THE NORTH SEA BALLAST WATER OPPORTUNITY Project Newsletter

2012/2



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Introduction

This quarter saw the Annual Meeting 2012 (Hamburg, May) with a number of interesting workshops and impressive key note speakers, as reported in this Newsletter. A special report on a separate workshop and the launching of the NORSAS alien species data base is completed by a report on a prize won by a brilliant student. This was also the season where our efforts to promote full transparency in BWM took full swing.

WP1: Project co-ordination

De most important project event was the Annual meeting of the project, Thursday 24 and Friday 25 May. Partner BSH kindly offered to host this year's meeting, which was highly appreciated. The meeting was opened by Mr Rolf von Ostrowski who vey kindly agreed to become Chair of the Steering Group.

At the meeting, all WP-leaders reported on highlights of their work packages (WP) for the project year 2011-2012. As to WP1, the option to extend the project beyond its current official termination date of 31 December 2013 is a major item. All WP leaders were of the opinion that, for several reasons, it would be worthwhile to pursue this option, not in the least because it is likely that the Ballast Water Management Convention of IMO will be sufficiently ratified late 2012 or early 2013, which means that all measures mentioned (Installation of BWTS, Compliance and Control System) should be in place upon





recommendations:

- 1. The steering group recommends that WP 1 investigates options to continue the project after its present finalization date of 31st December 2013, in particular taking into consideration future work that enables the established platform to be maintained, and work on the improvement of existing guidelines and test procedures to be undertaken. To improve transparency in all aspects of ballast water management, policies and regulatory framework for all interested parties. A detailed proposal will be circulated to the SG in time for the next NSBWO annual meeting (AM2013).
- The steering group recommends that WP 6 develops options to continue the website after the end of the project, including a transfer to EMSA as the hosting organization. A detailed proposal will be circulated to the SG in time for the next AM.

In this newsletter

- Annual Meeting 2012
- New Flow Cytometer at NIOZ
- Special: Workshop ecotoxicity at IMARES
- Developing organism detection tools
- NorSas database
- Dissimination products
- 3. The steering group recommends that in the six months of the potential project extension the project will focus its work on dissemination, guidelines G2, G8 and G9, as well as the guidelines on Port State Control and support practical implementation of the convention within the existing deliverables.

The full minutes of the Steering Group Meeting can also be obtained on the project website.

Moreover, five interesting workshops were held: Mathematical modeling of the distribution of surviving organisms after discharge from a ballast tank (WP5), a round-table organism detection techniques for G8/G9 testing and compliance monitoring (WP\$), a ports workshop (WP6), and a workshop on the possibilities to use of social media in disseminating the NSBWO project and its achievements (WP6). More about the workshops in the WP reports.

The progress report on the 6th period of the NSBWO project has been submitted by EM Consult to JTS electronically as well as on paper in the beginning of June. Feedback on the report is expected in late summer (app. end of August).



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WP 3: Science and Testing

Several presentations have been given. Peter Paul Stehouwer was invited to a Becton-Dickinson workshop in Denmark to present NIOZ' experiences with a BD-flow cytometer that has been used in ballast water research. The small BD-Accuri C6 can be used on board ships and is sensitive enough to measure the abundance of bacteria and phytoplankton. Both Peter Paul Stehouwer and Cees van Slooten gave presentations on a second Becton-Dickinson workshop in The Netherlands. In this case Cees' presentation focussed on the use of the BD-Accuri C6 in scientific experiments on active substances.

In April Cees van Slooten won the second price in a BSH-competition for Compliance Monitoring and Enforcement techniques ("Effective new technologies for the assessment of compliance with the Ballast Water

WP3 Special: NSBWO Workshop Harmonisation of ecotoxicity testing of discharged ballast water

As each test facility is characterised by a different water type (climate, salinity, etc.), the basis for ecotoxicity testing is different at the various test facilities. Therefore, the suite of tests applicable will differ, as well as test conditions used. For evaluating different ballast water treatment systems it is important that the ecotoxicity data used for the risk analysis are comparable. Management Convention"). Cees' idea was to measure ATP, present in all living organisms, as a measure of noncompliance. His research on this topic is on-going, and is extended with other techniques such as FDA detection and PAM fluorometry.

In May a new FlowCAM arrived at NIOZ. This flow cytometer is able to take pictures of the particles that are measured, enabling us to see and identify the organisms present in our samples. Together with the FlowCAM the newly built BallastCAM was delivered. This 'simple' version of the FlowCAM is specifically designed to measure viable organisms in the 10-50 μ m size range. Both instruments are currently tested by Leonardo Romero Martinez, a Ph.D. student from the university of Puerto Real (Cádiz, Spain).

In June IMARES organised a workshop

As part of the Interreg IVb project "North Sea Ballast Water Opportunity", IMARES, Wageningen UR hosted a workshop on harmonisation of ecotoxicity testing of discharged ballast water, June 18 to June 20, 2012.

The views of the GESAMP-BWWG (presented by Dr. J. Linders) and a flag state (represented by Dr. S. Wieck, UBA and Dr. S. Kacan, BSH) on data requirements and data quality, were discussed with representatives from test facilities that have to deal with the ecotoxicity tests in practice.

Not only test facilities from the North

on "Harmonisation of ecotoxicity testing of discharged ballast water"; see below in this Newsletter.

