INTERNATIONAL MARITIME ORGANIZATION

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MARINE ENVIRONMENT PROTECTION COMMITTEE
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Agenda item 2

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HARMFUL AQUATIC ORGANISMS IN BALLAST WATER

Workshops on organism detection technologies, compliance control, monitoring and enforcement and ecotoxicity testing during land-based testing

Submitted by Denmark, Germany, Netherlands, Norway and United Kingdom

SUMMARY

Executive summary:	This document provides information on the outcomes of five workshops organized within the Interreg IVB North Sea Ballast Water Opportunity Project. They covered organism detection technologies according to the organism categories of regulation D-2 of the Ballast Water Management Convention, information on compliance control, monitoring and enforcement (CME) and discussed the challenges of ecotoxicity testing during land-based testing.
Strategic direction:	2.0
High-level action:	2.0.1
Planned output:	2.0.1.2
Action to be taken:	Paragraph 10
Related documents:	MEPC 58/23; MEPC 63/23; MEPC 64/2/15, MEPC 64/23; BLG 14/INF.6; BLG 15/5/1, BLG 15/5/5; BLG 17/4 and BLG 17/4/1

Introduction

1 Regulation D-2 of the annex of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWMC) sets the performance standard for discharge of ballast water, related to maximum concentrations of viable organisms. Consequently, reliable organism detection methods need to be developed, and effectively and uniformly implemented to prove compliance or non-compliance for each organism size category addressed in regulation D-2. In pursuit of this goal, options for standard practices are still under discussion.

2 In the context of the North Sea Ballast Water Opportunity Project (NSBWO) within the European Union Regional Development Fund Interreg IVB Programme, project partners organized a series of workshops on organism detection technologies, compliance control, monitoring and enforcement (CME) and ecotoxicity testing.

Workshops on the detection of ≥ 50 µm organisms, organisms 10 to 50 µm and organisms ≤ 10 µm

3 During the years 2010 to 2013 three NSBWO workshops addressed different organism detection technologies, covering the three organism categories according to regulation D-2 of the annex of the BWMC. The "Workshop on Aspects of Certification and Compliance Enforcement Purposes: Counting Zooplankton greater than or equal to 50 µm" took place at the Royal Netherlands Institute for Sea Research (NIOZ), Texel, the Netherlands from 18 to 22 October 2010. Participants from different test facilities and ballast water related institutes discussed different methods for sampling and measuring viable organisms greater than or equal to 50 micrometres in minimum dimension. In addition, quality management and quality assurance and the process of reporting results were reviewed. The discussions did not result in a detailed template of a standard operating protocol or procedure for this plankton size fraction. The workshop brought forward a number of recommendations to the authorities and to IMO as well as a concise summary on sampling and analytical methods.

4 The "Ballast Water Workshop 10-50 µm: Phytoplankton – Microzooplankton" was held at Moss Landing Marine Laboratories, California State University from 28 to 31 March 2011. Participants shared their experiences related to ballast water testing procedures, in evaluating live numeric counts of viable organisms per millilitre of test water, within the < 50 micrometres and ≥ 10 micrometres in minimum dimension (10-50 µm) range. Experiences relating to quality assurance and quality control procedures and the determination of the organism size (minimum dimension) were also discussed.

5 The "Workshop on Testing of Ballast Water Treatment Systems Performance regarding Organisms below 10 Micron in minimum dimension" was held at the Minnesota Pollution Control Agency (MPCA), Duluth, United States, from 19 to 20 September 2012. Amongst others, participants addressed current and potential relevance of indicator microbes to Ballast Water Management System testing (land-based, shipboard and compliance testing). They also discussed current and emerging methods for the detection and assessment of the viability of indicator microbes and other organisms below 10 µm in minimum dimension and the possible harmonization of future tests of ballast water management systems with regard to this category of organisms.

6 The workshop reports are available on the website of the NSWBO project: http://www.northseaballast.eu/inorthseaballast/1912/5/0/82. To access the website of the Interreg IVB North Sea Ballast Water Opportunity Project please register at http://www.northseaballast.eu/northseaballast/1882/5/0/82.

Workshop on compliance control, monitoring and enforcement (CME) and workshop on ecotoxicity testing during land-based testing

7 At the "Workshop on Compliance Control, Monitoring and Enforcement", which took place in Hamburg, Germany, on 7 March 2013, participants discussed the most promising techniques for ballast water investigation according to the requirements of the BWMC. In addition, the German Federal Marine and Hydrography Agency (BSH) presented the outcome of its competition "Effective new technologies for the assessment of compliance with the Ballast Water Management Convention". The BSH initiated this competition to identify promising technologies for the assessment of compliance of ships with the D-2 standard of the annex to the BWMC.

8 A "Workshop on Ecotoxicity Testing during land-based Testing" was held in Den Helder, the Netherlands, from 18 to 20 June 2012. The workshop made an attempt to harmonize toxicity testing of discharged ballast water during land-based testing for type approval. The participants thoroughly discussed a general test scheme, sampling procedures and the issue of sample treatment. Test types, test species, test conditions and matters arising from quality assurance and quality control were also reviewed. They agreed that a checklist of test species and associated quality assurance (indicators/processes) was needed. Furthermore, the workshop concluded that a minimum guideline for toxicity testing on treated ballast water (Whole Effluent Toxicity testing, or WET-testing) would be advantageous and that inter-laboratory ring tests as a means of external quality control should be considered.

9 The reports of the "Workshop on Compliance Control, Monitoring and Enforcement (CME)" and the "Workshop on Ecotoxicity Testing during land-based Testing" are available on the website http://www.northseaballast.eu/inorthseaballast/2519/5/0/82. To access the website of the Interreg IVB North Sea Ballast Water Opportunity Project please register at http://www.northseaballast.eu/northseaballast/1882/5/0/82.

Action requested of the Committee

10 The Committee is invited to take note of the information contained in this document.