port, including presence/absence of introduced species.	NIO and FSI													US $ 75000/ (50000+25000) 1.A.4
	• Identify all in-country marine science and field survey capabilities.	NIO and FSI													
	• Work with PCU and consultants to develop and initiate port baseline surveys.	NIO and FSI													
Ballast Water Management Measures	• Assist PCU to hold first training course in application of IMO guidelines.	CFP, CFP(A) and CPTF													US$ (15000+25000) 1.A.4
	• Arrange for continuation of such training through local maritime institute.	CFP,CFP(A) and CPTF													
	• Compile all existing domestic legislation and regulations on ballast water.	CONSULTANT													US $ 25000/ PCU to specify the date of international workshop on the subject.
	• Contract consultants to review existing legislation.														
	• Participate in the international workshop on Legislation and Regulations.	CFP, CFP(A) and Consultant													
	• Implementation any recommendations from the legislation review.	CFP ,CFP(A)													
Compliance Enforcement & Monitoring	• Implement compliance, enforcement and monitoring arrangements with support and advice from PCU and consultants.	Ports													US $ 60000/
Regional Activities	• Form cooperative relationships with neighbouring countries and share lessons.	CFP,CFP(A)													US $ 10000/ (To clarify about Budget allocation)
	• Assist the PCU to establish RPTF and participate actively in this group.	CFP, CFP(A)													
Resourcing & Financing	• Develop and implement in-country arrangements for the long-term, ongoing resourcing and financing of ballast water management activities.	CFP,CFP(A)													

Islamic Republic of Iran

Activity	Tasks Undertaken
Day-to-day management/ administration/reporting	
Organization of CPTF meetings	CPTF has already established and / Three meetings was held
GPTF related activities	
Communication/Awareness Raising activities	Country communication workshop is going to be held in Feb-Mar 2001 TV coverage of demonstration site has performed Seminar with local experts was held in Bushehr port
Risk Assessment activities, including collection of ballast water reporting forms and data management.	Sensitive area mapping is ongoing Collection of existing data is ongoing A database based on reporting forms is established
Port Baseline Survey activities.	
Education/Training activities.	
Legal activities.	Review of I.R. Iran National Law has been initiated
Progress with National Ballast Water Management Plan	
Compliance Monitoring and Enforcement activities, including ballast water sampling.	Random checking of ships enter to Khark Island has been initiated (To implement Res.A.868(20))
Regional Cooperation and Replication activities.	To inform ROPME of programme initiating Receiving reply from Executive Secretary of ROPME containing full support of ROPME Arrange for introducing the programme through forthcoming ROPME's Steering Committee on Reception Facilities
Progress with national contributions to the programme/self financing activities.	
Country-specific activities under National Workplan, not covered by Global PIP:	Main objectives of country specific activities are developed
Other duties assigned by Country Focal Point/ PCU	
Other/Miscellaneous	Development of country NWP has been accomplished

National Workplan Summary Table (Note: Programme activities that are not the responsibility of CPTFs are not shown – only national activities are shown)

Workplan Component	Tasks to be undertaken	Responsible Party	Timeline												Budget (US$)
			J	F	M	A	M	J	J	A	S	O	N	D	
National Workplan	• Develop National Workplan for the in-country implementation of the programme.														12,600
	• Implement National Workplan (add additional rows for specific activities)	CPTF-Lead Agency-CFP, CFP Assistant													32,500
Communication, Education and Awareness Raising	• Assist local case studies and to communicate findings to all stakeholders.	CPTF-Lead Agency-CFP, CFP Assistant													14,800
	• Hold in-country communication workshop to develop communication plan.	CPTF-Lead Agency-CFP, CFP Assistant													42,500
	• Implement country communication plan.	CPTF-Lead Agency-CFP, CFP Assistant													5,500
Risk Assessment	• Identify and map most sensitive environmental resources and values.	CPTF-Lead Agency-CFP, CFP Assistant													
	• Collect all existing information on environmental conditions in the port (physical, chemical and biological).	CPTF-Lead Agency-CFP, CFP Assistant													
	• Collect all existing shipping data, especially on source ports.	CPTF-Lead Agency-CFP, CFP Assistant													
	• Collect all existing information on ballasting and deballasting patterns and procedures in the port.	CPTF-Lead Agency-CFP, CFP Assistant													
	• Assist the PCU and consultants with the risk assessment.	CPTF-Lead Agency-CFP, CFP Assistant													17,000
Port Baseline Surveys	• Collect all existing information and previous studies on the distribution of biota in the port, including presence/absence of introduced species.	CPTF-Lead Agency-CFP, CFP Assistant													33,000
	• Identify all in-country marine science and field survey capabilities.	CPTF-Lead Agency-CFP, CFP Assistant													
	• Work with PCU and consultants to develop and initiate port baseline surveys, using local marine science capabilities, following standardised methods and supported by the PCU and consultants.	CPTF-Lead Agency-CFP, CFP Assistant													15,000
Ballast Water Management Measures	• Assist PCU to hold fist training course in application of IMO voluntary guidelines.	CPTF-Lead Agency-CFP, CFP Assistant													55,000
	• Arrange for continuation of such training through local maritime training institute.	CPTF-Lead Agency-CFP, CFP Assistant													
	• Compile all existing domestic legislation and regulations relating to ballast water.	CPTF-Lead Agency-CFP, CFP Assistant													14,000
	• Contract consultants to review existing legislation.	CPTF-Lead Agency-CFP, CFP Assistant													
	• Plan for the possible implementation of any recommendations from the legislation review.	CPTF-Lead Agency-CFP, CFP Assistant													
Compliance Enforcement & Monitoring	• Implement compliance, enforcement and monitoring arrangements, including training of personnel, based on existing IMO and other guidelines and with support and advice from the PCU.	CPTF-Lead Agency-CFP, CFP Assistant													
Regional Activities	• Form cooperative relationships with neighbouring countries and share lessons.	CPTF-Lead Agency-CFP, CFP Assistant													20,000
	• Assist the PCU to establish RPTF and participate actively in this group.	CPTF-Lead Agency-CFP, CFP Assistant													
Resourcing & Financing	• Develop and implement in-country arrangements for the long-term, ongoing resourcing and financing of ballast water management activities.	CPTF-Lead Agency-CFP, CFP Assistant													

South Africa

Workplan Component	Tasks to be undertaken	Responsible Party	Timeline												Budget (US$)
			J	F	M	A	M	J	J	A	S	O	N	D	
National Workplan	• Support for CFP Assistant and CPTF	CFP, CFP Assistant	X	X	X	X	X	X	X	X	X	X	X	X	2520
	• Develop Aureococcus case study	CPTF		X	X	X	X	X	X	X	X	X	X	X	30 000
	• Plankton monitoring	CPTF, local consultants						X	X	X	X	X	X	X	38 000
	• Pathogen characterisation study	CPTF, local consultants				X	X	X	X	X	X	X	X		40 000
Communication, Education and Awareness Raising	• Implement country communication plan	CFP, CFP Assistant, CPTF	X	X	X	X	X	X	X	X	X	X	X	X	36 500
	.														
Risk Assessment	• Identify and map most sensitive environmental resources and values.	CFP Assistant, CPTF	X	X	X										
	• Collect all existing information on environmental conditions in the port (physical, chemical and biological).	CFP Assistant, CPTF	X	X	X										
	• Collect all existing shipping data, especially on source ports.	CFP Assistant, CPTF	X	X	X										
	• Collect all existing information on ballasting and deballasting patterns	CFP Assistant, CPTF	X	X	X										
	• Assist the PCU and consultants with the risk assessment.	CFP Assistant, CPTF	X	X	X										
Port Baseline Surveys	• Collect all existing information and previous studies on the distribution of biota in the port, including presence/absence of introduced species.	CFP Assistant	X												
	• Identify all in-country marine science and field survey capabilities.	CFP Assistant, CPTF	X												
	• Work with PCU and consultants to develop and initiate port baseline surveys.	CFP Assistant, CPTF		X	X	X									56 400
Ballast Water Management Measures	• Assist PCU to hold first training course in application of IMO guidelines.	CPTF											X	X	
	• Arrange for continuation of such training through local maritime institute.														
	• Compile all existing domestic legislation and regulations on ballast water.	CFP Assistant, CPTF	X												
	• Contract consultants to review existing legislation.	CFP, CFP Assistant		X	X										5000
	• Participate in the international workshop on Legislation and Regulation.	CFP, CFP Assistant							X	X					5000
	• Implement any recommendations from the legislation review.														
Compliance Enforcement & Monitoring	• Implement compliance, enforcement and monitoring arrangements, with support and advice from PCU and consultants.	CFP, CFP Assistant					X	X	X						10 000
Regional Activities	• Form cooperative relationships with neighbouring countries and share lessons.		X	X	X	X	X	X	X	X	X	X	X	X	10 000
	• Assist the PCU to establish RPTF and participate actively in this group.														
Resourcing & Financing	• Develop and implement in-country arrangements for the long-term, ongoing resourcing and financing of ballast water management activities.														

Ukraine

Half of a year is almost passed since we were sitting and learning the back grounds of planning our future work while 1st GPTF meeting. I have no idea how it was comprehended by the other participants presented there but for us, to tell you the truth, many that we have heard there were still unclear.

Nevertheless, on our coming back home, while we have everything in our minds, so called on hot steps, we held the CPTF meeting, where we entrusted each member to present their proposals on realization of the tasks of the Program in Ukraine. And here we made our first mistake because defining the subject of separate components of Programme Implementation Plan (or PIP), we have not determined the border of opportunities of the Program itself. It has resulted that in one week we were filled up with a piles of proposals, each of which, on author's opinion, was the most important. The desire of the participants to get as much financial assets of the program as possible was easily noted in every proposed activity. Fully understanding this, we had to try to group the submitted proposals on directions, which were not adjusted with some subjects of the PIP components. As result, the first version of our National Workplan, submitted for preliminary consideration to PCU in this October during the work of forty-fifth session of the Marine Environment Protection Committee (MEPC), has proved to be not well developed (insufficiently qualitative). We can not tell that the plan was absolutely bad, but its structure and not precise translation into English required its essential completion.

The specified work has taken away not only a lot of time, but, what is worse, has resulted in such variant of National Workplan, which was mostly under the framework of the PIP. It is necessary to recognize, that, beginning the development of National Workplan we assumed, that PIP is only for our help on how to design the National Workplan, but not the document strictly determined the structure of the National Plan and each its component. It was our second mistake, which mostly was corrected with the help of Mr. Technical Adviser Steve Raaymakers.

It is difficult to overestimate (переоценить) the help provided by Mr. Raaymakers. The plan, which, as it was seemed, was impossible to put in the framework of PIP, has been finished in such version, which, to our mind, can be a sufficient basis for the further work on every of its separate components. The main value of his help is that he quickly defined questions, in which understanding we were mistaken, and patiently, step by step, explained us our mistakes. There were a lot of mistakes of any kind, but basically I can point out three of them:

- At this stage the program is realized mostly by the forces of marine biologists, while we represented shipping industry;
- Nobody from us have participated before in the realization of any similar projects, especially in such that have so clearly expressed ecological coloring;
- English language is not widely spread in Ukraine and not each member of our CPTF, including us, can easily and quickly, and what is more important correctly, understand separate peculiarities of the English text.

We do not see in it anything terrible and we mention these difficulties only to show how important to us were all Mr. Raaymakers' patient explanations of every uncertain question.

