Implementing the Ballast Water Management Convention – the EU dimension

10th and 11th November 2008

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1. Background

With the expansion of volume and density of international shipping, the transfer of harmful aquatic species in ships' ballast water tanks has become the most significant pathway of unintentional introductions of invasive alien species into marine ecosystems. Apart from affecting ecosystems and contributing to the extinction of native species, and therefore representing a significant threat to biodiversity, invasive alien species may also cause major socio-economic damage. Also, reported effects on human health deriving from alien invasive species include changes to the native food web and human consumption of contaminated seafood.

Ballast water is needed to provide stability and manoeuvrability during a voyage when ships are not carrying cargo, are not carrying heavy enough cargo, or require more stability due to rough seas. It is estimated that 3000-4000 million tons of untreated ballast water are discharged from ships every year in ports, as cargoes are loaded, and in coastal regions, as vessels de-ballast to reduce their draft and enter ports. Furthermore, it is estimated that more than 10,000 marine species each day may be transported across the oceans in the ballast water of cargo ships and introduced into a non-native environment. As ballast water may be fresh, brackish or saline, the coastal environment, estuaries and navigable inland waters, are most at risk.

Numerous alien species have been introduced into the North Sea, the Baltic Sea, the Mediterranean Sea and the Black Sea. The economical, social, recreational and ecological losses/costs of such invasive species are very difficult to assess, as the losses of native species and environment restoration to pre-invasion quality are more difficult to determine and quantify. Therefore, it has only been possible to estimate the cost of the damage caused by non-indigenous species in a few cases

Canada and Australia were among the first countries to experience particular problems with harmful aquatic species, and they brought their concerns to the attention of the International Maritime Organization's (IMO) Marine Environment Protection Committee (MEPC) in the late 1980's. After many years of negotiations at the IMO, the International Convention for the Control and Management of Ships' Ballast Water and Sediments was eventually adopted by an IMO Diplomatic Conference in February 2004 (BWM Convention).

This Convention sets out strict treatment standards for ballast water discharges, which, when ratified, will apply to different ships at different times depending on their construction date and their ballast water capacity. Additionally, the Convention provides guidance for the type approval of ballast water treatment systems and identifies detailed procedures to ensure that the environmental toxicity of ballast water is evaluated and minimised, resulting in safe discharges of ballast water discharges. This is especially important when systems use chemical treatment methods to meet the Convention's standards.

So far the European Community's involvement in ballast water management has been limited. The Commission has 'strongly recommended' that Member States should ratify the BWM Convention and has participated in the development of interim measures to reduce the risk of non-indigenous species being introduced through the discharge of ship's ballast water in the four Regional Seas Organisations surrounding Europe (HELCOM, the OSPAR Commission, REMPEC/Barcelona Convention and the Black Sea Commission). Additionally, several EC Directives:

- the EC Marine Strategy Framework Directive 2008/56/EC;
- the EC Marine Equipment Directive 96/98/EC – as amended by 2002/84/EC;
- the EC Biocide Directive 98/8/EC;
- the EC Port State Control Directive 95/21/EC; and,
- the EC Port Waste Reception Facilities Directive 2000/59/EC,

and emerging European policy on invasive species (the recent EC communication "Towards an EU Strategy on Invasive Species") have a direct impact on the treatment and discharge of Ballast Water (Please see the Ballast Water Background Paper for further details).

After discussion and agreement with the both DG TREN and DG Environment, EMSA organised this workshop to identify how the EU Member States, the European Commission and EMSA can work together to provide a cohesive approach in implementing the ballast water management strategies of the regional fora and ratifying the Ballast Water Management Convention.

