



GLOBALLAST PARTNERSHIPS PROJECT

**Introductory Training Course on Ballast Water
Management Issues**

14-17 April 2008, Alexandria (Egypt)

REPORT

AUGUST 2008



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INTRODUCTION

Over the past two decades, ships' ballast water has been recognized as one of the major vectors for the introduction of harmful aquatic organisms and pathogens into aquatic environment and the introduction of invasive species was recognised as one of the four biggest threats to the marine environment.

IMO's activities to address this issue have included the development of a regulatory regime culminating in the adoption of the International Convention for the Control and Management of Ships' Ballast Water and Sediments in February 2004, as well as the GloBallast Programme, which included a pilot phase addressing the issue in six Pilot Countries (2000-2004) and a follow-up phase (GloBallast Partnerships Project 2008-2012) to be implemented in six priority regions, including the Mediterranean.

The project was developed as a joint initiative of the Global Environment Facility (GEF), the United National Development Programme (UNDP) and the International Maritime Organization (IMO) with the following objectives:

- assisting developing countries to reduce the transfer of harmful aquatic organisms and pathogens in ships' ballast water;
- building capacity to address the ballast water issues;
- undertaking legal, policy and institutional reform and
- implementing the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention) adopted under the aegis of IMO.

In order to facilitate the implementation of the Project in the Mediterranean region, REMPEC was identified as the Regional Coordinating Organisation (RCO) in consideration of the close linkages with IMO and of the relevance of the Partnership's objectives to the mandate of the Centre. As the RCO, REMPEC is responsible for the preparation and organization of regional-tier activities including training courses/workshops and meetings (Regional Task Force Meetings) which are carried out under the project.

In this context, the Centre organized an Introductory training course on Ballast Water Management Issues which was held in Alexandria (Egypt) between 14 and 17 April 2008.

The training, hosted by the Arab Academy for Science, Technology and Maritime Transport of Alexandria, represented the first regional activity being implemented in the Mediterranean region in the framework of the GloBallast Partnerships project.

I AIMS OF THE TRAINING

The main objective of the course was to provide a common set of knowledge and skills to all participants to enable them to take appropriate action in their various capacities with a view towards promoting uniform implementation of the BWM Convention.

In particular the following aims were assigned to the training:

- to describe the concept of invasive species and the role that ballast water plays in the introduction of such species;
- to outline the main impacts caused by the introduction of harmful aquatic organisms and pathogens;
- to introduce the various initiatives set up to deal with the problem, in particular the IMO's International Convention on the Management of Ship's Ballast Water and Sediments;
- to build the necessary capacity in the region to offer similar training to a wide range of stakeholders at national and regional level.

I.1 Lecturers

In order to achieve the objectives outlined above, the course was divided into 9 different modules which were presented by instructors with knowledge and experience in different fields related to ballast water management. A total of 5 instructors were selected to deliver the training course (2 from the Arab Academy, 2 from REMPEC and 1 from IMO). The list of lecturers is included in **Annex I**.

I.2 Profiles of Participants

As the course intended to be an introductory and general training on ballast water issues, the participants were expected to have a different background as well as different knowledge on the topic. One of the scopes of the course was to encourage discussions between participants coming from different sectors thus having different views on ballast water management issues.

A total of 25 participants attended the Training, having responsibilities at mid to high level positions in the field of maritime traffic, search and rescue, marine environment protection, port state control, marine biology and marine pollution.

The full list of participants is reported in **Annex II**.

I.3 Themes selected for the Course

The training was delivered as a standard training package which complies with the requirements, international standards and criterion of the TRAIN-SEA-COAST Programme. This course represented the first delivery of the standard training package to a regional context such as the Mediterranean, therefore some of its Modules were further improved and/or modified by the Instructors with a view to better adapt the course to the Mediterranean region.

The training package is composed of nine modules. Though each module is a stand alone component of the course, all of them are interrelated. The Modules were delivered in the following order:

- Module 1 “Background to Ballast Water Management”
- Module 2 “Ballast Water Management on Ships”
- Module 3 “Standards for Ballast Water Management”
- Module 4 “Operational Aspects on Ship-board Ballast Water Management”
- Module 5 “Ballast Water Management by Port/Coastal State”
- Module 6 “Compliance Monitoring and Enforcement”
- Module 7 “Incursion management”
- Module 8 “Development of a National Strategic Framework to BWM”
- Module 9 “Technical Assistance & Regional Co-operation”

Each Module was followed by a test which the trainees were asked to carry out on the spot. The training package included also a Role Play, which was performed on the last day of the course after all modules were presented. The trainees were divided into three groups and provided with a specific scenario which enabled them to put into practice their knowledge on ballast water management issues.

The work programme of the Seminar may be found in **Annex III** to the present report.