In this connection I would like express our thanks to all PCU staff, which, on our opinion, proved to be a perfect team capable to provide us with any help and support during all period of work under this Program.

It is not right to say that the plan we represents now, is completed up to the end. It is very difficult to plan the order and terms of performance of tasks, which will be provided by the PCU or on the basis of PCU documents, especially taking into account that the first months of plan activities will be

carried out in winter. The weather conditions in Ukraine can change any plans, as it happened a week ago, when I stayed for two days in a frozen train Odessa-Kiev, which was stopped in an open space (steppe) because of a spontaneous icing of the railway communications and breakage of electro supply wires, which have paralyzed the normal life of more than a thousand (1000) cities and areas on approximately a quarter of Ukrainian territory. And it is still not winter, but only deep autumn! That is why, to our mind, the development of the plan of realization of the tasks not demanding immediate financing, can be carried out later, when it will be possible to synchronize both the actions of the PCU and our CPTF. Taking this decision, we consulted with the PCU Technical adviser who understood and supported such an approach.

Taking into account that Country Status Report (CSR) contains information on the realization of separate measures (or components) of the Plan, it is forth to consider the project of the National Workplan of Ukraine and CSR together. Also taking into account that one of the priorities of this meeting is finding out those questions still uncertain to the developers of the Plan, we think it would be useful for us and maybe for other participants, to discuss them right here.

So, let me start with a consecutive statement (последовательному изложению) of the contents of our National Workplan and with the information on those measures, which we already realized or which are realizing by the means of Ukraine.

Introduction and Background

As in PIP, introduction contains the general description of a problem, GloBallast Programme, its objectives and task, diagram (algorithm) of a consecutive (последовательной) realization of the Program tasks. The calendar dates of realization of some tasks were adjusted with a real state of a programme.

The list of components of the plan adjusted with the appropriate list in PIP.

Component 1: Programme Coordination and Management

In **Activity 1.B.1:** Designate Lead Agency and Country Focal Point (CFP) - the fact of the fulfillment of first four tasks of the Programme is given and the list of CPTF members (with their role) is stated.

Activity 1.B.2: Support CPTF and CFP Assistant - contains the proving of expenses for necessary office hardware equipment for the CFPA (it is planned US$ 27,000), for average CFPA travel Odessa-Kiev-Odessa (about US$ 6,500). The contingency funding is US$ 5,500.

Taking into account that US$ 100,000 is available to Ukraine for this activity, CFPA salary is US$ 46,000, the remainder (100,000-46,000-27,000-6,500-5,500=15,000) will be re-allocated to activity 1.B.4 (d).

Activity 1.B.3: Support CPTF Meetings - contains the proving of expenses to hold 10 CPTF of Ukraine meetings. It is mentioned in the plan that Ukraine has already held one CPTF meeting covered by the Programme and three was held as part of Ukraine's contribution (in-kind support). It is among our plans to hold not less than 8 meetings. Their cost will be US$ 22,560. The budget breakdown is made on the basis of expenses while the 1st CPTF meeting. The remainder US$ 7,440 will be saved as contingency funding to cover uncertain (непредвиденных)expenses.

Activity 1.B.4: Develop/Implement National Workplan for Ukraine - included measures connected with development of National Workplan and realization of country-specific activities and proposals of CPTF members and not mentioned (не подпадающих) in the PIP. In this part it is mentioned that the main part of the Workplan was developed by the CPTF of Ukraine as in-kind support that is why all fund available for Ukraine will be spend for the realization of country-specific activities, as follows:

Activity 1.B.4 (a): Risk Assessment - National/Regional Approach. To extend the ballast water risk assessment in Port of Odessa to the other ports of Ukraine, giving their location in one ecosystem also. It is supposed (предполагается) to extend such activity to the ports of a region. US$ 30,000 is allocated to this activity.

Activity 1.B.4 (b): National/Regional Invasive Marine Species Co-ordination Centre. The establishment of such centre will be extremely useful for the day to day information of state and port authorities, specialist concerned about the programme realization in Ukraine, marine environment in ports, as well as for consultancy on training organization for persons and organisations of Ukraine and the whole region on how to implement ballast water management and control system. US$ 30,000 is allocated to this activity.

Activity 1.B.4 (c): Institutional strengthening (повышение потенциала) of marine laboratory facilities in Odessa. It is supposed to provide their readiness for ballast water sampling procedures in order to determine unwanted marine species and pathogens. US$ 40,000 is allocated to this activity.

Activity 1.B.4 (d): Ballast water treatment technology. It means search for the prospective and alternative technical solutions on ballast water treatment onboard or on shore, using as the basis, an expert conclusion (заключение) of their more high level as proposed in R&D Directory. US$ 40,000 is allocated to this activity.

Component 2: Communication, Education and Awareness Raising

Activity 2.2: Generic Communication, Education and Awareness Raising Materials. In the framework of this activity it is planned to translate and print materials about the extent of the problem and international measures on its resolving. Giving special language conditions in Ukraine there will be a need to publish them both in Ukrainian and Russian. Planned expenses are US$ 8,000.

Activity 2.3: Case Studies. Taking into account that this activity will be undertaken by the PCU consultants, CPTF of Ukraine will take the responsibility to support the consultants work, providing information on case studies relating to its area, access to scientific centers in Odessa. To our mind we already done it while Mr. Stephan Gollasch visited Odessa and the same will be provided to all consultants and experts visiting us for implementing this activity as may be required in future. There are no budget on this activity.

Activity 2.4: Country Communication Workshops and Workplans. US$ 20,000 is available to hold a National Workshop to develop a Country Communication Plan for Ukraine. But Ukraine has already developed its National Communication Workplan as outlined below (activity 2.5) as in-kind support. So, the US$ 20,000 available and saved is re-allocated to implement the measures contained in this plan or for the contingency purposes.

Activity 2.5: Implement National Communication Workplan. To implement this activity Ukraine will fulfill the following country specific communication measures:

Activity 2.5 (a): Awareness Raising Seminars. To hold national seminars to rise awareness of different organizations and persons concerned: shipping industry, environment protection, public health, port authorities, Higher Education community. It is supposed that to participate in each seminar there will be invited four lecturers and about fifteen persons from most of the cities of Ukraine. Taking into account that average expenses to hold each seminar (including hiring venue (аренду помещений), travel and accommodation, DSA, developing, printing and dissemination of materials, catering, lecturers' fees) is US$ 5,200, the total budget of this activity will be US$ 26,000.

Activity 2.5 (b): National/Regional web-site. Developing National / regional web-site will give the audience information and materials of the Project including the information of the global web-site of the programme both in Russian and in Ukrainian languages. It is extremely important to rise awareness in case of such countries as Ukraine, Russian Federation, Georgia and Bulgaria. Consider

the prices in the electronic market of Ukraine, the total budget development and supporting the web-site will not exceed US$ 3,500.

Activity 2.5 (c): Awareness-raising of the ballast water issue in High and Secondary Education. Developing and delivering (представление) lectures in Secondary and High Schools about the problem of transfer of unwanted marine species and pathogens. It is planned to deliver 16 lectures among the Secondary and High Schools students studying biological, maritime and environmental science. US$ 4,200 planned to allocate to this activity.

Activity 2.5 (d): General translation of miscellaneous technical publications and other documents into Russian and Ukrainian. As I have mentioned above, duly translations of English written documents is of utmost (приоритетную) importance for the effective implementation of the programme in Ukraine and Black sea countries. It is planned to allocate US$ 20,000 to cover the expenses of translations all materials in two years and on two languages, including professional editing.

Activity 2.5 (e): Video&TV documentary. It means developing and applying TV/video materials to rise awareness about the problem and measures taken on global, regional and local scope. According to the prices in the videomarket of Ukraine, the expenses for participation in the television programs, producing of videos, constant television/information support - there will be a need in US$ 5,900 for this activity.

Activity 2.5 (f): Country-specific awareness raising materials. It will also be extremely useful to design and produce printed materials that are specifically tailored to the culture and society of Ukraine and the Black Sea region. US$ 7,000 is allocated for this activity.

Activity 2.5 (g): Communication Consultant. There is a need to hire a local communication consultant to initiate and co-ordinate the awareness raising campaign. It is necessary for the programme in Ukraine because within the Shipping Safety Inspectorate and CPTF there currently does not exist any specific experts in this extremely important and specialised area. The communication consultant will be paid at the local consultancy rate of US$ 200 per month from the programme budget or US$ 5,400 for the whole duration of the programme.

To sum up the total budget. All proposed communication activities come to a total of US$ 72 000, which leaves US$ 38 000 remaining in the US$ 110 000 available under the PIP for this component. This will be held in reserve as a contingency fund either for any additional communication and awareness raising activities that may be required later in the programme, or for re-allocation to other programme components if required.

Component 3: Risk Assessment & Port Biota Surveys

After communication, education and awareness raising, the next foundation for the programme at the port/country level is to conduct port-specific Invasive Marine Species Risk Assessments for port of Odessa (and later in others ports of Ukraine).

Accordingly, the following Activities are included in the National Workplan to address risk assessment.

Activity 3.1: Ballast Water Risk Assessment. The actual Risk Assessments for the port of Odessa will be undertaken as a consultancy on contract to the PCU with the help and participation of our CPTF. In this connection the CPTF of Ukraine under the PCU guidance and its consultants on Ukrainian means will undertake the following activities: collect information from relevant sources on shipping movements in the port of Odessa, collect information on the quantities, frequencies and locations of ballast water discharges in the port of Odessa, collect information on environmental conditions and biological resources in and around the port of Odessa. PCU consultants will be provided with all necessary and relevant information and logistical and organizational support while their staying in Odessa and making necessary researches.

As an important objective of the risk assessment consultancy is to provide training to Ukraine personnel in risk assessment methodology, the Ukraine CPTF will identify suitable candidates from relevant organizations to receive this training. The time of these personnel will be made available for this training as in-kind support from Ukraine.

Activity 3.2: Port Baseline Surveys. One of the most important task of the programme is to conduct port surveys in port of Odessa, based on replication of modern and uniform ballast and sea water sampling methods, their preservation, delivering to the laboratories and holding laboratory analysis.

For organization of such system an expert team is creating in port of Odessa, consisting from port experts and scientific institutes involved in the field of biological laboratory researches for a long time, with probable attraction to this work of students of biological educational institutions and personnel of other ports of Ukraine (for practical skills). (навыков)

Funds available to Ukraine for this activity: US$50,000.

The lack of practice of organization and creation of such system enforced the CPTF of Ukraine to request the PCU to provide the methodical help for development of the detailed plan of realization of this task and expenditure of the allocated means.

CPTF of Ukraine considers that effective realization of this task in port of Odessa will essentially (существоенно) facilitate the solution of much more later task - distribution of steady practice of realization of similar researches not only in other ports of Ukraine, but also in all ports of a region.

Component 4: Ballast Water Management Measures

The component contents the tasks that will make possible to achieve such programme objectives as:

Increasing adherence (подготовленности) by Ukraine (and later countries of the region) to the current IMO *voluntary* guidelines on ballast water management, and

assistance for Ukraine (and later to other countries of the region) in preparing for the implementation of the IMO *mandatory* regime when it comes into force.

The realization of the planned tasks will ensure distribution of the international standards on ship ballast water management on vessels flying the flag of Ukraine, provide awareness among the shipping and port specialists on ballast water management, provide ballast water control regime in orts of Ukraine in accordance with the relevant international practice, etc.

