



March 2011 Report: Activity: Ballast Water Opportunity (resubmission)

Internal Filing Number Periodic Report number

Name of project:	Ballast Water Opportunity (resubmission) (extension)
Project acronym:	Ballast Water Opportunity (resubmission)
ID journal number	35-2-50-08

Summary on Progress

The project has now completed the first two years. As in previous periods the project keeps attracting international attention. The highlight of this was certainly the plenary key note lecture by Prof. Marcel Veldhuis (NIOZ) at the major international IMO GloBallast ballast water meeting in Singapore.

The accent of the work is clearly shifting. Where initially the focus was on establishing the knowledge transfer centers, the test bed and exchange of information, ideas and experience, it is now participating in resolving issues at a high level e.g. IMO.

Examples are the workshops and reports on scaling of UV systems, toxicology of UV, CI systems and inert gas but also the harmonisation workshops on certification focusing on the different classes of organism from the convention. All these are leading to reports that are or will be submitted to the IMO and various other papers.

As a network, the project is still expanding. More and more companies find their way to the project. Mainly developers of ballast water treatment systems, but also developers of detection technology. Further, also the stakeholders both from outside and inside the North Sea Region are making contact with the project. At this moment this list exceeds 143 organisation that have directly actively contacted the project network.

With the new dissemination plan also dissemination will become more focused on the target groups, ship owners, ship yards and port authorities. In the next reporting round more and more communication activities will be geared towards these groups.

1. Beneficiary and project information

Beneficiary information

Extended deadline for submission of report	
Required submission date	16/05/2011
Final Report is expected to be delivered	31/03/2014

Lead Beneficiary information

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Project number	35-2-50-08	Priority	2 - Promoting the Sustainable Management of our Environment
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Project website	ERDF	5.698.719
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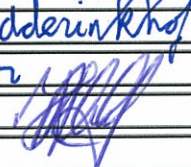
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Certification by Lead Beneficiary

Name	Prof. dr. ir. H. Ridderinkhof
Position	Deputy Director
Signature	
Date	31-5-2011

2. Time period (6 months)

This Activity report covers the time period from	01/09/2010	To	28/02/2011
Extended implementation period		To	

3. Changes and other project issues

3.1 Changes process

Have any of the changes below been made during the reporting period	Yes
Have the changes been processed using the above listed process	No
Change of contact details	Yes
Changes of activities in the work packages	No
Change of partnership	No
Change of project timeline (new project timeline)	Yes

3.2 Other project issues

Incompletion of a work package	No
Addition of an Indicator	No
Publicity	No
Activities outside the Eligible Area	Yes
Comments	
<p>Changes during this reporting period (and also some from before) have not been processed according the listed process, because that is impossible. The changes #2 are still pending. The project does have several changes that will be filed through the online system as soon as that is possible.</p> <p>Project timeline changes for: D2.1, D4.x and the communication and dissemination plan.</p> <p>Two memoranda are added. One containing the changes. This will be send to JTS 2 days before locking the online system. One containing delays and remarks from JTS.</p>	

4. Work packages/activities

4a. Work packages and activities
<p>See enclosure 1.</p> <p>To aid in management and control a flowchart of who is doing what and what the connections between the WPs are, will be designed.</p>
4b. Activities outside the eligible area (that were listed in Q2.4 of the approved application form)
<p>BSH attended the 2nd international Fresenius Conference on Environmental Risk Assessment for chemicals and Biocides in Frankfurt. BSH contributed to this conference with a presentation. BSH also generated new contacts which contribute to deliverable D2-3.</p>
4c. Activities or travels outside the eligible area (that were not listed in Q2.4 of the approved application form)
<p>People from NIOZ, BSH, GoConsult and Imares visited the 17th 5th International Conference & Exhibition on Ballast Water Management (ICBWM) in Singapore ICBWM Global Test Facility Forum 2010 conference in Singapore. Several partners gave a presentation. The costs for this conference were not used to generate ERDF and are paid by the organisations. As a result of this meeting NIOZ discussed further collaboration and exchange of expertise with various representatives of Singapore, China and Japan.</p> <p>Olof Linden (WMU) visited the IMO Globallast Water Project Secretariat (United Kingdom) to discuss progress in the BWO project. The costs are not used to generated ERDF.</p> <p>GoConsult undertook some sea voyages outside the eligible area, to do research. These activities are provided as in-kind contribution to the project and no EU-Interreg funding was used.</p> <p>ERDF is generated during this period for two visits outside the eligible area that will benefit the project and the North sea region. Both were approved by the coordinator.</p> <p>1. Mr. Van Hecke of Cytobuoy participated in the first Dymaphy calibration exercise in Wimereux, France (1-2- December 2011). They participate in the project but are not a partner but provider, thus their costs would not have been paid by the Dymaphy project. The workshop contributed to the further development of a ballast Water Test System.</p> <p>2. People from BSH went to San Fransisco to inspect the training ship "Golden Bear" of the California Maritime Academy in Valejo and to exchange experience on sampling procedures of testing ballast water management systems.</p>