I.4 Organizational arrangements

Captain Hussein A. Hegazy, in his role of IMO-MOU Focal Point from the Arab Academy, together with REMPEC and IMO, acted as coordinators of the course. REMPEC and IMO selected the participants and the instructors whereas Captain Hegazy organized the reproduction of the training material and was responsible for all the logistical aspects of the course. Captain Hussein A. Hegazy was also designated as the Chairperson of the course.

In consideration of their longstanding relationship with the GloBallast Programme, Mr. Jose Matheickal, Chief Technical Advisor of the GloBallast Water Management Programme at IMO, and Mr. Dandiu Pughiuc, Head of Marine Biosafety Section, Marine Environment Division, IMO, acted as backstopping persons, adding comments and answering questions as needed.

REMPEC was represented by Ms. Khodjet El Khil, Programme officer (Marine Environment Protection) in charge of the Globallast Partnerships Project in the Mediterranean region, and by Ms. Christina Farchi, Programme Officer.

Participants were provided with a Trainee Manual which included a comprehensive and easy to understand material for use during the course as well as a very useful post-training reference material for the participants. The Manual may be considered as the most updated and comprehensive source of information in the field of ballast water management.

The course was delivered in English and simultaneous interpretation to French and Arabic was provided.

II ORGANIZATION OF THE TRAINING

II.1 Opening of the Training

The Introductory training course on Ballast Water Management issues was opened on Monday 14 April at 9.30 hrs at the Headquarters of the Arab Academy, Alexandria.

The Chairman of the Academy, Dr. Gamel Mokhtar, welcomed the participants and wished them a successful training before giving the floor to Captain Hussein A. Hegazy, from the Arab Academy, who highlighted the relevance of such course in raising awareness on the problem of invasive species at a regional level.

Mr. Dandu Pughiuc of IMO recalled the importance of the GloBallast Programme and of the GloBallast Partnerships Project for the ratification and implementation of the Ballast Water Management Convention. He also expressed his appreciation to the Academy for hosting this introductory training course at its first delivery in the Mediterranean region.

The representative of REMPEC, Ms. Lilia Khodjet El Khil, also thanked the Arab Academy for their efforts in organizing such training course. She pointed out that the course should represent a first step towards the development of a regional strategy aimed at preventing the introduction of unwanted stowaways in the Mediterranean.

II.2 Presentations

Prior to the beginning of the training, the IMO-BBC documentary “Invaders from the Sea” was projected. The aim was to provide the trainees with a general overview on the transfer of harmful organisms in ships’ ballast water, on the effects of this phenomena on our coasts as well as on the measures taken by the global community to fight against these alien species.

Day 1
Module I and II

MODULE I - Background to BWM:

Module I explains how and why ships use ballast water and how this plays a role in the transfer of aquatic species to new environments in which they may establish and have major adverse consequences. More specifically, this Module has the following objectives:

- to describe the concept of invasive species and the role that ballast water plays in the introduction of such species;
- to outline the main impacts caused by the introduction of harmful aquatic organisms and pathogens;
- to introduce the various initiatives set up to deal with the problem – in particular the IMO's International Convention on the Management of Ship's Ballast Water and Sediment.

The first Module of the training was delivered by Mr. Jose Matheickal from IMO. Mr. Matheickal stressed that today ballast water is recognised as one of the principal vectors of potentially invasive alien species, and is responsible for the transfer of between 7,000 and 10,000 different species of marine microbes, plants and animals globally each day. He also pointed out that an important feature of the ecological impacts is that to date, they have invariably proven to be irreversible. Among others he reported the following case studies:

- the Zebra Mussel (*Dreissena polymorpha*), native to Eastern Europe (Black Sea) and introduced to western and northern Europe, including Ireland and the Baltic Sea and to the eastern half of North America (Great Lakes), is causing severe ecological and economic impacts due to its capacity of fouling all available hard surfaces in mass numbers;
- the North American Comb Jelly Fish (*Mnemiopsis leidyi*), endemic to estuaries along the North and South American Atlantic coast, was first recorded in the Caspian Sea towards the end of 1999 and is today so well established that its biomass eventually exceeds levels ever recorded in other seas, causing a severe impact on fisheries.

Mr. Matheickal pointed out that the ultimate goal of invasive alien species (IAS) management is to minimise threats to biodiversity, economies, and human health and that a good coordination in responding to IAS among the relevant authorities represents a key factor to successful management. He concluded his lecture emphasizing on the importance of

prevention which remains the most cost effective and environmentally desirable option when dealing with invasive species.

Captain Hussein A. Hegazy, from the Arab Academy of Alexandria, presented Module II, III and IV of the training package.