Activity 4.1: Legislation and Regulations. This contains measures aimed at juridical and organizational basis of entering and functioning of the international ballast water management and control regime.

In the framework of this activity CPTF of Ukraine will use as much as possible the guidelines for the revision of national legislation provided by the PCU in conjunction with the World Maritime University (WMU). Also our CPTF will review the national legislation concerning ballast water issue. Where it will be appropriate the amendments to existing documents will be developed and also developed new documents regarding ballast water management and control on the basis of the established international rules and regulations.

At present time as in-kind support from Ukraine it is almost finalized the collecting of the documents requiring more analysis and taking decision about the advisability of making any amendments to them.

It is allocated US$ 30,000 for this activity. It is planned to spent US$ 25,000. The remainder US$ 5,000 will be re-allocated to activity 1.B.4 (d).

Activity 4.2: In-Country Training. The PCU course packages, based on the UN TRAIN-X methodology will require the adaptation to the local legislation. They also should be tested during training process within special training centres and institutions.

CPTF of Ukraine will provide necessary conditions for entering these courses into the training programmes, including hiring (наем) an expert for their adaptation and further support.

US$ 30,000 is allocated for this activity.

Component 5: Compliance Monitoring and Enforcement (осуществление и наблюдение за выполнением) (CME).

Realization of tasks of this component must ensure stable functioning of marine environment monitoring system in port within the programme duration and after its commitment (завершение). That is why CPTF of Ukraine considers as especially important priopity to fulfill these tasks so that the monitoring system in Ukraine would work reliably (надежно) and effectively. It should be recognized that, while the realization of this component, we will need particular help and support from the PCU and its advisors who have practical experience in these issues.

Activity 5.2: Ballast Water Sampling Equipment. The PCU will provide US$ 10,000 for ballast water sampling equipment to port of Odessa, as recommended by standard international ballast water sampling procedures, for use in monitoring and enforcing compliance with the IMO guidelines. It will be provided as we would like to hope under the proposed from the PCU list of equipment.

Activity 5.3: CME Personnel and Training. The important part in the resolving of the problem of stable monitoring system is personnel training to compliance monitoring and enforcement procedures including modern methods of ballast water sampling.

Funds available to Ukraine for this Activity: US$ 80,000.

CPTF of Ukraine can now give a list of personnel designated for ballast water sampling, but can not plan the costs and terms of the mentioned training without the advice from the PCU. In connection that such training should be carried out on new equipment, we believe, that planning of realization of this task can be developed later, at least, after the obtaining of the specified equipment. During this time CPTF of Ukraine will carry out nomination of the personnel.

Activity 5.4: Implement CME Systems. The establishment of such system may include ship-shore communication and reporting systems, surveillance and inspection systems, record keeping and establishment of databases etc. At this stage we have no determine specialists in this field and is not certain as to what type of CME systems might be required for the port of Odessa. Details and budget break down of the US$ 40,000 available will be developed later with the guidance from the PCU.

Component 6: Regional Cooperation and Replication

Black Sea is a closed sea basin that is why any problem connected with the introduction of unwanted species into its ecosystem should be resolved commonly. There are no preventive measures taken in port of Odessa capable to save its ecosystem from biological pollution, unless such (если такие же) measures will be undertaken in the ports of other countries of a region. Being aware of this, CPTF of Ukraine has taken a number of measures stimulate regional cooperation and is supposed to continue all necessary efforts for the co-ordinated solution of the problem within a region.

CPTF of Ukraine is aware that the final objective of the programme should be the establishment of the Regional Task Force (RPTF), which should support regional environment protection measures within the framework of UN and IMO environmental policy.

In undertaking regional co-operation and replication, Ukraine will seek to utilize existing regional structures such as the Black Sea Environment Programme, the Bucharest Convention and the Black Sea MoU on Port State Control, and also to maximize bilateral cooperation established during International Workshop held in September 1999 in the Black Sea.

Under the PIP the total budget available to Ukraine for these activities is US$ 100 000, it will include: regional travel to form RPTF; holding RPTF meetings; and Black Sea countries specialists' study tours to Odessa to participate in separate activities of the Odessa DS.

We believe, that we shall receive the right to propagandize the achievement of the Program only when we shall be convinced that the tasks of the Program and National Workplan are carried out effectively and that the activity of Odessa DS can form the basis for its replication among the other countries of a region.

Component 7: Resourcing and Financing

As the programme proceeds the CPTF of Ukraine, as in-kind support, will seek to identify, evaluate and implement long term in-country researching and financing arrangements for its National ballast water management programme. For this aim there will be considered the opportunities of using part from port dues or ecological funds, other financial sources, etc.

That was a short comments on the condition of the National Workplan of Ukraine for this moment. Though planning of some tasks are still to be developed we think that under the most of its activities beginning from the very first month of the next millennium we will be able to start efficient work. This would be much helped by the fact that all our difficulties with the opening of the bank account in Ukraine are overcome and we will be able to involve other experts to our work.

Unforeseeable barriers appeared on the way of signing **MoU between IMO and Ministry of Transport of Ukraine**. The matter is that unfortunately our lawyers while adjustment the text of the memorandum has not pay attention to the fact that there was a regulation under which the order for signing such documents is ruled by the statement of Cabinet of Ministers of Ukraine. And only after texts was fully approved it is appeared that we need to get the approving from our Ministry of Foreign Affairs and Cabinet of Ministers. Presently we started a new stage of adjustments. There are no doubt that it will be successful but it is a pity that the signing of memorandum which was talked about for a long time as a ready case is going to postpone for a while.

To be not a pessimist I want to add that Odessa Demonstration Site has well-equipped office room, where Country focal Point Assistant Mr. Limanchuk is working day to day and where both Steve Raaymakers and Stephen Gollasch succeeded to work as well. This office became already center of activities for specialists and institutions from all parts of Ukraine interested in resolving of problem. Propositions on cooperation are coming into this room sometimes from very unwaited sourses. We fill that it is a good evidence of actuality and perspectivity of our work.

National Workplan Summary Table (Note: Programme activities that are not the responsibility of CPTFs are not shown – only national activities are shown)

Workplan Component	Activity	Tasks to be undertaken	Responsible Party	Timeline												Budget , US$ 000
				J	F	M	A	M	J	J	A	S	O	N	D	
National Workplan - Component 1: Programme Coordination and Management - Sub-Component 1.B: In-country Arrangements		• Implement National Workplan														
	Activity 1.B.1	Designate Lead Agency and Country Focal Point (CFP)	PCU	10,0	10,0	7,8	1,1	1,1	1,1	0,3	0,3	0,2	0,3	0,3	0,2	32,7
	Activity 1.B.2	Support CPTF and CFP Assistant	PCU, SSIU	2,82			2,82			2,82			2,82			11,28
	Activity 1.B.3	Support CPTF Meetings	SSIU													
	Activity 1.B.4	• Develop/Implement National Workplan for Ukraine														
	Activity 1.B.4 (a)	Risk Assessment – National/Regional Approach.	PCU, IBSS													
	Activity 1.B.4 (b)	National/Regional Invasive Marine Species Co-ordination Centre.	SSIU													
	Activity 1.B.4 (c)	Institutional strengthening of marine laboratory facilities in Odessa.	PCU, SSIU													
	Activity 1.B.4 (d)	Ballast water treatment technology.	URDIMM				1,0			5,0			7,0	7,0	7,0	26,0
Component 2: Communication, Education and Awareness Raising	Activity 2.1:	Programme Identification	PCU.													
	Activity 2.2:	Generic Communication, Education and Awareness Raising Materials	SSIU				1,0			1,0			1,0			3,0
	Activity 2.3	Case Studies • Assist local case studies and to communicate findings to all stakeholders.	SSIU													In-kind
	Activity 2.4	Country Communication Workshops and Workplans • Hold in-country communication workshop to develop communication plan.	SSIU													In-kind
	Activity 2.5	Implement National Communication Workplan														
	Activity 2.5 (a)	Awareness Raising Seminars	SSIU				4,2					4,2				8,4
	Activity 2.5 (b)	National/Regional web-site	SSIU					3,0								3,0
	Activity 2.5 (c)	Awareness-raising of the ballast water issue in High and Secondary Education.	SSIU			1,0	0,3	0,3	0,3			0,3	0,3	0,3	0,3	3,1
	Activity 2.5 (d)	General translation of miscellaneous technical publications and other documents	SSIU		1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0		10,0
	Activity 2.5 (e)	Video&TV ducumentary	SSIU		0,5	0,45		0,5			0,5				0,5	2,45
	Activity 2.5 (f)	Country-specific awareness raising materials.	SSIU						1,0					1,0		2,0
	Activity 2.5 (g)	Communication Consultant	SSIU	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	2,4

Workplan Component	Activity	Tasks to be undertaken	Responsible Party	Timeline												Budget , US$ 000
				J	F	M	A	M	J	J	A	S	O	N	D	
Component 3: Risk Assessment & Port Biota Surveys	Activity 3.1: Ballast Water Risk Assessment	• Identify and map most sensitive environmental resources and values.	SSIU													In-kind
		• Collect all existing information on environmental conditions in the port (physical, chemical and biological).	SSIU													In-kind
		• Collect all existing shipping data, especially on source ports.	SSIU													In-kind
		• Collect all existing information on ballasting and deballasting patterns	SSIU													In-kind
		• Assist the PCU and consultants with the risk assessment.	SSIU													In-kind
Port Baseline Surveys	Activity 3.2: Port Baseline Surveys	• Collect all existing information and previous studies on the distribution of biota in the port, including presence/absence of introduced species. • Identify all in-country marine science and field survey capabilities. • Work with PCU and consultants to develop and initiate port baseline surveys.	PCU, IBSS, UMESC, APRI,	2,0	4,0	4,0	5,0			5,0			5,0			25,0
Component 4: Ballast Water Management Measures.		• Assist PCU to hold fist training course in application of IMO guidelines. • Arrange for continuation of such training through local maritime institute.														
	Activity 4.1	Legislation and Regulations: • Compile all existing domestic legislation and regulations on ballast water.	URDIMM	1,0			1,0			1,0			1,0			
		• Contract consultants to review existing legislation.														
	Activity 4.2	In-Country Training	PCU													
		• Participate in the international workshop on Legislation and Regulations.														
		• Implementation any recommendations from the legislation review.														
Component 5: Compliance Monitoring and Enforcement.	Activity 5.2	Ballast Water Sampling Equipment	SSIU, SIPB													
	Activity 5.3	CME Personnel and Training	Budget breakdown will be developed later													
	Activity 5.4:	Implement CME Systems	Budget breakdown will be developed later													
		Implement compliance, enforcement and monitoring arrangements with support and advice from PCU and consultants.														

Workplan Component	Activity	Tasks to be undertaken	Responsible Party	Timeline												Budget , US$ 000
				J	F	M	A	M	J	J	A	S	O	N	D	
Component 6: Regional Cooperation and Replication	Activities 6.1 & 6.2	Regional Programme Task Forces, Meetings and Study Tours • Form cooperative relationships with neighbouring countries and share lessons.	PCU, SSIU													
		• Assist the PCU to establish RPTF and participate actively in this group.														
Component 7: Resources and Financing.	Activities 7.1 & 7.2:	Review Opportunities and Hold Donors Conference • Develop and implement in-country arrangements for the long-term, ongoing resourcing and financing of ballast water management activities.	No programme funds are available to Ukraine for this activity and it will be undertaken as in-kind support from Ukraine.													
Total budget for each period of time																

Agenda Item 4:
NGO/Industry Information Papers

Friends of the Earth International

Roger Lankester – FOEI (Oceans Division)

In considering this aspect of the ships ballast water issue the two most important considerations are ecological integrity or stability and biological diversity. To define the impact on both these elements it is first necessary to expand on their basic concepts. I should add that these will not be entirely "scientific" in content as this can be better explained by specialist experts. What I shall attempt is a philosophical approach based on a scientific background.