2. Workshop Objectives

The purpose and aims of the workshop were to:

- provide an overview of the problem and describe the current state of play with respect to international ballast water regulations at IMO and ballast water management strategies being developed by the regional seas organizations within Europe;
- share experiences and exchange best practice with respect to developing the regional strategies and ratifying the Convention;
- identify issues and technical difficulties related to developing and contributing to the strategies being developed by the Regional Sea Conventions, ratifying the IMO Convention and the processes being employed to help develop these controls; and
- discuss potential future activities of the EU in this field, by identifying how the Commission and EMSA can add value to the processes already being employed to develop regional strategies and ratify the Convention.

3. Workshop Programme

The Workshop was divided into two parts:

- Day 1: Setting the scene and providing an update on developments in the IMO, the European Commission, the four Regional Seas Organisations and the Member States on the development of Regulations and interim strategies to reduce the risk of non-indigenous species being introduced through ballast water; and,
- Day 2: Identification of problems Member States are having in ratifying the Convention and developing regional interim strategies, and the identification of areas where working within the European dimension could overcome these problems or enhance the work of the Member States. This included a Tour de Table of the Member States, where they had the opportunity to raise issues and provide an update of their ratification process.

During the presentations and discussions throughout the workshop, any suggestions regarding how the Commission and EMSA can add value, overcome problems or enhance the processes already being employed to develop regional strategies and ratify the Convention were recorded.

The Workshop was chaired by Henrik Ringbom, Head of EMSA's Marine Environment, Training and Statistics Unit (B.3). It was attended by both DG TREN and DG Environment and national experts from 18 Member States along with experts from Norway, Iceland, Croatia and Turkey. Specialists in the field of ballast water management and the alien species problem in Europe were invited from GoConsult (Dr. Stephan Gollasch) and the University of Ljubljana (Dr. Matej David) and speakers were invited from HELCOM (the Helsinki Commission), the OSPAR Commission, REMPEC and the Black Sea Commission – the four Regional Seas Conventions. The meeting was also attended by EMSA staff involved in the subject and one of EMSA's port State Control experts.

(A). Day 1 started with the Chairman welcoming the group. This was followed by a presentation from Dr Stephan Gollasch on the marine alien species problem in Europe in order to set the scene and put the issue of the non-indigenous species invasion in perspective. The work of the IMO in this field was then reviewed, and it was noted that following the conclusions and agreements at IMO's MEPC 58 meeting, the two main hurdles that were delaying ratification of the Convention (the lack of technology to meet the BWM Convention's treatment standards and the lack of a complete set of guidelines supporting the BWM Convention) were no longer valid issues. Therefore, there were no longer any major barriers to delay IMO Member States from ratifying the Convention.

The European Commission then provided an overview on how the Ballast Water Management Convention linked with the following:

- the Marine Equipment Directive;
- the Biocide Directive;
- the Marine Strategy Directive;
- the Port State Control Directive;

- the Port Waste Reception Facilities Directive; and,
- the upcoming communication towards an EU Strategy on Invasive Species.

The work of each of the four Regional Seas Conventions to develop interim strategies for reducing the risk of non-indigenous species invasions through the vector of ballast water was then outlined by representatives of each organisation, before the Member States were given the opportunity to outline any other regional or national initiatives with respect to ballast water management. As a result the workshop was informed of the following:

- The development of initiatives in Norway following their ratification of the BWM Convention. Norway is planning to put legislation into force to implement the D1 Standard in the BWM Convention before the summer of 2009. As such, their work has been focussed on the development of Ballast Water Exchange Areas and three areas have been designated using set criteria. A fourth in the Skagerrak may be designated following discussions and agreement with Denmark and Sweden;
- The Ballast water initiatives being developed in the Regional Seas Conventions, including:
    - The OSPAR/HELCOM general guidance on the Voluntary Interim application of the D1 Ballast Water Exchange Standard in the North East Atlantic and the Baltic Sea;
    - the HELCOM Ballast Water Roadmap,
    - the Globallast Partnership being developed in the Mediterranean Sea; and,
    - the Black Sea initiatives being developed from work started by the original Globallast Project;
- a proposed Particularly Sensitive Sea Area (PSSA) for the Adriatic, which will require ships to exchange ballast water in accordance with the Regulation B-4 of the BWM Convention to meet the D1 Standard of the BWM Convention prior to entry to the Adriatic PSSA, and report on their ballast water status prior to entering the Adriatic PSSA; and,

- the proposed North Sea Ballast Water Opportunity Project being developed by the Royal Netherlands Institute for Sea Research (NIOZ) and being submitted for INTERREG Funding.