MODULE II - Ballast Water Management on Ships:

The aim of this module is to introduce the requirements for ballast water management on board ships, particularly in the context of the Convention. More specific objectives are to:

- detail the International Requirements for Ballast Water Management on board Ships;
- discuss the precautionary approach in relation to minimizing the effects of potentially invasive marine species transported in ballast water;
- describe the development and scope of a Ship's Ballast Water Management Plan;
- discuss the practicalities around implementing those Requirements.

Captain Hegazy pointed out that since the vast majority of ships in the current global fleet do carry ballast water, management measures need to be included as part of their operations. In particular, these measures should be applied in all the three main phases of the ballast water cycle, namely uptake, carriage, and discharge.

Following a brief description on the various BWM methods, the instructor explained that the selection of the best available method will mainly depend on what technology is available at the time of construction of the ship and on what is appropriate for the ship type. He outlined BW exchange and BW treatment measures, highlighting advantages and disadvantages of both methods and stating that a combination of treatments represents the most promising solution.

Captain Hegazy also highlighted that the effectiveness of some precautionary procedures can be maximized if the Port State informs the ship and/or its local agent, of areas and situations where the uptake of ballast water should be avoided.

Furthermore, he referred to the importance of having a BWM Plan on board which should include detailed procedures and actions to be taken in order to facilitate the safe and effective implementation of the ballast water management system on the ship concerned. While the Plan will obviously be based on the technology available on board, its

implementation on a particular voyage will rest mainly with the ship's Master, depending on the weather conditions and other safety considerations during the voyage.

The instructor concluded his presentation by stressing the fundamental role of training in the success of any ballast water management operation. The officers and the ship's crew need to be properly trained in order to avoid serious consequences related to safety of crew, ship and cargo, damage to the environment and commercial loss.

Day 2
Module III, IV, V

MODULE III - Standards for Ballast Water Management on Ships:

This Module is directly related to Module II and provides a detailed explanation of the Convention's standards for ballast water management on ships.

More specifically, the Module has the following objectives:

- to discuss the international standards for ballast water exchange on board ships;
- to discuss the international standards for ballast water treatment on board ships;
- to describe the initial survey which the ship must undergo prior to being issued the International Ballast Water Management Certificate;
- to describe the follow-up surveys the ship will be subjected to for maintenance and renewal of that certificate.

Captain Hegazy described the standards required for Ballast Water Exchange and Ballast Water Treatment as well as their applicability, which may vary according to the date of construction of the ship and to the ship's ballast capacity. However, he pointed out that a ship conducting ballast water exchange shall not be required to comply with standards defined, if the master reasonably decides that such exchange would threaten the safety or stability of the ship, its crew, or its passengers.

He also stated that Ballast Water Management Systems must be approved prior to being installed on vessels so that compliance with safety, environmental acceptability, practicability and biological effectiveness standards are established. Ships fitted with equipment for use in ballast water treatment will need to ensure that proper maintenance is carried out diligently.

Furthermore he mentioned the survey requirements under the Convention which are necessary to ensure that the ship is fit to proceed to sea without presenting a threat to the environment, human health, property or resources. In case the necessary requirements are met, the BW Convention requires ships entitled to fly the flag of a Party to the Convention to

be issued with an International Ballast Water Management Certificate. The Validity of the Certificate is for a period not exceeding 5 years.

MODULE IV - Operational Aspects on Ship-board Ballast Water Management:

This Module discusses some of the operational aspects of ballast water management on board ships.

In particular, the following topics are described in detail:

- The various records that must be kept by ships in the process of managing ballast water;
- The importance of keeping such records accurately and completely;
- Who is responsible for keeping such records and presenting them for inspection to competent authorities;
- How long such records are to be maintained;
- Ways in which to facilitate ballast water and sediment sampling by port states.

Captain Hegazy started the delivery of this Module by highlighting the importance of keeping records on board ships for several different purposes (evidence of safe and legal manner of operations, accurate reconstruction of voyage, etc). He mentioned that the Ballast Water Management Convention gives specific advice on the records relating to ballast water management that must be kept by a ship, including their form, usage and retention period. Focusing on the Ballast Water Record Book he described the information which should be included in order to demonstrate:

- where and when ballast water has been taken on board and whether any advice regarding uptake restrictions has been followed;
- whether the ballast water has been treated or exchanged en route in accordance with the requirements of the Convention;
- where and when the ballast water has been discharged;
- whether all safety and environmental precautions as required by the Ballast Water Management Plan have been observed during the process of uptake, exchange or treatment or discharge;
- whether sediments were disposed of in a proper and correct manner.

He also mentioned that Ballast Water Record Book entries shall be maintained on board the ship for a minimum period of two years after the last entry has been made and thereafter in the Company's control for a minimum period of three years.