Ecology originates from the Greek ecos, which simply means home or, in nature conservation terms, habitat.

The UNCED definition of Biological Diversity is:

> "The variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species and of ecosystems."

The sea comprises 99% of the living space on the planet. It is what makes the Earth what it is. However, the majority of marine life lives in a relatively small proportion of the marine environment. These are the shallow coastal areas of continental shelf zones. About 70% of all marine life is to be found in only 5% of the marine area. This gives an insight into the origin of ecological variability which is at the centre of concern.

World-wide many thousands of marine and aquatic discrete ecosystems have evolved over many millions of year. The main factors which govern this variation are:

- Water depth, temperature, amount and penetration of sunlight.
- Type of geological formations – rock, sand, gravel, mud and other fine sediment.
- Current and tidal patterns creating inter-tidal zones varied by spring and neap tidal conditions, location of habitat i.e. estuaries, semi-enclosed seas etc.
- Chemistry – nutrients, salinity, run-off from land dependant on rainfall.
- Wind and wave conditions – low energy/high energy coastline.

Differing variations in all these factors in combination provide the conditions that govern the vast array of discrete marine ecosystems.

Figures 1 and 2 show the model of these influences for the North Sea and figures 3 and 4 the distribution of main coastal habitat types.

Marine ecosystems may comprise single or multiple biological communities depending on the conditions outlined and may be highly localised in the case of islands or extensive in the case of regional seas. However, even here, as with the North Sea, current patterns can create boundaries that preclude natural planktonic migration or drift where a number of discrete communities still remain.

Of course the motor driving all biological activity, including the sea, is the Sun and seasonal variation as the Earth travels on its trajectory through space.

Most dependant on these factors is primary production comprising phytoplankton which forms the food source for zooplankton and son on up the food chain. Phytoplankton supplies other services supporting the global life support system, in particular around 70% of the Earths oxygen as well as absorbing Co2 from the atmosphere. Also a particular species called emiliana huxleyii produces a gas dimethyl sulfide that is a nucleate for clouds over the oceans. This is just a brief insight into the multiplicity of processes that comprise the global biosphere.

Until recently the influence of mankind on the natural evolution of species, processes and ecosystems was largely negligible. Once the ability to navigate across seas and oceans became possible, modifications to natural ecological balance began to occur. This has accelerated enormously in the last few hundred years as a result of the industrial revolution.

Inputs of nutrients, chemical pollution, thermal pollution etc., all create artificially modified conditions for a whole range of species. Some may disappear or become highly stressed because conditions are hostile, others may thrive when predators disappear. Into this random and highly dynamic process alien or non-indigenous species are introduced when ships' ballast water is discharged into a receiving port.

What has happened is pelagic bridges have been built establishing artificial links between a whole range of discrete marine ecosystems that would otherwise never occur under natural conditions.

The effect of these artificial biological introductions may be highly dramatic, as in the case of the comb jelly fish in the Black Sea where the whole ecosystem has been largely destroyed, or no detectable effect at all, YET. What is or is not an adverse impact in ecological terms is still the subject of scientific debate. For example, a ships ballast water introduction from the US to the north Sea has caused a hybrid cord grass called spartina anglica to evolve. It has the effect of rapidly colonising mud flats, which to some is a good thing as it may provide rough grazing for farm animals.

Other areas of the world where harmful species have been introduced and their impact documented is the US, Australia, New Zealand and South Africa. But these impacts relate largely to economic marine resources such as fishing and amenity use of the sea. We have yet to evaluate the effect of alien species on natural biological evolution and the processes that result. The introduction of toxic dinoflagellates into nutrient rich waters can cause a massive algal bloom creating hostile conditions for indigenous biological communities and changing the distribution and species profile of phytoplankton. This may well impair the very basis of the marine food chain. Mankind is now having substantial impact and influence on natural ecological processes.

The main question remaining unanswered with certainty is; does it yet matter?

It is here we need to look at a more philosophical concept. Descartes originated the notion of mankind's unique reason for existence. "I think therefore I am" can be applied to assess with some objectivity man's relationship with nature and our position in its complex ecological structure. Typical is the Convention on Biological Diversity. Although ultimately the economic resources of the sea are only available for human enjoyment as a consequence of biodiversity, this convention suggests a more altruistic motive. We are at last considering an ethical and moral concept of controlling man's relationship with the natural environment for its intrinsic value rather than what it can do for us.

Alien species introduction is now considered one of the top five threats to biodiversity and must now be managed so that the many discrete biological communities and ecosystems that remain can be allowed to develop as naturally as possible. Given sufficient time of ballast water discharges and the ability of species to habituate to new conditions, marine ecosystems may well become so rationalised that a much smaller number of biologically different communities will ultimately exist.

The sea is still much too powerful for man to destroy as a functioning biosphere, but he may have sufficient impact on it so that he has no longer a place in it. The challenge is to take the necessary action before it is too late.

Refs:
GESAMP Report No. 62 – Marine Biodiversity: patterns threats and conservation needs – Gray – IMO, London 1997
GESAMP Report No. 58 – Opportunistic settlers and the problem of the Ctenophore Mnemiopsis leidyi invasion in the Black Sea – IMO, London 1997
The Convention on Biological Diversity – UNCED – 1992
An introduction to marine Ecology – Barnes & Hughes – Blackwell 1988
The ages of GAIA – A biography of our living Earth – Lovelock – Oxford University Press 1989

International Chamber of Shipping

Alec Bilney

Ballast Water Management: what is it that shipowners and ships must do?

Ballast water management is now an established part of shipping. It is already a mandatory procedure for ships trading to Australia and parts of North America, and there is a haphazard mix of varying voluntary and mandatory requirements in other parts of the world. There are increasing reports about it in the trade press that prove the need for something to be done. I feel that that is now accepted, and it begs the question on the screen.

Since we have to go somewhere, we must decide where we are going and how to get there. We must identify the hurdles on the way, decide who else is going, decide what tools we need, how we check that we are on the right route, and what insurance we need.

The target and the route

The intent of ballast water management is to eliminate or minimise the translocation of harmful living species. The concept of maintaining one geographical region is not a new concept. It has existed in the form of quarantine controls for a very long time and measures adopted now should follow other successful protection measures, such as human diseases, cargo infestation and airborne pests. De-ratting certification of ships, inoculation of crewmembers by certified vaccines produced to the standards of the World Health Organisation, edible and other organic cargoes are often required to be fumigated by a certified process before importation.

In each case it is the preventative procedure that is specified, and not the result that must be demonstrated. Once that procedure has been followed, and certified if necessary, that is accepted as sufficient. The importer does not nee to prove non-existence of the harmful organism. Any subsequent amendment of the preventative system found to be necessary is agreed at a high level.

This should be the basis upon which restrictions are placed on ships wishing to import ballast water.

The hurdles

Having said that, what are the restrictions and regulations? I don't need to tell anyone in this room that there is a plethora of local and national requirements already in existence. But it is essential that all countries are persuaded of the need to agree a universal standard (however severe!), so that ships can be equipped to meet it and the crew given the training to achieve it.

IMO is continuing the development of the international mandatory instrument that will place controls on ships for the discharge of ballast water. But it is not yet agreed.

New ships can be built with the practice fully catered for. An owner ordering a new ship from now on should ensure that space for equipment and power availability is adequate, and that crewing and operational planning provide for continual ballast management. IMO will shortly adopt a Resolution urging administrations to encourage this.

It is planned that, eventually, the flag state obligation for universal ballast water management will be applied to existing ships, but existing ships can only be adapted as far as space and power availability permits. Compliance by existing ships is not, in itself, in doubt; after all, they comply now with port state requirements as best they can. What is important will be to establish a realistic level to which the Convention will require them to process their ballast water before discharging it into a harbour, and a realistic timescale they will have to meet.

Standards for existing ships

Discussion at MEPC 45 touched upon standards for existing ships, and it remains to be decided whether the eventual obligation for existing ships should be the same as for new ships, or whether a different standard should be adopted. If an elderly four hatch tramp ship is retrospectively fitted with a new, certified, treatment system, there should be no penalty for residual sediment becoming entrained, or for failures of older machinery. Within two decades, all ships will meet the best standards, anyway.

Implementation for existing ships

The implementation period for existing ships should be gradual and phased. An initial step could be to require the more recently built ships to perform ballast water management procedures on all ballast voyages after a set period, say five years after implementation, to allow for all ships to have gone through a docking period.

A second step a few years later could require, say the largest of somewhat older ships to comply. A final step might eventually require all existing ships to be able to perform some form of ballast water management procedures on all ballast voyages. This unavoidable target may encourage earlier investment by owners of mature ships that are in good condition, and which are expected to continue to trade for may years.

No matter how far ahead these steps now seem, it should be borne in mind that, throughout the period, even existing ships will have been performing some sort of ballast management when required by port states. Owners whose ships regularly trade to such areas may well choose an earlier date for retrospective installation. But ships that rarely trade to such countries will not have a requirement to perform a ballast management process anyway and, because energy will not be used for one (unwanted) environmental protection aspect that produces a detriment to the environment in another aspect, there will be a net gain to the global environment (I have been personally assured, for instance, that the inhabitants of Pireaus, proud that the harbour has been host to ships engaged in international trade for four thousand years, are concerned that the city's air quality now needs more protection from anyone burning fuel that is not essential to burn, than do the creatures living in its waters from foreign organisms).

What tools do we need, and what do we have?

At present, a wonky old adjustable spanner is the only universally available tool; fitting no ship exactly, but better than nothing. Ballast water exchange at sea, preferably far from land and in deep water, is regarded as the base case in much of the existing legislation, and that any other treatment procedure should be at least as effective. But there are known difficulties with judging this.

The first is that ballast water exchange at sea is unquantifiable. Its merit is assumed to be that it reduces the harmful organisms in the ballast water on board by about 90% if performed thoroughly. But the number of organisms in the remaining 10% depends upon the original number in the ballast water first loaded.

The second problem is the impossibility of ignoring the potential safety problem with stability and ship strength. If, on one voyage in four, a ship meets bad enough weather that it is deemed unsafe or impractical to perform the exchange, there is no reduction in organisms at all. Even in calmer weather, unless the route takes the ship through deep water and far from land, either the process is not performed or one set of life forms may be exchanged for another. So almost any other procedure can be deemed to be at least as effective.

So, if ballast water exchange at sea is unsuitable for use as a yardstick, how are other methods to be measured?

Measurement standard and authority

At the start of my talk I proposed that the yardstick and the systems that meet it should be approved by an international authority. It is suggested that, just as the WHO does for human diseases, so IMO should set the standard for ballast water management. It should gauge systems submitted for consideration, then approve equipment or procedures that better the standard.

It is progress in this field which will answer the shipowners' main plea of "what is it that we have to do?"