(B). Day 2 began with a presentation from Dr. Matej David identifying the synergies between the Strategies being developed by the Regional Seas Fora and how can they interact and learn from each other at a technical level, building on the presentations given on Day 1. This presentation also identified how the Member States, the European Commission and EMSA could potentially work together to provide a cohesive approach in implementing these Strategies and ratifying the Ballast Water Management Convention. The Chairman then initiated a "Tour de Table" where Member States were asked what their plans were for ratification and what problems or issues they were encountering or foresaw in both developing and implementing the various Regional Strategies and ratifying the Convention. Alternatively, those Member States who had ratified the Convention were asked to identify what problems they were having in implementing it. This was then followed by a discussion on how the Member States, the European Commission and EMSA could potentially work together to overcome these problems and issues.

4. Discussion at the Workshop

(A). Day 1: Following the presentation held by the European Commission, the discussion centred on the relationship between the Biocide Directive and the IMO BWM Convention. The main concerns regarding this interaction focussed on when a ballast water treatment system based on active substances is passed by the IMO but not included in Annex I, IA or IB of the Biocide Directive. Questions were posed to the Commission in order clarify the issue of when and how the two approval processes should interact. The Commission explained that some types of ballast water treatment systems indeed fall within the scope of the Directive and therefore, cannot be placed on the market unless:

- the active substance(s) contained in the biocidal product has/have been included in Annex I, IA or IB; and,
- the biocidal product has been authorised by the relevant Member State.

The Commission reminded the group that in order to facilitate the relationship between the Directive and the BWM Convention, in particular the submission of treatment systems for approval to IMO, a procedure has been agreed in the Council Working Group on Transport in September 2006, prior to the co-ordination process for MEPC 55. The Commission described the procedure and its importance for both the Member States and the companies interested in placing ballast water treatment systems on the market. The Commission also stated that the procedure has been discussed with the Member States at various meetings of the competent authorities dealing with the Biocides Directive.

Futhermore, the discussion touched upon the ongoing revision of the Biocides Directive and the possible changes resulting for the ballast water treatment systems. A specific concern raised by Member States was the implications of the coverage by the Directive of the use of biocidal products (in addition to just placing on the market). Several Member States wondered how such provisions – should they materialise - would apply to ships (including foreign ships) using ballast water treatment systems using active substances in the waters of EU Member States and how it would relate to the IMO's approval system undertaken by the GESAMP-BWWG and the IMO Convention.

There was insufficient time to address all concerns of the Member States over the current interaction between the BWM Convention and the Directive or the future developments. It was suggested that this may be an area where work or further guidance could be developed at the European level."

Discussion then centred on the initiatives being developed by the 4 Regional Seas Conventions and the identification of common areas which could be the focus of work at the European level between the Commission, EMSA and the Member States. These can be found in the list in Section 5.

(B). Day 2: The major discussions on day 2 surrounded the problems raised in the "Tour de Table" and the potential areas of co-operation raised by Dr. Matej David in his

presentation, which identified issues which that the Member States, the European Commission and EMSA could potentially work together on.

During the “Tour de Table” 6 countries stated that they had begun the ratification process and had targeted ratification in 2009, whereas 2 more stated that their target date was 2011 or later. The other 11 (3 have already ratified) could not confirm a date for ratification and were at various stages in the preparations for ratification. It was noted that if these proposed dates were to come to fruition then with the recent ratification of the BWM Convention by France, South Africa and Liberia, the entry into force of the Convention could be earlier than previously expected.