Also in June, NIOZ presented a preliminary evaluation of testing techniques as given in IMO guideline G8 to the "Inspection Leefomgeving en Transport" of the Ministery of Infrastructure and the Environment, in preparation of an EMSA workshop on the Type Approval of Ballast water management Systems.



Sea area were represented, but also test facilities from the USA and Korea. The goal of the workshop was to discuss such differences and to come up with a set of basic requirements in order to facilitate the process of risk analysis in the Final Approval procedure.

The main topics addressed were sampling procedures, test type and test species, test conditions and QA/ QC with special emphasis on WETtesting. The results of the discussions will result in a guidance document, to be presented at the GloBal TestNet meeting in November.





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WP4: Science-Detection

The recent activities in WP4 focused on organism detection tools. A comprehensive report to screen candidate technologies has been completed. A wealth of methods is available, but very few of those were developed to identify organisms in ballast water samples. A crucial objective is that organism viability needs to be proven which is difficult for many of the systems considered. This might reflect a discrepancy between the definition of viability as developed in IMO and the scientific definition of viability.

During the Annual Meeting of NSBWO an organism detection workshop was held and the NSBWO partners and subpartners presented the status of their detection tool developments. Good progress has been made to modify organism detection technologies for the purpose of compliance control monitoring with the Convention's standards. However, it seems that organism detection technologies today are more suitable to assess noncompliance with the D-2 Standard by an indicating gross excess in organism numbers. Noting the expertise needed to interpret the organism count by the organism detection technologies considered, it may be advisable that Port State Control officers become involved in sample taking and forward the sample to a laboratory for later analysis rather than analysing the samples and interpreting the results themselves.

NSBWO sub-partner OVIZIO introduced WP4 to the holographic microscopy they developed. Samples were run through the system in a demonstration event in May 2012. A report was jointly prepared to document the suitability of this technology for organism detection in ballast water.

It was noted that several "critical" organisms whose introduction through ballast water should be prevented are below 10 micron in minimum dimension and are therefore not addressed by the IMO ballast water discharge standards. To address such organisms a workshop is planned in copperation with the North-East-Mid-West institute in USA. The workshop is planned for September 2012.







WP 5: Strategies

The first phase of the North Sea Alien Species database (NorSAS) is being launched during the month of May at www.norsas.eu portal. The database provides background information about biological invasions, the alien species status in the North Sea region and the detail species specific information which are reported so far. Species information is compiled from various sources, such as peer reviewed scientific articles, working group reports and web sources such as DAISIE, NOBANIS, WoRMS, Algaebase, FishBase, MarLIN, Aquatic Invasions etc. Species specific information includes taxonomy, common names, images of the species, morphological

description, biology, ecology, as well as any notable impact in the North Sea, population and species status in the North Sea, pathways and vectors of introductions, potential management schemes, a GBIF species distribution map (worldwide), a North Sea occurrence map and related bibliographies. The database will be updated continuously on a regular basis with new species information.

The modelling workshop was successfully concluded at the Annual meeting 2012 which was held at BSH, Hamburg. The workshop was well attended by all NSBWO project partners and sub-partners present. Representatives from NIOZ, DHI,



GmbH and GiMaRIS presented their on-going work on modelling around the North Sea region. The presentations provided updates and developments in modelling studies and raised some issues which are of concern when studying the distribution of organisms using modelling applications. The workshop presentations, main findings and conclusions from the workshop are uploaded on the NSBWO project website.



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WP 6: Dissemination

This year we employed an excellent opportunity (Riviera Conference, 24-25 April 2012, London) to draw the attention to the need for full transparency in information on ballast water management to create confidence and trust in the practice and its requirements. The concept was warmly welcomed by representatives from the shipping community and governments. The real concern on transparency in the shipping community became also clear at a conference in Saint Petersburg (Russia, 30-31/05/12) where representatives of the shipping world expressed their concerns raised by being ill-informed on the options to do BWM. At the same conference we presented the NSBWO project, its achievements, impact and future plans.

We continued to participate in the BWExpert Group (NL Ministry of Infrastructure and the Environment, 11/04/12).

This quarter we also held our first

exploratory talks with the organisers of Europort 2013 (16/04/12).

In preparation of the ports workshop at AM12 (24-25 May, Hamburg): we communicated extensively with ports representatives form NL & Belgium, while exploring commitment from other sub partners to the project. The ports workshop was quite successful, with three inspiring speakers from the ports world, enthusiastic participants and clear conclusions on how to follow up. A main observation was that apart from some pro-active ports, most ports kept a low profile as long as a view on rapid ratification of the BWM Convention was lacking.

The 2nd BW Times, focussing on ports, was launched at AM12.

Efforts to find support from the project to launch a BWM game prepared by dissemination team members, did not succeed in the primarily perceived goal, yet revealed clear indicators on what might pose a more successful dissemination product for the project as a whole.

The Dissemination team (ProSEa, Wadden Sea Society, Project LeaderWP6 and NIOZ Communications) continued to meet on dissemination planning, strategies and logistics.

At the Annual Meeting 2012 (24-25 May, Hamburg), apart from reporting on the activities of the last year and future plans, two dissemination workshops were held, one on ports (organised by CaTO, cf above) and one on new media (organised by ProSea).

The ProSea Foundation continued to inventory of the needs of the sector (shipping) by continuing interviews with representatives from the sector.

At the Interreg North Sea Annual Conference (June 18-19, Bremerhaven) we presented our experience with international impact and how to create such spin off.