Ballast water management techniques

Practical ways of achieving the environmental targets presently fall into three clear categories as far as ships are concerned. The most obvious is not to discharge the ballast water into the sea. The alternatives are either to remove the organisms or to kill them.

Not discharging the ballast freely into the sea can be achieved by retention on board, discharge to shore reception and treatment facilities, or passing it to another ship. The first is not really an option if the ship is to load a full cargo. Discharge to shore reception facilities pre-supposes that such facilities will ever exist – at every berth, no matter how remote a terminal is. Passing the ballast to another ship, either directly or via a port storage unit, may be a suitable route for liner trades to minimise the cost, but would not meet the needs of the bulk cargo trade, one of the prime targets.

Generally, then, this is a poor option and unlikely to be used.

Removal by filtration is a known and proven system, and is a process with which seamen are familiar, but the perceived obstacle is the flow rate, which must be compatible with modern ship schedules. However, even if good flow rates are achieved, a problem is becoming apparent: what to do with the removed creatures. It is generally expected that the organisms will be returned to the harbour, which is their native habitat, but there have been rumblings that this would create a point of concentration near every berth, and that that is likely to disturb the ecosystems of the ballast exporting country. It must be possible, therefore, to filter the water while on the high seas, or to keep the organisms on board for later disposal.

Generally, filtration is a good option but it must be thought through.

Thus, killing the organisms may be the best process in the end, as is done in all other quarantine processes. It can be achieved by heat treatment, by chemicals or by biological means. Concern has been expressed about the effect of hot water on steelwork and tank coatings, but for cost reasons there will be extensive heat recovery from treated water so temperature gradients in a tank would not be very large. The use of ultra-violet light is so far only successful after physical separation to achieve clarification of water, and it requires a great deal of electrical power generation. As far as is known, ozone enrichment and oxygen depletion are still at the laboratory experimental stage.

Chemical treatment through adding poisons is generally felt not to be a viable option, because discharge of treated water with the chemical would almost certainly be just as unwelcome as untreated water with the organisms.

How will we know we are on the right route?

By research and development. There are several research organisations heavily involved in the necessary work to develop mechanisms that will treat ballast water to such an extent that it can be discharged into any harbour of the world with confidence that it contains no harmful organisms. This development is surely best left to such commercial bodies, rather than encouraging IMO or national governments to get involved. There is a huge potential market which will amply repay any research costs.

OCIMF

At the first Task Force Meeting we advised that OCIMF fully supported moves to prevent the transfer of harmful aquatic organisms in ships ballast water but had serious reservations about the safety aspects of Ballast Water Exchange at sea. Such reservations appear to be supported by most parties within the Ballast Water Working Group at MEPC 45. However, at present the Exchange method is the only workable solution and some of our Members engaged in building new vessels are already addressing the issue by designing their ships to be capable of safe ballast water exchange using the Dilution Method.

Consideration of technical aspects of water treatment has now passed the "general awareness" stage within the industry and reached critical mass in the deliberations of our membership – the need for action is now fully accepted.

The feasibility and practicalities of current potential solutions, such as Cyclone and filtration Technology and similar, are being considered by our Marine Technical Sub-Committee. Presentations have been given to OCIMF meetings by proponents of such systems, but up to date knowledge of all realistic options has been difficult to obtain.

The decision as to whether ballast water being treated ashore or being treated on board ship should become the accepted norm remains a major hurdle. Even within integrated companies, there are differences of opinion between Terminal Operators and Ship Operators. Practicality and past experience suggests that shipboard treatment may be the most realistic option in the long term; the MEPC 45 working group appearing to generally favour this option.

Having a uniform and effective means of policing ballast water management standards and control measures remains an important part of OCIMF's policy, which is why we have confirmed participation in the MEPC Ballast Water Intersessional Group tasked with developing a range of draft Standards to apply. OCIMF hopes to offer some general suggestions in the near future.

As an organisation, we hope to substantively develop more definitive suggestions for measures on new and existing vessels, treatment monitoring and enforcement procedures, reception facilities and other relevant points in time for MEPC 46 (April 2001).

There appears to be a need for enhancing co-ordination between research bodies appointed or contracted by various Administrations and agencies. We feel that IMO, particularly through MEPC and this Task Force group may be suitable to play a greater role co-ordinating all aspects of Ballast Water Management proposals. This Task Force group in particular appears to be ideally suited as a co-ordinator of information from relevant scientific studies and the further development of the R&D Directory.

Agenda Item 5:
Proposed IMO/Pilot Countries MoU

Background

As this is a complex project involving the three UN organisations and six national governments, the international transfer of funds and the expectation that each participating party will carry out various activities to fulfil certain obligations, as outlined in the Project Document, it is necessary to provide a legal basis and mandate for cooperation between the executing agency (IMO) and each participating country. This is most effectively and efficiently achieved through a simple Memorandum of Understanding (MoU) or Memorandum of Agreement (MoA) between IMO and the Government/Lead Agency of each participating country.

Accordingly, approximately two years ago during the preparatory phases of the project, such a document was drafted by IMO for consideration by governments. This MoU has now been amended to reflect feed-back received from some participating countries and a final draft is now available (Attachment I) for consideration by participating countries for signing.

Benefits

The benefits of such an MoU include:

- Clear definition of the roles, responsibilities and obligations of each party.
- Provision of a clear mandate for the project at the national level.
- A basis for the Lead Agency in each country to secure support from other national government bodies, including treasury, for the implementation of in-country programme activities.

Action Required

The Lead Agencies in each participating country need to review the final draft MoU and progress to signing it in conjunction with IMO.

Final Draft MoU

Memorandum of Understanding
between
Ministry of Transport of Ukraine
and
The International Maritime Organization (IMO)

This Memorandum of Understanding is concluded between the Ministry of Transport of Ukraine [address] and the International Maritime Organization (hereinafter referred to as "IMO") for the implementation and execution of the GEF/UNDP/IMO Project on "Removal of Barriers for the Effective Implementation of Ballast Water Control and Management in Development Countries" (Project No. GLO/99/G31/ All G/19) (hereinafter referred to as the "Project").

Preamble

The Ministry of Transport of Ukraine and IMO,

Desiring to achieve the overall objective of this Project, which is to assist developing countries to reduce the transfer of harmful organisms from ship ballast water, and more specifically to implement the existing IMO voluntary guidelines and prepare for the anticipated IMO regulatory regime on ballast water,

Considering that the Global Environment Facility (GEF) has allocated US$7,392,000 for this Project for a three-year period from March 2000 to February 2003, UNDP is the GEF Implementing Agency for the project and IMO is the UNDP Executing Agency for the Project,

Recognizing that the commitment and support of the beneficiary participating countries is required to assure the successful implementation and execution of the Project,

Have agreed as follows:

Article 1: Objectives

1.1 The Parties to this Memorandum of Understanding agree to work together to implement and execute the Project and to perform their reciprocal obligations in accordance with the terms established by the Project document attached hereto (as amended if applicable).

Article 2: Undertaking by IMO

2.1 The IMO, as executing agency for the Project, has established a Project Co-ordinating Unit (PCU) at IMO Headquarters in London. The PCU consists of one Chief Technical Adviser (CTA), one Technical Adviser (TA) (a communication specialist), and one Administrative Assistant. The PCU will be responsible for the day-to-day activities of the Project, and will report to the Director, Marine Environment Division, IMO. IMO will report to the United Nations Development Programme; IMO will also provide staff support for the project activities and office space for PCU.

2 .2 The Project Co-ordinating Unit (PCU) will:

.1 throughout the life of the Project, cover the salary, including travel costs, of one assistant to the national Focal Point throughout the Project;

.2 provide technical assistance and guidance to the national Focal Point in the execution of theProject on both national and regional basis in accordance with the Project Document;

.3 finance the consultancy contracts and pay the costs of the activities related to implementation of the Project;

.4 assist and provide financial support for organizing the national and/or regional meetings in accordance with the Project Document;

.5 procure and finance the equipment necessary for the implementation of the Project;

.6 cover the costs for reporting and evaluating the Project; and,

.7 assist and provide financial support for the establishment of the Regional Task Forces (RPTFs).

Article 3: Undertaking by the Ministry of Transport of Ukraine

3.1 The Ministry of Transport of Ukraine will:

.1 designate the organization to act as Lead Agency and appoint a Country Focal Point (CFP) for the Project;

.2 in co-operation with the PCU, the CFP will select a competent person to act as Assistant to the Country Focal Point. The Lead Agency will provide office space for the Assistant;

.3 release the Country Focal Point from his normal duties to attend meetings and participate in other activities related to the implementation of the Project (all travel costs incurred in this respect will be covered by the project);

.4 develop port and country-specific programmes of action based on the model provided by PCU;

.5 provide free access to information required for the implementation of the Project;

.6 authorise, subject to adequate prior notification and formal clearance, site visits by technical experts to support the implementation of the Project;

.7 provide financial and in kind support for the activities of the Project, especially covering local expenditure;

.8 support the risk assessment activities, the port baseline surveys and academic research on subjects related to ballast water issues; and,

.9 ensure co-ordination between the different agencies involved in the ballast water issues (environment, transport, fisheries, etc.).

Article 4: Implementation

4.1 During the development of the Project, the Lead Agency shall inform the PCU, through the Focal Point, of any other national or regional organizations to be involved in the project implementation.

4.2 The Ministry of Transport of Ukraine, through the Focal Point and IMO, through the PCU, shall keep each other mutually informed of all relevant developments related to the Project through official correspondence.

4.3 To ensure adequate follow-up and co-ordination of the work plan, regular national and regional meetings shall be arranged by the Country Focal Point, with assistance from the PCU, for the Country Project Task Force and the Regional Project Task Force.

Article 5: Amendments

5.1 Any amendment to the present MOU must be confirmed in writing between the Ministry of Transport of Ukraine and IMO.

Article 6: Entry into force and expiry of the Memorandum of Understanding

6.1 This Memorandum of Understanding will enter into force upon signature by the parties hereto. The duration of the present Memorandum of Understanding will be linked to the period necessary for the implementation of the Project. It will expire no later than 28 February 2003, or such other date as IMO and the Ministry of Transport of Ukraine shall agree in writing.

Article 7: Settlement of disputes

7.1 Any dispute between the parties to this MOU concerning the interpretation or applications of this Agreement shall be settled amicably. However, if the parties fail to reach a settlement the dispute shall be settled, finally, by arbitration in accordance with the United Nations Commission on International Trade Law (UNCITRAL) arbitration rules as at present in force.

Article 8: Termination

8.1 This Memorandum of Understanding may be terminated by both sides with a minimum of 60 days notice in the event of non-performance of any of its clauses or force majeure.

In witness hereof the duly accredited undersigned affix their signature.

Made in duplicate in the English language.

[City] [day] [date] [year]

On behalf of International Maritime Organization	On behalf of Ministry of Transport of Ukraine
……	…….

Agenda Item 6:
BW Treatment R&D Symposium

Background

A core objective of the GloBallast programme is to assist developing countries to implement the existing IMO voluntary guidelines on ballast water management. The main management measure recommended under these guidelines is ballast exchange/reballasting at sea. It is widely recognized that this approach has many limitations, including serious safety considerations that limit its applicability, and the fact that translocation of species can still occur even when a vessel has been able to fully implement ballast exchange/reballasting at sea.