Failure to comply with record keeping requirements may result in fines or other penalties being imposed on the ship and/or its Master. Although the BWM Convention does not prescribe fines or penalties, national regulations may do so.

Captain Hegazy concluded this Module by focusing on the sampling of ship's ballast water. He explained that Article 9 of the Convention, in addition to allowing port State authorities to inspect the ships records for verification purposes, also allows, under certain conditions, sampling of the ship's ballast water since Port Authorities may need to take samples of ballast water and sediments as part of their Port control processes.

The instructor highlighted that the location of suitable access points for sampling ballast water should be described in the ship's Ballast Water Management Plan, in order that crew members can provide maximum assistance when the competent Authority requires the collection of samples.

MODULE V - Ballast Water Management by Port/Coastal State:

This Module discusses the role of the port and coastal States in the management of ships' ballast water to minimise the threat posed by harmful aquatic organisms and pathogens. It describes the steps that ports should take to develop and implement Port Ballast Water Management Plans as the principal operational tool to achieve this objective.

In particular this Module has the following objectives:

- Promote an understanding in broader terms, of the rights and duties/obligations of the port/coastal state under the BWM Convention;
- Outline the key issues in developing a port ballast water management plan;
- Explain how to gather, manage and store shipping and environmental data;
- Describe the special circumstances pertaining in certain areas and the need for warnings concerning ballast water uptake in certain areas;
- Demonstrate the need for sediment reception facilities;
- Explain the need to conduct port risk assessments;
- Explain the importance of providing ships and IMO with the Port BWM Plan.

Module V was delivered by Captain Mahmoud Marawan El Said Ismail, Maritime Security Expert from the Arab Academy. Following a brief introduction related to rights and duties of the Port State under the Convention, he stressed that Ports and Port Authorities, representing the primary interface between ships and the Port or Coastal State, have a fundamental role to play in improving practices to minimise the risk of the spread of harmful aquatic organisms and pathogens in ships ballast water. He therefore highlighted the

importance of developing a Port BWM Plan which shall detail the requirements for ballast water management in the port, including the actions required to prevent uptake and export of organisms for all ships intending to leave and enter the port.

Prior to the development of a Port BWM Plan, Captain El Said Ismail mentioned the need of carrying out the following activities:

- port biological baseline surveys aimed at the collection of scientifically based information concerning harmful aquatic organisms and pathogens which may already be present within the Port's waters. The said information would not only allow the port to act in a responsible manner towards other ports when ships take up ballast water from its waters but it would also help to avoid the potential spread of introduced species from the port to adjacent coastal areas.
- risk assessment using the results of the port biological baseline survey, as well as an analysis of shipping patterns, ballast water operations and comparison of the survey port with its source and destination ports.

Captain El Said Ismail described the key principles in developing a BWM Plan such as the needs to incorporate regional considerations, to comply with IMO requirements and the Country's National Policy & Strategy and to actively involve all key stakeholders. He also pointed out that the plan should include a communication system whereby ships can be alerted to any outbreaks of potentially harmful species in the port and areas to be avoided during ballasting/de-ballasting.

The instructor gave a general overview of how the Port BWM Plan should be structured (introduction, objectives and purposes, key principles and best practices, operational arrangements and administration) highlighting that the operational aspects represent the most important part of the plan since they describe the actual requirements of the Port as well as procedures and arrangements to be implemented. He emphasized that by the time the Port BWM Plan is finalised and ready for implementation, it is essential that roles and responsibilities of all key stakeholders have been determined and articulated to all parties.

Another important aspect of ballast water management is awareness raising and education of all stakeholders, in order to enhance their active contribution to the preparation and implementation of the Plan. Furthermore, training of port personnel represents a key element in the administration of the Plan.

Captain El Said Ismail also referred to Regulation C-1 of the Convention which allows Parties, individually or jointly with other Parties, to take additional measures to further protect

the environment from harmful aquatic organisms and pathogens. Information on the special requirements for certain areas must be provided to IMO and, through the Organization, it should be communicated to other Parties.

Finally the instructor addressed the issue of reception facilities. He stated that, according to the Convention, the Port State is required to provide adequate sediment reception facilities where cleaning or repair of ballast tanks occurs. It is further obliged to provide ships with details of the availability, location, capacities of and applicable fees relevant to reception facilities that are being provided for the environmentally safe disposal of sediments.

Day 3
Module VI, VII, VIII

MODULE VI - Compliance Monitoring and Enforcement:

Module VI deals with the function of ‘compliance monitoring and enforcement’ (CME), which is an essential component of the BWM regime. The objectives of the Module are to:

- explain what a Compliance Monitoring and Enforcement system is;
- describe the role of Compliance Monitoring and Enforcement in BWM regimes;
- describe the data that is required in a CME system and how it is verified;
- explain the role of ballast water sampling in compliance monitoring;
- discuss enforcement, mitigation measures, penalties and sanctions and how to apply them.

