



NORTH SEA BALLAST WATER

The Interreg IVB  
North Sea Region  
Programme



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## HARMFUL AQUATIC ORGANISMS IN BALLAST WATER

**Call for ratification of the BWM Convention – ballast water continues to transfer invasive aquatic organisms**



Friends of the Earth  
International (FOEI)

International Union for the  
Conservation of Nature  
(IUCN)

World Wildlife Fund (WWF)

Clean Shipping Coalition  
(CSC)

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## HARMFUL AQUATIC ORGANISMS IN BALLAST WATER

### Call for ratification of the BWM Convention – ballast water continues to transfer invasive aquatic organisms

Submitted by the Friends of the Earth International (FOEI), International Union for  
the Conservation of Nature (IUCN), World Wildlife Fund (WWF)  
and Clean Shipping Coalition (CSC)

#### SUMMARY

*Executive summary:* This document highlights the need for urgent action regarding the rapid ratification of the Ballast Water Management Convention (BWM Convention). The document reports on the continuously increasing number of invasive species and their adverse impact that affects ecosystem and human health, economy and ecosystem services. The document calls on States to ratify the BWM Convention as a matter of urgency.

*Strategic direction:* 7.1

*High-level action:* 7.1.2

*Planned output:* 7.1.2.4 and 7.1.2.5

*Action to be taken:* Paragraph 9

*Related documents:* BWM/CONF.1/36; MEPC 59/2/20; MEPC 64/2/12 and MEPC 64/23

#### Introduction

1 Bearing in mind that the Ballast Water Management Convention (BWM Convention), which was adopted in 2004 with the aim of minimizing and ultimately eliminating the risks to the environment, human health, property and resources caused by unwanted harmful organisms by means of ballast water management has, by 2013, been in place for nine years and has still not entered into force. The number of ratified countries required for entry into force, 30, has long since been achieved; the required world tonnage, 35 per cent of the world's total, has not and is still nearly 6 per cent short. Several efforts from international projects such as the GEF-UNDP-IMO GloBallast Partnerships Project and the North Sea Ballast Water Opportunity Project (EU-Interreg) have helped in stimulating ratification, yet more effort is needed to achieve the entry into force conditions.

2 In the meantime, the rationale that led to developing and adopting the BWM Convention tends to move out of view: the continuing increase in invasive species carried by ships' ballast water (WWF, 2009), their seriously adverse effects (Tsolaki and Diamandopoulos, 2010) and their costs to society (WWF, 2009).

### **Background**

3 It is well known that, once established, populations of invasive species can have an adverse impact on environmental, economic, social, cultural and human health values in coastal, estuarine and inland ecosystems (Dahlstrom et al. 2011). Although not all is known about the way invasive species interact with a new environment and with the species that are native there, much knowledge can be gained from the status of the recipient area. An environmentally depleted ecosystem is more likely to have "empty" niches that can offer bedding for an invasive species (EEA, 2012). Species that thrive at similar environmental conditions (such as salinity, temperature regime, type of sea floor) as are present in the recipient area are more likely to survive and reproduce than those that have other environmental requirements. The costs of aquatic invasive species are high: Keller et al. (2011a) estimates 2.2 billion euros a year for Europe alone.

4 The impact of invasive species on ecosystem functioning and services can become very high in seas with a dense shipping activity, such as the North Sea (Vila et al. 2010). Several types of natural barriers for species transport in semi-enclosed shelf sea areas, such as salinity differences (Trümpner, 2011) and seas with one-way semi-circular current patterns, can easily be circumvented by ships crossing such areas (van der Meer et al. 2013).

5 Invasions of aquatic invasive species have a global impact and efforts are made at all levels to counter the consequences. Many vulnerable marine areas that are situated off the coasts of developing countries are frequently exposed to biological invasions, while they are particularly vulnerable to them. Developing countries have taken initiatives to assess the vulnerability of species and habitats and to develop conservation plans and protective regimes for such areas, such as the work accomplished by Angola, Namibia and South Africa within the framework of the Benguela Current LME with regard to ballast water management (GESAMP, 2007, p 50, p 73-74).