It is therefore extremely important that alternative, effective ballast water management and/or treatment methods are developed as soon as possible, to replace reballasting at sea. Significant research and development (R&D) efforts are underway by a number of scientific and engineering research establishments around the world, aimed at developing a more complete solution to the problem. Options being considered include:

- Mechanical treatment such as filtration and separation.
- Physical treatment such as sterilisation by ozone, ultra-violet light, electric currents and heat.
- Chemical treatment such adding biocides to ballast water to kill organisms.
- Various combinations of the above.

All of these possibilities currently require significant further research effort. Major barriers still exist in scaling these various technologies to deal effectively with the huge quantities of ballast water carried by large ships (e.g. about 60,000 tonnes of ballast water on a 200,000 dwt bulk carrier). Treatment options must not interfere unduly with the safe and economical operation of the ship and must consider ship design limitations. Any control measure that is developed must meet a number of general criteria, including:

- It must be safe.
- It must be environmentally acceptable.
- It must be cost-effective.
- It must work.

One of the problems currently faced by the global R&D and shipping community is that apart from the general criteria above, there are currently no internationally agreed and approved standards and criteria for the evaluation and approval of new ballast water treatment systems that are developed.

Most parties involved in the ballast water issue, including the Ballast Water Working Group of IMO's Marine Environment Protection Committee (MEPC), have identified the current lack of such standards and criteria as the single largest obstacle to finding a solution to the problem of marine organism transfers in ballast water.

In addition, many groups are working in isolation from each other. There are no formal mechanisms in place to ensure effective lines of communication between IMO, the R&D community, governments

and ship designers, builders and owners on ballast water treatment issues. Also, virtually all of the R&D is being conducted in developed countries. Links need to be established in order to ensure that the needs of developing economies are also met. These are vital if the R&D effort is to succeed.

To help address this situation, the GloBallast Programme Coordination Unit (PCU) is organizing an international symposium and workshop on ballast water treatment from 26 to 30 March 2001. The objectives will be to:

- Update the current status of ballast water treatment R&D around the world.
- Enhance communication links between IMO, member countries, the R&D community and ship designers, builders and owners on ballast water treatment.
- Develop a range of possible standards and criteria for the evaluation and approval of new ballast water treatment systems. These will be submitted to the Ballast Water Working Group of MEPC 46 for information/consideration.

The attached paper provides more details about the symposium and workshop.

The GloBallast programme will fund attendance by two delegates from each of the six pilot countries. These should be scientific/technical people who are involved with work that is highly relevant to ballast water treatment R&D. Countries may wish to send additional delegates, at their own cost.

Action Required

The CFP/CFP-A in each country, through their CPTFs, should identify two nominees to attend the symposium/workshop. The Registration Forms (attached) for these nominees should be completed and submitted to the PCU before 31 January 2001.

Agenda Item 7:
Education and Training Packages

Background

The objective of this Activity (4.2 under the PIP) is to strengthen countries' capacities to effectively devise and implement sustained actions, as recommended by the IMO voluntary *Guidelines for the control and management of ship's ballast water to minimize the transfer of harmful aquatic organisms and pathogen*s and prepare for the IMO mandatory regulatory regime.

This Activity builds upon two major assets:

a) Conceptual and practical guidance of the PCU and IMO; and

b) Ongoing global training network (TRAIN-SEA-COAST (TSC) Programme), which was launched in 1993 by the UN Division for Ocean Affairs and the Law of the Sea (UN/DOALOS).

Over the next two years, the project will:

a) Build capacity, through training at both local and regional levels, to implement the IMO voluntary guidelines and prepare for the IMO mandatory regulatory regime;

b) Develop one training course for global delivery, on "Control and Management of Ship's Ballast Water", and validate the course at two demonstration sites of the GloBallast programme (Sepetiba, Brazil and Saldanha South Africa), with the support of existing TSC Course Development Teams; or teams of instructors from other TRAIN-X sister programmes;

c) Adapt and deliver the above course at the four remaining demonstration sites of the GloBallast programme, with the support of existing TSC Course Development Teams; or teams of instructors from other TRAIN-X sister programmes;

d) Train up to 270 individuals at the site level, in first deliveries alone.

The project strategy revolves around two major issues:

a) How to provide high quality training, in a cost-effective manner at both local and regional levels, to ship-based personnel (seafarers), port authorities and officials and maritime administrators on the implementation of the IMO voluntary guidelines; and

b) How to use, in the most effective manner, the resources, experience and existing infrastructure for training that exist within the UN system.

The first issue calls for a training programme specifically designed to train large number of port and shipping personnel. The training should have the same standards of performance in tackling the new responsibilities regarding the implementation of the IMO voluntary guidelines, as well as the skills and knowledge that are needed to carry them out.

This is a training programme addressing a global issue (ballast water management) that will be implemented at the local level. Therefore the following factors should be taken into consideration:

- Achieving the same standard (reliable level of competency) at the end of formal training is important;
- A very large number of trainees will use the training material;
- The subject-matter content is relatively stable (will not require fundamental updating in the next five years);
- Training has to be implemented in various locations; and
- A limited number of qualified instructors are available.

The above factors clearly indicate that the use of Train-X methodology and validated training material is justifiable. As shipping is an international industry, the only effective way to address training-related issues is through a standardized training system having an international basis (the UN-TRAIN-X approach). By this it is meant that the training package is material-dependent, it complies with TRAIN-X standards, and has been validated by the GloBallast programme and the TRAIN-SEA-COAST programme.

Up to 270 individuals will be trained through the first delivery of the course at the six GloBallast demonstration sites. This could include up to fifteen experts from Maritime Training Centers; fifteen port officers and fifteen administrators per each demonstration site. These individuals will become the group of instructors that, in turn, are expected to train ship's masters and crews, administrators and port personnel after the completion of this project. This will also ensure that the course will be delivered to the same standards at different locations worldwide.

The second issue calls for a collaborative approach between UN organizations that share similar problems and are developing complementary activities. The widespread recognition of the need for training as one of the most effective vehicles for capacity building calls for an effective coordination of efforts between the UN/DOALOS TSC programme and the GloBallast programme. In this regard, the project defines a new partnership in which the GloBallast adds a new dimension to the TSC programme and in turn, the TSC Programme assist in the implementation of the GloBallast programme through the use of an established global training network – namely, the TSC programme, plus sister programmes of the TRAIN-X family.

The effective implementation of the Guidelines requires a massive effort on the part of countries as well as regional and international organizations. Full and effective implementation of ballast water regulations require that every seafarer on board a ship has to be fully aware why specific measures are taken, such as the exchange of ballast water at high sea, the monitoring of port and ballast waters, or the cleaning of tanks of sediments.

At the same time, port authorities and officials need to be aware of relevant IMO requirements and the ballast water management plans developed for each ship. The specific local criteria, such as when a particular species is being targeted as an unwanted alien are also of particular importance for the ports.

The variety of the IMO Guidelines requirements from informing local agents and/or ships of areas and situations where uptake of ballast water should be minimized, procedures for dealing with ballast water (e.g. exchange of ballast water at sea; discharge to reception facilities), to the future use of alternative treatments, represents a veritable challenge to institutions and individuals having the responsibility of implementing the Guidelines.

This also calls for a fresh analysis of new jobs associated with the implementation of the Guidelines, and of the skills and knowledge that are needed to carry them out. Complementary to this analysis is the need to have accurate and effective data on manpower and training needs to meet the requirements of the Guidelines.

There are excellent courses delivered in various aspects covered by the international conventions. Unfortunately, the majority of them are one-time offerings that are not replicated in other parts of the

world. This is due, among other things, to the fact that generally training courses are instructor-dependent and are not adequately documented, a fact that inhibits their adaptation to different countries facing similar problems within the project's region or beyond.

Usually, training courses are developed by outside consultants without the sharing of materials and experience. In addition, this precludes the participation of local users/primary beneficiaries of training in the design and implementation of training programmes.

Through the TSC-GloBallast partnership, the project will build a core of human resources in key aspects of the implementation of the IMO Guidelines. In addition, the project will undertake a thorough training needs assessment that will be performed jointly with the CFPs, GloBallast PCU and the designated TSC Course Development Units. This is a valuable tool for identifying manpower requirements and anticipating and responding to priority training needs in each GloBallast demonstration site.

Outcome of the project

The project will: develop, deliver and validate one high quality-training course on "Control and Management of Ship's Ballast Water". The course will be material-dependent, thus allowing multiple deliveries, of the same course or adapted course having the same quality standard.

The target group are: a total of 270 seafarers, Port State authorities and officials, and administrators.

Duration of the course: 5 days

The course will consist of: one part generic material that is applicable in all GloBallast demonstration sites; and a second part which will consist of material adapted to each of the demonstration sites and other local situations. The course will have a task/performance-orientation with the outputs focussed on the application of ballast water management and control measures as provided in IMO Guidelines (Resolution A. 868(20)), and will be flexible enough to accommodate the mandatory regulations when they come into force. The course will contain modules for ship personnel (2 days), port authorities (2 days) and administrative staff (1 day).

The course will be developed, delivered and validated initially by: TRAIN-SEA-COAST/Brazil (in Rio Grande, Brazil); and TRAIN-SEA-COAST/Benguela Current (in South Africa). Both TSC Units will develop the course in close contact with their Country Focal Points (CFPs), ports of Sepetiba (Brazil) and Saldanha (South Africa), and using subject-matter experts identified locally. TSC/Brazil and TSC Benguela Current will validate the course in Brazil as well as in South Africa, with the assistance of the GloBallast/PCU and TSC Central Support Unit, including review by global subject matter experts. After the two initial validations the training package will be adapted to the four remaining GloBallast demonstration sites.

The GloBallast PCU together with the CFPs will identify local institutions with required expertise to adapt the courses for each of the four remaining demonstration sites. One course developer from the GloBallast/CDUs will visit the sites to assist in the adaptation of the course to local conditions. Once the course is adapted by the local institution, it will be delivered by a team of instructors including the local expert responsible for the adaptation of the course. In each of demonstration sites where a sister TRAIN-X Programme exists, if agreeable and at the request of the GloBallast programme, the interested CDU will adapt and deliver the GloBallast course.

Benefits for the GloBallast Programme

Through the cooperative training network, all TSC courses can be shared by TSC members who may adapt and deliver the courses as many times as needed. This not only avoids duplication of efforts, but it is also cost-effective. The instruments that make this possible are a standardized methodology for course design which is applied throughout the network and global arrangements to facilitate cooperation among the training centres. Training courses, experience and personnel may be shared for the benefit of all the members of the network. This allows maximum utilization and distribution of training materials world-wide.

TSC courses are developed jointly by teams of pedagogic and technical experts. The TSC/Central Support Unit in New York provides continuous pedagogic support and undertakes the quality control of the course development process, thus ensuring that TSC standards are maintained. The outcome of the process is a Standard Training Package (STP) composed of:

a) a manual for the participants;

b) a manual for the instructor; and

c) the key reports on the process of course development.

d) This facilitates the sharing and adaptation of the courses by other TSC course development units and ensures that the quality standards are maintained regardless how many times the course is delivered at different locations. This approach to training is proven effective throughout the experience of many training organizations. However, it is even more beneficial when the training required addresses global issues like ballast waters, sewage, etc. and large number of people have to be trained in different locations world-wide.