Module VI was delivered by Mr. Jose Matheickal from IMO. He explained that the CME system is an essential component of the BWM regime particularly designed to:

- assess whether or not a ship has met the IMO and Port State’s BWM requirements;
- when necessary, enforce those requirements.

He also stated that CME systems must be fully consistent with both the BWM regime and the IMO BWM Convention and outlined its key elements as follows:

- requirement for ships to collect and record information about their BWM practices;
- requirement for ships to make available this information to the Port State’s BWM regulatory authority (the RA) and receive directions from them;

- provisions for examination/auditing of the ships' official log books and other official records to ascertain compliance with the BWM requirements of the Port State;
- provisions to enable the appropriate authority, either the RA or someone acting on their behalf, to take ballast water (and sediment) samples and carry out any necessary testing;
- legal provision for 'enforcement', where necessary, for ships found in non-compliance with the BWM requirements;
- requirement for notification of arrangements to IMO and other interested parties.

In addition, another important issue which should be considered and included in the CME system is the risk posed by the ship. The greater the risk posed by a particular ship the greater effort should be devoted through the CME to ensuring that the BWM requirements are met.

Mr. Matheickal described in detail the data that must be gathered for CME purposes, such as the International Ballast Water Management Certificate, the Ballast Water Management Plan and the Ballast Water Record Book. He pointed out that since the CME system forms part of the Port State's BWM regime, it is desirable to have it included within the information/awareness package provided to ships. This package of information will inform the ship of the Port State's requirements and of how they will be audited and the requirements enforced.

Routine and detailed inspections of ships were also described. In particular it was stressed that ship inspections for compliance monitoring and enforcement purposes may result in ballast water sampling. Mr. Matheickal took this opportunity to stress once again the importance of cooperation between the ship's personnel and the Competent Authority in collecting samples of ballast water and described to the participants various sampling challenges.

The last part of the Module was dedicated to the description of the enforcement process. The instructor explained that the process commences when the Port State's BWM regulatory authority, through the CME system, confirms that the Port State's BWM requirements have not been fully met. It becomes necessary therefore to determine the level/seriousness of the non-compliance which may lead to the application of a penalty or sanction.

Mr. Matheickal highlighted that penalties or sanctions should be proportional to the seriousness of the offence and the risk, if any, resulting from the offence in order to discourage violations.

MODULE VII - Incursion Management:

Module VII deals with the management of invasive species in aquatic environments once invasions have occurred. The Module demonstrates that although incursion management in the marine environment is typically complex, expensive and with very limited success throughout the world, there are a number of possible options to minimize the consequences that require consideration.

Specific objectives of the Module are to:

- evaluate the role of incursion management in the national Ballast Water Management regime;
- outline the strategies and techniques available for incursion management;
- apply the decision-making process for selecting the appropriate strategy (feasibility assessment, risk assessment & cost-benefit analysis);
- describe contingency planning for effective invasive aquatic species response.

Ms. Farchi introduced Module VII, highlighting that although it is well known that introductions do not very often result in the establishment of viable populations, studies on invasive species have shown that a single introduced species is sufficient to cause severe harm to the ecology, economy and health of the affected habitat and that the effects are generally irreversible.

Once an alien species has been detected and is considered to be potentially invasive, the response actions which can be taken were presented as follows:

- Confirm presence and distribution of species
- Assess the risks for the environment and society
- Establish management options
- Analyse the cost-benefit of the options
- Implement selected option/s

Ms. Farchi recalled that although prevention of marine bioinvasions remains the preferred option, it can never be 100% effective and therefore other management options need to be considered. These options, which should be practical and feasible, must facilitate rapid decision making and ideally be included in the Country's Incursion Management Response Plan (which the Country should develop).

She pointed out that management options can be divided in two main categories:

1. Early detection of incursions followed by rapid response aimed at eradicating new species;
2. Where eradication is not feasible, control and management of pest populations.

Among the management options she described some of the responses which are most commonly carried out, such as containment, eradication, control (physical, chemical and biological) and mitigation. She explained the importance of both routine monitoring in achieving early detection of incursions or assessing eradication success of a target species, and contingency plans in facilitating rapid response actions. It was stressed that the chances of success of a particular management option will depend on many factors, such as the availability of information on the species, the extent of the invasion, the resources available (manpower, budget, etc) and the commitment of responsible agencies.

Particular emphasis was given to risk assessment which needs to be carried out prior to deciding the best management option to undertake. The instructor highlighted that a proper risk assessment is made of three components:

- Determining the extent of the invasion;
- Identifying the species origin and its characteristics;
- Determining the resources under risk.