6 Several developing countries throughout the world have developed National Status and Economic Assessments to serve as a basis for a National Task Force to implement a National ballast water management strategy. Such initiatives have been integrated at a regional level too. Many regions (South Asia, East Asia, the Mediterranean Sea, the Red Sea and the Gulf of Aden, the Black Sea, the Caspian Sea, West and Central Africa, the South Pacific, and the wider Caribbean region) have developed and, in some cases, adopted Regional BWM Strategy and Action Plans (<http://globallast.imo.org/>).

7 The links between environmental conditions and ship movements are relevant to invasive species transport (Keller et al. 2011b). Ports in different areas of a hydrologically non uniform region can act as stepping stones for further distribution of viable species that were earlier brought from outside the region to the first port of call in the region. Another relationship between shipping movements and species transfer is the number of individuals per released water volume and the release frequency, both of which will increase the risk that a viable species is able to become established in the release area (Dunstan and Bax, 2008).

## **Conclusion**

8 As organizations that aim for conservation and environmental protection, we are very concerned by the continuing increase of the transfer of invasive species by ballast water and therefore call on the global forum to step up their efforts to rapidly ratify the BWM Convention and to stimulate and assist others to also achieve the level of confidence they need to ratify.

## **Action requested of the Committee**

9 The Committee is invited to take note of this document, to encourage rapid ratification of the BWM Convention, and to take action as appropriate.

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## ANNEX

### References:

Dahlstrom, A., Hewitt, C.L., Campbell, M.L., 2011. A review of international, regional and national biosecurity risk assessment frameworks. *MAR. POL.* 35(2), 208-217.

Dunstan, P.K., Bax, N.J., 2008. Management of an invasive marine species: defining and testing the effectiveness of ballast water management options using management strategy evaluation. *ICES J. MAR. SCI.* 65(6), 841-850.

EEA (European Environmental Agency), 2012. The impacts of invasive alien species in Europe, Technical report No.16/2012.

GloBallast Global Partnerships, 2013 <http://globallast.imo.org/>

Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP). (2007). Report of the Thirty-Fourth Session of GESAMP. Paris 8-11 May 2007. Reports and Studies, GESAMP No. 77. [http://www.gesamp.org/data/gesamp/files/media/Publications/Reports\\_and\\_Studies\\_77/gallery\\_1040/object\\_1040\\_large.pdf](http://www.gesamp.org/data/gesamp/files/media/Publications/Reports_and_Studies_77/gallery_1040/object_1040_large.pdf)

Keller, R.P., Geist, J., Jeschke, J.M., Kuhn, I., 2011a. Invasive species in Europe: ecology, status, and policy. *Environmental Sciences Europe*, 23:23; 17 pp.

Keller, R.P., Drake, J.M., Drew, M.B., Lodge, D.M., 2011b. Linking environmental conditions and ship movements to estimate invasive species transport across the global shipping network. *DIVERSITY DISTRIB.* 17(1), 93-102.

Trümpler, K., 2011. Implementation of the BWMC. SOWOS Conference No. 5 Hamburg, held on November 25, 2011.

Tsolaki, E., Diamadopoulos, E., 2010. Technologies for ballast water treatment: a review. *J. CHEM. TECHNOL. BIOTECHNOL.* 85(1), 19-32.

van der Meer, R., Liebig, V., Ree, C.M., ten Hallers-Tjabbes, C.C., Veldhuis, M., 2013. Unwelcome at the other side. Evaluating ballast water management exemption strategies in the North Sea region and ballast water risk modeling. Submitted.

Vila, M., Basnou, C., Pyšek, P., Josefsson, M., Genovesi, P., Gollasch, S., Nentwig, W., Olenin, S., Roques, A., Roy, D., et al. 2010. How well do we understand the impacts of alien species on ecosystem services? A pan-European, cross-taxa assessment. *FRONT. ECOL. ENVIRON.* 8(3), 135-44.

WWF, 2009. Silent Invasions. The spread of marine invasive species via ships' ballast water. WWF International, Gland, Switzerland. 19 pp.



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