Expected benefits of the partnership between the GloBallast and the TSC global training network as a vehicle to address GloBallast related training priorities, include:

- More responsiveness to current and future manpower and training needs of GloBallast, and in particular towards the implementation of the IMO Guidelines and the mandatory regulations when they will come into force.
- Building local capacity for adapting and delivering the course "Control and Management of Ship's Ballast Water", in technical centres associated with the GloBallast and TSC;
- Ensured high quality training standards, for the development and delivery of a training package at the global level;
- Cost-effectiveness in the short and long-terms;
- Participation in the TSC sharing network and possible adaptation of training courses prepared by other TSC/course development units;
- Setting the stage for more active cooperation between different GloBallast initiatives and their training component.

For easy reference, objectives, outputs and activities have been arranged according to the phases of the project, namely:

a) Preparatory activities;

b) Development of the STP;

c) Validation of the course; and

d) Adaptation and delivery of the course in the remaining demonstration sites.

Detailed descriptions of the activities, outputs and costs have been provided in the final section of the training project document.

Action required

- The meeting is invited to comment on the training project and provide advice as appropriate. The participants are encouraged to indicate how they will use the output.
- Once UNDP and IMO have had formally approved the training project document, the CFPs, through their CPTFs, will identify the appropriate training institutions and experts for the adaptation and delivery of the STP and the beneficiaries of the courses in each country.
- Towards the final stage of the training project the CFPs through their CFP Assistants will identify the most appropriate locations and organise the delivery of the course.

Agenda Item 8:
Forthcoming Risk Assessments

Consultants' Terms of Reference

Activity 3.1: Ballast Water Risk Assessments
6 Demonstration Sites

1 Introduction & Background

The International Maritime Organization (IMO), with funding provided by the Global Environment Facility (GEF) through the United Nations Development Programme (UNDP), has initiated the Global Ballast Water Management Programme (GloBallast).

This programme is aimed at reducing the transfer of harmful marine species in ships' ballast water, by assisting developing countries to implement existing IMO voluntary guidelines on ballast water management (IMO Assembly Resolution A.868(20)), and to prepare for the anticipated introduction of an international legal instrument regulating ballast water management currently being developed by IMO member countries.

The programme aims to achieve this by providing technical assistance, capacity building and institutional strengthening to remove barriers to effective ballast water management arrangements in six initial demonstration sites. These six sites are Sepetiba, Brazil; Dalian, China; Mumbai, India; Kharg Island, Iran; Saldanha, South Africa and Odessa, Ukraine. The initial demonstration sites are intended to be representative of the six main developing regions of the world, as defined by GEF. These are respectively, South America, East Asia, South Asia, Middle East, Africa and Eastern Europe. As the programme proceeds it is intended to replicate these initial demonstration sites throughout each region.

2 The Need for the Risk Assessments

The development objectives of the programme are to assist countries to implement the existing IMO voluntary ballast water management guidelines and to prepare for the introduction of a new international legal instrument on ballast water.

The current IMO ballast water management guidelines offer states significant flexibility in determining the nature and extent of their national ballast water management regimes. This flexibility is warranted given that nations are still experimenting with approaches. A port state may wish to apply its regime uniformly to all vessels, which visit, or it may wish to attempt to assess the relative risk of vessels to valuable resources and apply the regime selectively to those which are deemed of highest risk.

The uniform application option offers the advantages of simplified programme administration in that there are no "judgement calls" to be made or justified by the port state regarding which vessels must participate and which need not. In addition, the system requires substantially less information management demands. Finally, it offers more protection from unanticipated invaders, and overall protection is not dependent upon the quality of a decision support system which may not be complete.

The primary disadvantages of this approach are: 1) additional overall cost to vessels which otherwise might not need to take action, and 2) more vessels will be involved in undertaking the measures, and therefore the port state will need to monitor compliance from a greater number of vessels.

Some nations are experimenting with systems to allow more selective applicability based upon voyage-specific risk assessments because this approach offers to reduce the numbers of vessels subject to ballast water controls and monitoring. The prospect of reducing the numbers of ships to which the program applies is especially attractive to nations that wish to eliminate introductions of target organisms such as toxic dinoflagellates. More rigorous measures can be justified on ships deemed to be of 'high risk' if fewer restrictions are placed on low risk vessels. However, this approach places commensurate information technology and management burdens on port state and its effectiveness depends on the quality of the information supporting it. The approach may also leave the country/port vulnerable to unknown risks from non-target organisms.

For countries/ports which choose the selective approach, it will be essential to establish an organized means of evaluating the potential risk posed by each vessel entering their port, through a Decision Support System (DSS). Only in this way can they take the most appropriate decision regarding any required action concerning that vessels' ballast water discharge. The DSS is a management system that provides a mechanism for assessing all available information relating to individual vessels and their individual management of ballast water so that, based upon assessed risk, the appropriate course of action can be taken.

Before a pilot country decides on whether to adopt the 'blanket' (i.e. all vessels) approach or to target specific, identified high risk vessels only, a general, first-past risk assessment needs to be carried out. This should look at shipping arrival patterns and identify the source ports from which ballast water is imported. Once these are identified, source port/discharge port environmental comparisons should be carried out to give a preliminary indication of overall risk. This will greatly assist the port state to assess which approach to take.

The GloBallast programme, under Activity 3.1; will support these initial , 'first-past' risk assessments as a consultancy on contract to the PCU. This is important for establishing 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. These will differ from site to site, and will determine the types of management responses that are required.

The PCU risk assessment consultants, in conducting the risk assessment in each pilot country, will work with and train country counterpart(s) and include them in the study process as part of the capacity building objectives of the programme, so as to allow each country to undertake its own risk assessments in future.

3 Scope of the Risk Assessments

A Risk Assessment will be undertaken for each of the ports of:

- Sepetiba, Brazil;
- Dalian, China;
- Mumbai, India;
- Kharg Island, Iran;
- Saldanha, South Africa and
- Odessa, Ukraine.

The Risk Assessments will apply to all ship movements into and out of these ports based on shipping data for the last 10 years (or longer if available).

4 Services Required & Tasks to be Undertaken

The GloBallast PCU requires a suitably qualified and experienced consultancy team to undertake the ballast water risk assessments.

The tasks to be undertaken by the consultancy team comprise the following, for each demonstration site:

1. Characterise, describe and map de-ballasting and ballasting patterns including locations, times, frequencies and volumes of ballast water discharges and uptakes.
2. Identify all ports/locations from which ballast water is imported (source ports).
3. Identify all ports/locations to which ballast water is exported (destination ports).
4. Characterise as far as possible from existing data, the physical, chemical and biological environments for both the demonstration site and each of its source and destination ports (refer table one for list of parameters).
5. Using the data from task 4 and an appropriate multivariate similarity analysis programme, develop environmental similarity matrices and indices to compare each demonstration site with each of its source ports and destination ports.
6. Identify as far as possible from existing data, any high risk species present at the source ports that might pose a threat of introduction to the demonstration site, and any high risk species present at the demonstration site that might be exported to a destination port.
7. Assess and describe as far as possible, the risk profile for invasive marine species being both introduced from its set of source ports and exported to its set of destination ports, and identify the highest risk source and destination ports, using the outputs of tasks 1 to 6 and based on the environmental similarity indices developed under task 4.
8. While undertaking the risk assessment, provide training and capacity building to the in-country risk assessment team (up to 10 people) in the risk assessment methodology, including use of the multivariate similarity analysis programme under task 5.

5 Methods to be Used

This is a desk-top study only. The consultants will, in their tender, propose and justify whatever methods are deemed necessary/appropriate to achieve each of the tasks outlined above. These methods will include but are not restricted to:

- Close consultation and cooperation with the PCU Technical Adviser (TA), who will manage this consultancy. The TA will contribute to the final report for each risk assessment.
- Close consultation and cooperation with the Country Focal Point (CFP) and CFP Assistant (CFP-A) in each pilot country, who provide the primary contact point for all in-country activities and for accessing in-country information and data. The CFP and/or CFP-A will compile as much existing information as possible in relation to tasks 1 to 4 to provide to the consultants.
- Standard literature search and review techniques, especially for tasks 1 to 4 and task 6.
- A two week visit to each demonstration site to hold discussions with the CFP, CFP-A, port authority, maritime administration, environment administration, fisheries/marine resources administration, marine science community and shipping industry, to identify and obtain information and data, and to provide training and capacity building in the risk assessment methodology to the in-country risk assessment team.

6 Time Frame, End Product and Reporting Procedure

The risk assessments will be conducted for each of the six demonstration sites in the first half of 2001. The precise timing for each site will be determined through consultation with each country in early 2001.

The end product of this consultancy will be a report for each demonstration site which addresses as fully as possible all of the tasks under section 4, consistent with all parts of these Terms of Reference and the consultancy contract.

Each report should be submitted to the PCU in draft form first, for review by the PCU and the demonstration site risk assessment team. The final report for each site will be submitted to the PCU within one month of the consultants receiving review comments.

The PCU may arrange for peer review of the draft reports, to ensure scientific credibility and quality control.

The final reports should be submitted to the PCU in both hard-copy and electronic form, including figures, images and data, ready for publication. The PCU will publish each final report in both English and the main language of the pilot country (if different).

7 Selection Criteria

- Cost competitiveness.
- Demonstrated record of meeting deadlines and completing tasks within budget.
- Extensive experience with the issue of introduced marine species, ballast water and risk assessment.
- Demonstrated abilities in literature search and review and in identifying and obtaining reports, publications, information and data from sometimes obscure and difficult sources.
- Demonstrated skills in information analysis and synthesis.
- Experience in working in developing countries.
- Experience in training and capacity building in developing countries.

8 Submission of Tenders

Tenders must be in a sealed envelope, endorsed on the bottom left hand corner of the envelope with the tender number (_____) and closing time and date, addressed to Technical Adviser, GloBallast Programme, International Maritime Organization, 4 Albert Embankment, London SE1 7SR and lodged in the Tender Box located at_____ by_____ .

Tenders received by telephone, facsimile, email or any mans other that the above will not be accepted.

Further Information

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Table 1: Example of Environmental Variables to be used for the Multivariate Similarity Analysis

RATIO DATA (scaleable, 0's meaningful)	**INTERVAL DATA (0's meaningless)**
Berth location (0-1; offshore, inshore, embayment/basin, estuary)	Mean and max. daytime air temp. for summer/equatorial wet (^oC)
Mean berth depth (m)	Mean and min. night-time air temp. for winter/equatorial dry (^oC)
Mean approach channel depth (m)	Median and max. surface water temp. for summer/equatorial wet (^oC)
Mean anchorage depth (m)	Median and min. surface water temp. for winter/equatorial dry (^oC)
Total annual rainfall (mm)	Distance interval (1-5) to nearest: (i) artificial shoreline/seawall,
Dry season rainfall (mm)	(ii) sand beach or spit,
Wet season rainfall (mm)	(iii) rocky shoreline,
Mean and extreme wet season surface water salinity (min. ppt)	(iv) intertidal mud flat,
Mean and extreme dry season surface water salinity (max. ppt)	(v) seagrass bed,
Mean spring tidal range (m)	(vi) mangroves,
Mean neap tidal range (m)	(vii) rocky reef,
Size of nearest river catchment (km^2)	(viii) coral reef.
Duration of peak river flow (months accounting for 75% rainfall)	
Presence of a diurnal and/or semi-diurnal tidal regimes (0-1)	[1= <1 km; 2=1-5 km; 3=5-10 km; 4 =10-50 km; 5= >50 km]
Incidence of algal blooms (0-1)	*Check variables used during Pilot exercise only:*
Kilometres to nearest river mouth (-ve if upstream)	Latitude and longitude (in nautical miles from Equator & Greenwich)

Agenda Item 9:
Legislation & Regulations

Background

There is currently no international legal regime for ballast water management, only voluntary guidelines adopted by IMO Member States as Assembly Resolution A.868(20). Section 3 of these guidelines provides that Member States shall determine the extent to which they apply within the State's jurisdiction and section 11.2 of the guidelines provides that Member States have the right to manage ballast water by national legislation. Several countries have implemented the IMO voluntary guidelines through national legislation. Without such legislation, it is extremely difficult, if not impossible, for a country to implement the guidelines.