The final step would be to carry out a cost-benefit analysis of the selected management options which would enable the responsible agencies to decide whether to opt for their implementation or not.

The last part of the Module was dedicated to the development of an Incursion Management Response Plan. Ms. Farchi highlighted the benefits of having such plan and gave a general overview of the main elements which should be included in the Plan.

MODULE VIII Development of a National Strategic Framework to BWM:

This Module aims at outlining the recommended steps in the development of a National Strategic Framework (NSF) for Ballast Water Management. Specific objectives of Module VIII are to:

- describe the essential components of a national strategic framework for BWM, and how these link to the broader policy on invasive species;
- describe the responsibilities of the Lead Agency;
- explain why it is necessary to establish a Task Force and what its responsibilities should be;
- explain the key principles governing the formulation and the design of a National Strategy;
- list some of the main actions required to implement the National Strategy.

Ms. Khodjet El Khil introduced Module VIII by highlighting the main components of a National Framework (policy, legislation, institutional structures, strategy / action plan) and

their specific purpose. She described in detail the various steps in the development of a NSF as follows:

- gather information on all related existing measures, policies, legislation/regulations;
- develop, on the basis of this information, policy, strategy and action plan;
- draft, enact & implement legislation and undertake institutional reform;
- implement strategy and action plan;
- monitor and evaluate the system.

Particular emphasis was given to the role and responsibilities of institutional structures, such as the Task Force, which should provide advice on and contribute to the development of a National Strategy, and the Lead Agency called to oversee the development and the implementation of the national strategy on ballast water management.

In order to facilitate countries in the decision making process of who should be the Lead Agency, the instructor outlined the main responsibilities of the Agency. In particular she mentioned that the constitutional structure of the country, as well as the already existing agencies and the capacities and resources of these agencies, represent important criteria which may affect the final choice.

Ms. Khodjet El Khil explained also the advantages of creating a Task Force and gave some examples of specific agencies, national authorities and other stakeholders which should be part of it. When providing recommendations regarding policy, strategy, operational arrangements and legislation, it must be kept in mind that the Task Force should always ensure consistency of recommendations with international obligations and requirements.

Ms. Khodjet El Khil presented the key elements to be included into the National Strategy and mentioned the operational arrangements of the action plan required to implement and enforce the National Strategy, drawing the attention of the audience on the fact that each proposed action was related to a topic discussed in a previous Module. In fact, Module VIII is aimed at assisting the countries in integrating, at national level, all the technical elements discussed in the previous Modules.

Before concluding her intervention, Ms. Khodjet El Khil pointed out that all participants were now provided with the tools to assist them in the process of designing their national policy/strategy which, eventually, will be part of the legislation they are going to enact to implement the BWM Convention.

Day 4
Module IX and Role Play

MODULE IX - Technical Assistance and Regional Cooperation:

This Module intends to outline options for technical assistance and to demonstrate the importance of regional co-operation in addressing the problem of ballast water and aquatic bio-invasions. Specific objectives of Module IX are to:

- list sources of assistance and information;
- highlight the importance of regional cooperation;
- discuss structures and arrangements;
- outline the development of regional strategies;
- provide an update on the situation in the Mediterranean.

Ms. Khodjet El Khil introduced Module IX describing in detail Article 13 of the BWM Convention which covers two fundamental topics to be considered by the Parties:

- the need to provide technical assistance in BWM through training, to make available relevant technology, equipment and facilities, and to undertake joint research and development programmes;
- to promote regional co-operation – especially around closed and semi-enclosed seas – by concluding regional agreements and harmonising procedures.

Given that similar IAS problems are repeatedly faced in different parts of the world, sharing of information and expertise internationally on the ecology, impacts and management of such IAS is one priority. Invasive alien species are also, by definition, a trans-boundary issue. Accordingly, it must be recognised that individual countries cannot effectively address this issue on their own. It was stressed that when a country is developing a National Strategy for BWM, it becomes essential to take into account the regional situation.

Ms. Khodjet El Khil provided the participants with some sources of technical assistance in the field of BWM. She mentioned that the IMO, as the body with primary responsibility for shipping and ballast water management at the international level, has a number of initiatives aimed at providing guidance and/or technical assistance to countries or regions, such as:

- Technical Co-operation Division (training; consultation meetings, awareness training activities);
- Globallast Programme (Phase I);
- Globallast Partnerships (Phase II).

Ms. Khodjet El Khil described the work carried out under the GloBallast Programme, which was concluded in 2004, and the expected results of the Globallast Partnerships, to be developed between 2007 and 2012. She then gave an overview of the information and support systems on IAS which are available today in order to assist the countries on the issue of BWM.