Major issues and problems that the Member States were facing included:

- The lack of ballast water exchange areas, or the potential for such areas, in enclosed seas;
- The potential for one interim regional strategy’s requirements impacting on another;
- Lack of clarity and specific problems concerning the relationship between the Biocide Directive and the BWM Convention;
- How to provide exemptions under the BWM Convention;
- How to provide an environmental baseline for ports from which risk assessments should be based;
- How to develop and undertake risk assessments;
- Liaison and working together with neighbouring non-EU States;
- How to enforce the BWM Convention;
- How to undertake Port State Control based on the Paris MOU Guidelines;
- How to sample and analyse the samples;
- What standards should be applied to sample testing facilities;
- The proposed World Health Organisation Guidelines on Ballast Water Treatment;
- The impact of excess residual chemicals in ports where more that one ballast water treatment system is discharging;

- How to identify ballast water exchange areas;
- Reporting;
- How to type approve ballast water treatment systems;
- The development of port/sediment reception facilities;
- How to apply IMO Assembly Resolution A.1005(25);
- Record credibility, especially with respect to ballast water exchange;
- Could (should) Strategic Impact Assessment be implemented for ballast water issue (Espo Convention - Convention on Environmental Impact Assessment in a Transboundary Context)?;
- Retrofitting – what happens if a ship cannot retrofit; and
- Can we accept the risk arising from the fact that some ships may not be able to apply all or part of the BWM Convention or the Interim Strategies?

Discussion then turned to how to solve some of these problems and the Member States suggested that the lists provided in Dr. Matej David's presentation should be prioritised and developed further. These lists were then discussed further and enhanced with further suggestions. Additionally, risk assessment, sampling and type approval were suggested as priority areas by the Member States. Some of the Regional Seas Initiatives cautioned that any further work should enhance their existing work and should not delay the development of their own strategies/initiatives in any way. This was accepted as a principle which could be used to prioritise or assess the feasibility of the proposals in the future. A list of potential ways which the Commission and EMSA can contribute to the work of the Member States can be found in Section 5 below.

5. Possible Follow-Up Activities

The possible follow up activities suggested by the Workshop are as follows (in no particular order). It should be noted that the feasibility of these suggestions will be discussed and analysed further at the European level before any action is taken. Additionally, all of these issues may require an element of research and training and should not be treated as stand alone issues. This is because one area/issue may impact on another. For example you need a port/marine sampling strategy to provide the data/information needed for use in a risk assessment.

Possible follow up activities include:

i). Implementation issues (BWM Convention) and Ballast Water Sampling:

- Review best practise, existing literature and approaches throughout Europe;
- Define the unresolved issues following the agreement of the G2 Guidelines;
    - Can these issues be more specific or aligned at EU level?
    - Can the Paris MOU Enforcement Guidelines be enhanced in any way?
- Develop additional guidance/prepare a generic sampling protocol;
- Develop a standard for analysing samples in the Member States;
- Potentially develop an EC IMO Paper for MEPC 59; and
- Enforcement issues:
    - If vessel is found not to be compliant in one EU port – what can be done in the next port of call? Or what can we do when a high risk ballast water movement is identified and all management options have been ruled out?; and
        - Identification and development of alternative management measures/guidance.
    - Identify other enforcement problems, such as problems with retrofitting and the development or use of port/sediment waste reception facilities and their relationship with the EC waste and Water Framework Directives
    - Develop additional guidance/prepare generic protocol on these issues.

ii). Risk Assessment approaches:

a). To help Regional Sea Initiatives;

- Review best practise, existing literature and approaches throughout Europe;
- Compare with IMO G7 Guidelines;
- Identify common themes and problems and ways to overcome those problems; and,
- Prepare common guidelines on risk assessment implementation

b). For inter-regional seas traffic;