One of the main development objectives of the GloBallast programme is to assist countries to implement the IMO voluntary guidelines. It therefore follows that the programme needs to assist countries to review and develop their regulatory regimes with a view to implementing the guidelines.

In addition, IMO Member States are currently developing an international legal instrument, for the regulation of ballast water. It is anticipated that the text of this new legal instrument will be ready to be considered by a diplomatic conference of IMO Member States in 2002/03.

Another of the main development objectives of the GloBallast programme is to assist countries to prepare for the implementation of the new legal instrument. It therefore follows that the programme needs to assist countries to review and prepare their regulatory regimes with a view to implementing the new legal instrument.

The GloBallast programme provides for this assistance through Activity 4.3: Legislation and Regulations. Under this Activity US$25,000 is available to each of the six pilot countries and US$30,000 is available for global advice and coordination.

Activity Description

It is proposed that the PCU will engage the World Maritime University (WMU) to provide global advice and coordination for this Activity. Tasks will be as follows (dates are indicative only):

- Jan 2001. WMU develops protocol and terms of reference for national consultants in each country to review their national legislative systems.
- Feb 2001: National consultants in each pilot country undertake legislation reviews, in accordance with the WMU protocol and terms of reference. These reviews will include identifying all relevant international legal obligations, national and local legislation and regulations and administrative arrangements, including maritime, environment protection, natural resource management, quarantine and health laws, port regulations, inspection directives and other legal practices, relevant to ballast water and introduced marine species.

- Feb 2001: WMU reviews best practice legislative systems for the management of ballast water and introduced marine species in other jurisdictions such as Australia, Canada, New Zealand and USA.
- April 2001: Interim reports from national consultants submitted to WMU and PCU.
- April 2001: WMU develops draft model legislation for the implementation of the IMO voluntary guidelines through national legislation.
- July/August 2001: Hold a workshop at WMU in Mälmo, Sweden, comprising representatives from the six pilot countries, the GloBallast PCU and WMU to review the national legislative reviews and the draft model legislation.
- Sept 2001: WMU produces final report, including model legislation, for adoption by countries if desired.

Action Required

- PCU to progress arrangements with WMU.
- Based on Terms of Reference developed by PCU pilot countries to identify suitable national consultants for their legislation reviews.

Appendix 1:
List of Participants

Brazil

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Appendix 2:
Minutes of the Meeting

Thursday 7 December.

Conference Room 3, IMO Headquarters, London.

The meeting was attended by 28 participants (The list of participants is attached as Annex 1 of the Proceedings).

Meeting commenced 0900.

Opening remarks (welcome message)

The Director of the IMO Marine Environment Division (MED) and Co-Chairman of the meeting, Mr Koji Sekimizu opened the meeting, welcomed the delegates, outlined housekeeping arrangements and read a statement on behalf of the Secretary General of IMO. His statement made the following main points:

- links between the GloBallast programme and the Ballast Water Working Group of MEPC are vital;
- there is a pressing need to develop ballast water treatment standards; and
- there is a need for globally standardised training on ballast water management.

He also welcomed the co-operative relationship with WMU aimed at the revision of laws and regulations regarding ballast water matters in the six pilot countries.

The UNDP representative, Mr Phil Reynolds who co-chaired the meeting with Director of MED, encouraged cooperation among the countries and remarked on the increasing trend towards globalisation of the project.

Agenda Item 1: Adoption of the Agenda

The agenda was adopted.

Agenda Item 2: PCU Progress Report

A comprehensive progress report was presented by the PCU (available as meeting paper GPTF 2/2).

Most of the pilot countries expressed their gratitude for the continuous support received from the PCU in the reporting period.

South Africa emphasized the need for translation for the programme's documents into Portuguese and French for dissemination in the African region.

Iran and Brazil expressed their concerns regarding the opening of the imprest accounts needed to start financing the various activities as provided in the Project Implementation Plan (PIP).

The Iranian delegation also identified the expedition of the nomination of the Country Focal Point Assistant and the securing of IMO's support for implementation of the programme's regional component through ROPME as its two main priorities.

The UNDP representative urged all the involved parties to co-operate in overcoming the delays, and suggested including in the report to the 3rd GPTF the most up-to-date financial report.

Agenda Item 3: Country Status Reports and National Workplans

Four of the six pilot countries (Brazil, China, India, Iran) presented Status Reports on activities implemented and results achieved since the first GPTF meeting in July and introduced their National Workplans to the meeting.

Participants commented extensively on the various activities proposed under each National Workplan.

The meeting took note with satisfaction of the progress made and of the substantial contributions of the Country Focal Points, their Assistants and their Governments for the implementation of the GloBallast programme.

There was a unanimous view that the workplans were of particular value and that significant progress had been made since the 1st GPTF meeting in July.

Friday 8 December

Meeting commenced 0830.

Agenda Item 3: Country Status Reports and National Workplans (continued)

Presentation of Country Status Reports and National Workplans continued (South Africa and Ukraine).

The meeting generally recommended all six National 2001 Workplans and Budgets for PCU approval, subject to each country addressing final comments from the PCU. The PCU was asked to summarize these and forward them to the Country Focal Points by 15 December 2000.

A comparative table of budgets of six National 2001 Workplans was prepared by the PCU as requested by the chairman and circulated among the participants.

Agenda Item 4: NGO/Industry Information Papers

The representatives of the shipping industry and environmental NGOs expressed their positions on ballast water related matters. They emphasized their support for a standardized approach and reiterated the view that IMO is the most appropriate forum to address ballast water issues. The precautionary approach was seen as prerequisite to any attempts to manage ballast water and the practicality of the different measures was considered to be essential. Some reservations were expressed for the efficiency of ballast water exchange methods and alternative treatment measures were strongly recommended by the speakers.

The MEPC Ballast Water Working Group Chairman expressed his appreciation for the achievements of the programme to date and encouraged the participants to bring their experience to the working group by submitting a paper for the next meeting in April 2001 (MEPC 46).

The UNDP representative expressed some concern for the timing agreed for the diplomatic conference for the adoption of a ballast water convention. He encouraged all concerned to expedite the process as much as possible to adopt the international instrument before the completion of the GloBallast Programme in March 2003.

Co-Chairman Mr Sekimizu concluded this agenda item by emphasizing the fact that year 2001 is of particular importance for the programme and encouraged all the parties to maintain the momentum achieved to date.

Agenda Item 5: Proposed IMO/Pilot Country MoU's

Participating countries were encouraged to progress the signature of the MoU between the Lead Agencies in each country and IMO.

The UNDP representative mentioned some of the benefits of concluding such an agreement and gave examples of similar memoranda signed by the participating countries under the framework of other GEF projects.

It was agreed that all CFPs, except the South African CFP, would work towards getting a signed MoU within the next six months. This process was felt to be unnecessary for South Africa, since the CFP's supervisor was also the GEF Focal Point who endorsed the project.

Agenda Item 6: Global R&D Symposium

The PCU provided a briefing on the proposed international ballast water treatment symposium and workshop planned to be held in March 2001.

The participants agreed on the utility and importance of this activity and urged the PCU to submit the outcome of this event for consideration to MEPC as a working paper. Countries were requested to submit nominations to the PCU.

Agenda Item 7: Ballast Water Management Education and Training Packages

The PCU provided a briefing on the proposed use of the UN Train-Sea-Coast programme to deliver standardised, modular training packages for training of Port State personnel and seafarers in the application of the IMO ballast water guidelines approved through Resolution A868(20), using Train-X methodology.

General Consensus was reached on the need for such training.

Some concern was expressed with regard to the training of seafarers and the practicality of such training, and how it might link to training provided for under the STCW Convention and the curriculums of national maritime training institutes.

Brazil expressed concern about the focussed nature of the intended audience, and would like to see the training developed for a broader audience.

It was agreed to allow one month for countries to consider this proposed activity and to submit comments to the PCU.

Agenda Item 8: Ballast Water Risk Assessment

The PCU provided a briefing on the proposed ballast water risk assessments planned to be commenced for each demonstration site in early 2001.

The meeting agreed on the timeframe and approach proposed by PCU for conducting these port-specific ballast water risk assessments.

The call for tenders to award the international consultancy for this activity is planned for January 2001.

Countries were asked to comment on the consultancy Terms of Reference by Friday, 15 December.

Agenda Item 9: Legislation & Regulations

The PCU provided a briefing on the proposed use of WMU to assist the programme and countries with review and development of national ballast water management legislation and regulations.

The meeting was reminded that one of the barriers identified during the first phase of the project was the lack of regulations regarding ballast water. The PCU was urged by the UNDP representative to make sure that the participating countries would be provided with recommendations for the adoption of the necessary legislation to implement the existing IMO Guidelines, Resolution A868(20) by the end of the programme.

The Co-Chairman Mr Sekimizu requested the PCU to closely observe the developments in the Ballast Water Working Group of MEPC and to ensure consistency.

Agenda Item 10: Port Baseline Surveys

The PCU provided a briefing on the proposed port baseline surveys planned to be commenced for each demonstration site in 2001.

The meeting agreed to first conduct the port baseline survey in South Africa in early 2001. Representatives from the scientific community from the rest of the participating countries were invited to attend this activity and to learn from the experiences achieved.

It was agreed that the first visit to South Africa of the Port Survey Coordinator should take place in January 2001 to harmonize the provisions of the CRIMP protocols and the local methodologies.

Countries were asked to comment on the consultancy Terms of Reference by Friday, 15 December.

Other Business

India and China have offered to host the third and fourth GPTF meetings in December 2001 and late October 2002, respectively, subject to further consultations with PCU.

The UNDP representative expressed his deep satisfaction with the progress of the programme, acknowledging the fact that the programme is now will on track. He also expressed his pride in being associated with the works of GloBallast. The participants expressed their general appreciation through their acclamation.

The meeting was concluded by the Director, MED who welcomed the support offered by the two chairmen of MEPC and the MEPC Ballast Water Working Group and underlined the steps forward made for the establishment of the imprest accounts in Brazil, Iran and Ukraine. He expressed his satisfaction for the general approval of the National Workplans and for the substantial achievements of the Programme.

The MEPC Chairman recommended exploring the possibility of performing an operational audit in parallel with the financial audit. The PCU/IMO will consider options for how this might be achieved and possibilities for monitoring the activities. The UNDP representative suggested that this operational audit should be in the form of a planned independent evaluation of the project. This mid-term evaluation is foreseen for late in the autumn 2001 so that the results can be discussed at the 3rd GPTF meeting in December 2001.

Guest Speaker

Dr Ron Thresher, Director of the Australian Centre for Research on Introduced Marine Pests (CRIMP) gave a presentation about the ballast water problem in Australia and the activities of

CRIMP, with a particular focus on Port Baseline Surveys and the development of Decision Support Systems.

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