

Emerging Risks from Ballast Water Treatment

For the reduction of aquatic invasive species, the International Ballast Water Convention requires the treatment of ships' ballast water prior to discharge. The approval procedure for ballast water treatment systems by the International Maritime Organization (IMO) aims to ensure their acceptability for human health and the aquatic environment. The majority of systems approved to date are based on oxidative principles, which produce disinfection by-products (DBP). Several DBP are known to produce cancer in animals, others are poorly characterized with respect to their long-term toxicity. Little is known about their impact on marine environments. This conference will focus on the formation of DBP by ballast water treatment systems and discuss strategies for improved human health and environmental risk assessment.

Programme

Wednesday, 19 October 2011

13:00 – 13:15

Welcome address

Andreas Hensel, President of BfR

Introduction

13:15 – 13:45

Objective and context of the conference

Thomas Höfer, BfR

13:45 – 14:15

Environmental and health risks of aquatic invasive species

Stephan Gollasch, GoConsult, Germany

14:15 – 14:45

Ballast Water Convention - introduction and status quo

Dandu Pughiuc, International Maritime Organization (IMO)

14:45 – 15:45 *Coffee break*

Treatment principles

16:00 – 16:30

Ballast water treatment principles: overview

Stefan Kacan, Federal Maritime and Hydrographic Agency (BSH)

16:30 – 17:00

Fine tuning of ballast water treatment

Marcel Veldhuis, Royal Netherlands Institute for Sea Research (NIOZ)

17:00 – 17:30

Kinetic and mechanistic aspects of disinfection by-product formation: role of water matrix parameters

Urs von Gunten, Swiss Federal Institute of Aquatic Science and Technology

Thursday, 20 October 2011

Exposure to disinfection by-products

9:30 – 10:00

DBP formation during ballast water treatment

Barbara Werschkun, BfR

10:00 – 10:30

Human exposure scenario

Sangeeta Banerji, BfR

10:30 – 11:00

Determining the environmental exposure

Stefanie Wieck, Federal Environment Agency (UBA)

11:00 – 11:30 *Coffee break*

11:45 – 12:30

Dispersion of disinfection by-products released into the sea

Colin Taylor, British Energy

12:30 – 13:00

Monitoring strategies and challenges

Norbert Theobald, BSH

13:00 – 15:00 *Lunch break and poster session*

Hazard assessment

15:00 – 15:45

Disinfection by-products: occurrence, formation, toxicity

Susan Richardson, Athens, GA, USA

15:45 – 16:15

Mutagenicity assays in water

Tamara Grummt, UBA

16:15 – 16:45 *Coffee break*

17:00 – 17:30

Long-term environmental effects of genotoxic substances

Awadhesh Jha, University of Plymouth, UK

17:30 – 18:00

Mixture toxicity: concepts for the assessment of cumulative effects

Thomas Backhaus, University of Gothenburg, Sweden

Friday, 21 October 2011

Risk assessment challenges

9:30 – 10:00

Risk assessment of ballast water treatment systems under IMO procedure G9

Jan Linders, National Institute for Public Health and the Environment (RIVM), The Netherlands

10:00 – 10:30

Assessment of hazardous substances in marine environmental monitoring pro-

grammes - approaches and developments

Michael Haarich, Federal Research Institute for Rural Areas, Forestry and Fisheries

10:30 – 11:00

A holistic view on ballast water management systems

Oihane Cabezas, AZTI - Tecnalia, Spain

11:00 – 11:30 Coffee break

Conclusion and outlook

11:30 – 12:30

Panel discussion: How safe is the current risk assessment? Which challenges remain?

- Susan Richardson, USA
- Marcel Veldhuis, NIOZ
- Jan Linders, RIVM
- Barbara Werschkun, BfR
- N.N.

12:30 – 12:45 Closing remarks and farewell

Thomas Höfer, BfR

13:00 – 14:00 Lunch

Host

Federal Institute for Risk Assessment in cooperation with the Federal Maritime and Hydrographic Agency and the EU Interreg project North Sea Ballast Water Opportunity



NORTH SEA BALLAST WATER

European Union



The European Regional Development Fund

Venue

Federal Institute for Risk Assessment (BfR)
Diedersdorfer Weg 1, 12277 Berlin



Registration

Please register by 30 September 2011 online (<http://www.bfr.bund.de/en/events.html>) or send an e-mail with "Ballast water" to veranstaltungen@bfr.bund.de

A limited number of hotel rooms have been reserved for participants until 31 August 2011 at Relaxa Hotel Stuttgarter Hof, Anhalter Strasse 08-09, 10963 Berlin. We kindly ask you to contact the hotel for booking your room:
Phone: +49 (030) 26483-0
E-Mail: berlin@relaxa-hotel.de
Reference "Ballast water"

Participants are invited to submit an abstract for poster presentation during the conference. Please contact: Barbara.Werschkun@bfr.bund.de

FEDERAL INSTITUTE FOR RISK ASSESSMENT

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Conference

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