The instructor explained the importance of regional cooperation and gave examples of existing Regional Agreement/Programmes and BW strategies and action plans at a global level.

She stressed that the process of designing and implementing any regional arrangement that involves cooperation requires three inter-related steps:

- 1- the approach (participation, partnerships, sharing of experience, etc.)
- 2- the mechanism (Regional Task Force)
- 3- the tools (Strategic Regional Action Plan – SAP)

In particular, the Regional Task Force would be responsible for designing and implementing the Regional Strategy/SAP according to key principles and key elements that the instructor brought to the attention of the trainees. The last part of the Module was intended to update the participants on the situation in the Mediterranean region as regards to BWM issues.

After recalling the institutional structures existing in the Mediterranean Sea that may be of interest to ballast water management, Ms. Khodjet El Khil mentioned the steps which have already been taken in the region to face the problem of IAS and informed the participants that three Mediterranean countries, namely Egypt, Spain and Syria, have ratified the BWM Convention.

Finally she gave an overview of the GloBallast Partnerships Project which is currently being implemented in the region, highlighting the role of REMPEC as facilitator in the execution of the project. Ms. Khodjet El Khil concluded that the main result which is expected from the GloBallast Partnerships is a Mediterranean Strategy on Ballast Water Management agreed upon by all the Contracting Parties of the Barcelona Convention.

Role play:

The rest of the morning was dedicated to the **Role Play**. Participants were divided into three groups and provided with a specific scenario related to BWM issues which allowed them to

discuss and to share their views and opinions on the subject. In particular, each group was requested to identify the relevant authorities that, according to their competences, would better deal with the issue of ship's ballast waters and invasive species. Mr. Pughiuc and Mr. Matheickal from IMO acted as facilitators.

II.3 Recommendations and Conclusion

Before the closure of the training course, the participants adopted a **set of recommendations**, to be referred to the forthcoming Mediterranean Region Task Force Meeting scheduled in September 2008.

Recommendations were made regarding specific topics as follows:

- **Capacity building:** the Group acknowledged the importance of the GloBallast Partnerships and highlighted that capacity building is of utmost importance to efficiently prepare for the ratification and implementation of the Ballast Water Management Convention in the Mediterranean region. Financial resources available at national level are also needed to sustain capacity building activities.

Recommendation 1: The Group recommended, as the most cost efficient option, to share as much as possible the available knowledge and expertise, especially using the capacity built in GloBallast Lead Partnering countries.

Recommendation 2: Turkey offered its willingness to host trainings on risk assessment and the Group recommended that IMO and REMPEC investigate the possibility of financing the participation of countries representatives in such trainings.

Recommendation 3: The Group also recommended using as much as possible bilateral assistance between developed and developing countries in the region. Regional and/or international fora should be used by representatives of the Mediterranean countries to explore such bilateral assistance.

- **Raising awareness:** the Group recognised that the IMO/BBC documentary “Invaders from the Sea” is a useful tool for public awareness and lobbying to mobilize interests and resources.

Recommendation 4: The Group recommended to use as much as possible the IMO/BBC documentary “Invaders from the Sea” as a tool for raising

awareness, and recommended that IMO and REMPEC investigate the possibility to have the documentary available in other languages than English.

- **Risk assessment:** the Group recognized the need for a regional level risk assessment of the Mediterranean region.

Recommendation 5: The Group recommended that efforts should be made to approach regional and bilateral funding schemes to undertake regional level risk assessment of the Mediterranean region.

- **Communication and sharing of information:** the Group recognised that communication and sharing of information between the various relevant institutions within the region and outside is crucial.

Recommendation 6: The Group recommended that efforts should be strengthened to integrate ballast water issues in regional agenda such as those of REMPEC Focal Points meetings, Mediterranean Action Plan (MAP) Focal Point Meetings and Meetings of the Contracting Parties to the Barcelona Convention.

Recommendation 7: The Group recommended ensuring appropriate liaison between relevant regional fora and international fora on ballast water management issues.

Recommendation 8: The Group recommended the establishment of a Ballast Water Correspondence Group in the region to facilitate exchange of information.

Recommendation 9: The Group encouraged the participants to liaise with their colleagues attending relevant IMO meetings such as meetings of IMO's Marine Environment Protection Committee (MEPC), IMO's Sub-Committee on Bulk Liquid and Gases (BLG), IMO's Sub-Committee on Flag State Implementation, and IMO's Technical Cooperation Committee (TTC), to communicate their specific needs and share information on the steps undertaken towards ratification and implementation of the BWM Convention.

- **Training:** the Group recognised the benefit and value of the Introductory Training Course on Ballast Water Management issues and called for more specific/targeted similar training for administrators and ship personnel.

Recommendation 10: The Group recommended that a specific version of the Introductory Training Course on Ballast Water Management package be produced to target such personnel.