- Review best practise, existing literature and approaches throughout Europe;
- Identify potential measures of reducing risk posed by Inter-regional seas traffic and those issues that might arise when decisions and management options stipulated by one strategy interact on another;
- Propose a (generic) risk assessment model/approach in line with IMO G7 Guidelines; and,
- Prepare guidance/regulations for vessels on inter-regional voyages and transit voyages that pass through more than one regional sea, as appropriate.

c). For the development of Exemptions and Additional Measures (Please see Section 7).

iii). G9 BWTS approval issue:

- Review best practise, existing literature and approaches throughout Europe;
- Clarify the relationship between the Biocide Directive and the G9 Guidelines – especially with respect to timing;
- Identify practical implementation concerns;
- Develop Type Approval Guidance/prepare a generic common protocol on these issues as appropriate; and,
- Identify ways to address the issue of the potential effect of many ships discharging treated ballast water from approved treatment systems in an enclosed area, with respect to the effects of elevated residual chemicals.

iv). Collection of data on BW operations

- Review best practise, existing literature and approaches throughout Europe;
- Identify common themes and problems and ways to overcome those problems;
- agree/prepare generic Ballast Water Discharge data collection requirements;
- review data collection/monitoring/reporting options; and,
- introduce proposals for monitoring/reporting if appropriate.

v). Collection of data on port environments - biological data and water parameters (physical, chemical):

- Review best practise, existing literature and approaches throughout Europe;
- Identify biological data requirements for proposed risk assessment and management measure (non-indigenous species, harmful species, pathogens);
- Identify monitoring needs (detail, frequency);
- Identify/agree common approaches/protocols on these issues;
- Review existing monitoring to see if it meets these common approaches/protocols;
- Prepare appropriate common implementation guidelines on Port Baseline Surveys and monitoring; and,
- Identify/prepare/help develop an Early Warning System to warn ships and countries (within and outside EU).

vi). BWM methods (new, alternative):

- Review existing Ballast Water Management methods and best practise:
  - Can effectiveness be improved?; and,
  - Do any “new” or “alternative” methods exist that will help in cases of high risk ballast movements and for use in enclosed seas?;
- Evaluate effectiveness and implementation options for European Seas; and,
- Develop common guidelines or rules enhancing the BWM Convention if appropriate.

vii). Exemptions and Additional Measures:

- Review best practise, existing literature and approaches throughout Europe;
- Identify practical implementation concerns;
- Evaluate implementation options for European Seas and possible inter-regional implications; and,
- Develop common guidelines, rules or protocols on the development of exemptions and additional measures (such as the designation of ballast water exchange areas) if appropriate.

viii). Information Exchange

- The development of a dedicated website to facilitate cooperation between the interested parties and to exchange data/existing research studies/ideas and documents was suggested by many participants as an important tool to provide a method of sharing best practise, finding solutions to problems and harmonising the approaches at regional and Member State level.

6. Workshop Conclusions

- A significant amount of work is going on in Europe to ratify the BWM Convention and develop interim strategies to reduce the risk of non-indigenous species being introduced through ballast water;
- Member States felt that this workshop was a very useful exercise and see the benefit in EMSA and the European Commission working in this area to add value to their own regional work and help them ratify the Convention;
- If the European Member States continue this work then collectively the EU Member States could bring the BWM Convention into force much earlier than expected, especially now that the major hurdles stopping States from ratifying have been overcome at IMO;
- The EU Member States have identified many ways in which they can work with EMSA and the European Commission to develop and enhance interim ballast water management strategies and overcome the problems they are having in ratifying the BWM Convention. EMSA will now take this list and assess and analyse the feasibility of these suggestions, indicating what priority should be given to each one, in order to propose a list of suggestions/problematic areas linked to Ballast Water for which assistance would be welcome. This list would then be considered by the European Commission in order to develop further action at the European Level;
- Delegates should liaise with experts in their own countries to ensure that actions concerning the Biocide Directive and the IMO's G9 Guidelines are coordinated; and,
- Member States should ratify the BWM Convention at the earliest possible opportunity.