Recommendation 11: The Group recommended that efforts should be made at national level to include the Ballast Water Management trainings in the curricula of maritime training institutions.

- **Contribution of the Group in forthcoming activities:** the Group discussed the participation of Mediterranean coastal States in activities leading to the development of a regional Strategy on ballast water management in the Mediterranean and took note of the information that Croatia will be hosting the first Regional Task Force Meeting in the Mediterranean region, where the participation of all Contracting parties to the Barcelona convention is expected.

Recommendation 12: The Group recommended that all Mediterranean coastal States be involved in trainings and capacity building activities undertaken within the GloBallast Partnerships and other related initiatives and called for a wider participation of non-sponsored Mediterranean countries in the future.

Recommendation 13: The Group recommended that its conclusions and recommendations be presented and discussed at the Regional Task Force Meeting by including a specific item for this purpose in the agenda of the meeting.

The Seminar was concluded at 16H30 on 17th April 2008. The representatives of IMO and REMPEC thanked the Arab Academy of Alexandria, for its support and valuable collaboration which ensured the best conditions of work for the Training, all lecturers as well as the participants for their active contribution to the various Modules.

All participants were provided with a Certificate of attendance for the present training course.

ANNEX I

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ANNEX III

PROGRAMME OF WORK

Monday, 14 April 2008	
Time	
08.30 -09.00	Registration
09.00- 09.30	Welcome & Opening remarks
09.30 -10.00	Introduction of Instructors & Participants
10.00 -10.30	<i>Coffee break</i>
10.30-11.30	Video “Invaders of the sea”
11.30 -12.00	Background to the course
12.00 -13.00	<i>Lunch break</i>
13.00 -14.30	Module 1. Background to Ballast Water Management
14.30 -15.00	Module 2. Ballast Water Management on Board Ships
15.00 -15.30	<i>Coffee break</i>
15.30 – 17.00	Module 2. Ballast Water Management on Board Ships
Tuesday 15 April 2008	
Time	
08.30 - 10.00	Module 3. Standards for Ballast Water Management
10.00 - 10.30	<i>Coffee break</i>
10.30 - 12.00	Module 4. Operational Aspects on Ship-board Ballast Water Management
12.00 - 13.00	<i>Lunch break</i>
13.00 - 14.00	Module 4. Operational Aspects on Ship-board Ballast Water Management
14.00 - 15.00	Module 5. Ballast Water Management by Port/Coastal State
15.00 - 15.30	<i>Coffee break</i>
15.30 – 17.00	Module 5. Ballast Water Management by Port/Coastal State

Wednesday 16 April 2008	
Time	
08.30 - 10.00	Module 6. Compliance Monitoring and Enforcement
10.00 - 10.30	<i>Coffee break</i>
10.30 - 11.30	Module 6. Compliance Monitoring and Enforcement
11.30 - 12.00	Module 7. Incursion Management
12.00 - 13.00	<i>Lunch break</i>
13.00 - 14.30	Module 7. Incursion Management
14.30 - 15.00	Module 8. Development of a National Strategic Framework to BWM
15.00 - 15.30	<i>Coffee break</i>
15.30 – 17.00	Module 8. Development of a National Strategic Framework to BWM
Thursday 17 April 2008	
Time	
08.30 - 09.30	Module 9. Technical Assistance & Regional Co-operation
09.30 - 10.00	Role play exercise Introduction
10.00 – 10.30	<i>Coffee break</i>
10.30 - 12.00	Role play exercise
12.00 - 13.30	<i>Lunch break</i>
13.30 - 15.00	Role play exercise and Group Presentations
15.00 - 15.30	<i>Coffee break</i>
15.30 - 16.00	Role Play Conclusions
16.00 – 17.00	Closing Ceremony and Award of Certificates

ANNEX IV

CERTIFICATE OF ATTENDANCE



IMO



REMPEC



MAP



UNEP

REGIONAL MARINE POLLUTION EMERGENCY RESPONSE CENTRE
FOR THE MEDITERRANEAN SEA
(REMPEC)

CERTIFICATE

No.

This is to certify that

_____ has attended the

**INTRODUCTORY TRAINING COURSE ON BALLAST WATER
MANAGEMENT ISSUES**

Alexandria, Egypt
14-17 April 2008

organized within the framework of the

**GLOBAL ENVIRONMENT FACILITY (GEF)/
UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)/
INTERNATIONAL MARITIME ORGANIZATION (IMO)
GLOBALLAST PARTNERSHIP**

by

REMPEC

in co-operation with the



AASTMT

**ARAB ACADEMY FOR SCIENCE, TECHNOLOGY AND
MARITIME TRANSPORT (AASTMT)**



Mr. Frederic HEBERT
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