5. Completion of a work package

Completed Work Packages

6. Transnational approach

How has the project ensured transnationality in its approach during the reporting period?
<p>The work in the project is transnational by nature. It affects the maritime industry and policies that are transnational by itself. All initiatives involve participants from different levels of government, scientists and industry. All countries within the North Sea Region (NSR) and many countries outside this region are involved.</p> <p>Through working groups in WP2 and the joint collaboration in WP3, 4 and 5 (science, industry and government), transnational participation is ensured.</p> <p>Subsidised by NIOZ, two graduate students from the Vrije Universiteit Amsterdam are researching the transnational effects of the North Sea Ballast Water Opportunity Project.</p> <p>The Annual Conference was attended by many participants from Europe, but also from Korea and USA. And more and more people and</p>

companies find NIOZ and other project partners looking for information and advice on BWT systems._

Examples of the transnational approach of the partners of the NSBWO project are:

NIOZ: increasing request of BWT constructors all over the world for using the pilot test bed. On the other hand various national administrations (Gr, US), port authorities but also ship owners put forward specific requests.

In October NIOZ held a Workshop which also attended by scientists and QAQC experts from other countries (USA, three different research teams).

The BWO project was introduced to the EMSA (European Marine Safety Agency (Lisbon, P). In particular the activities related to Compliance Enforcement as an existing program which can be used on many different levels (administrative, BWT technology, detection technology, risk assessment of invasive species, national and international legislation etc). This resulted in a more formal contact between the project (acting as a group of experts) and EMSA. This resulted in a series of technical submission to the IMO/BLG committee. This will be an ongoing activity.

BSH: Only undertook initiatives in which at least three countries and at least different levels of the Government of the NSR were participating. These initiatives were mainly supported by private scientist and non-Government organizations. The outcome of working groups is regularly reported to international organizations as IMO, HELCOM and OSPAR.

The webpage and the North Sea Alien Species Database (NorSAS) of WMU can be entered from all over the world and in that way contributes to the transnational approach.

GoConsult discussed the North Sea Alien Species List with experts in the NSR, but also outside the NSR during several meetings.

CaTO, GoConsult, NIOZ and BSH are keeping contact and attend meetings and workshops with different international organisations as GloBallast, GTFM, Ballast Water expert group, EMSA, ICES, IMO, MEPC and BLG.

They are also facilitating the project website that is visited by interested parties within and outside the NSR. The number of registrations to this website are increasing and are made by academia, maritime industries, government, NGO's, education & training bodies and developers of technologies.

Dr. Sergej Olenin of the University of Bergen and co-author G. Dubelaar of Cytobuoy wrote a paper "Recommendations on methods for the detection and control of biological pollution in marine coastal waters". This paper will be submitted to the international journal "Marine Pollution Bulletin".

Zebra is having many contacts with organisations that are interested in human pathogen detection. These organisations are from in- and outside the NSR.

During the reporting period (September 2010 to February 2011) a number of important project events and meetings were organised:

September 2010: Joint meeting with the Interreg NSRP JTS and workshops on detection technology (open to all participants). The results of the workshop was used in the key note lecture, given by NIOZ, in Singapore.

January 2011: Management meeting in Hamburg (project group, WP coordinators and management).

February 2011: Annual meeting at university of NewCastle, UK.

7. Transnationality

7a) How have the project partners ensured horizontal and vertical participation?

Horizontal and vertical collaboration is essential in this project. The complex implementations of the IMO Ballast Water Convention can only be achieved through good transnational, horizontal and vertical collaboration.

A list with the transnational partnerships is enclosed (see enclosure 2).

The NIOZ pilot test bed is a link in the development of testing of ballast water treatment (BWT) systems and in the development of tools for monitoring and enforcement authorities. Because of the NSBWO project NIOZ is considered an authority on testing BWT systems and detection of invasive organisms. Therefore scientists, industries and governments maintain contact with NIOZ.

A new working group on IG BWT systems will be initiated to clear the pathway of this technology for adequate testing and Type Approval procedure.

The RV Pelagia (NIOZ research ship) is currently equipped with a ballast water treatment system. The vendor of the BWT system (Hyde Marine/Calgon, US/Ca stationed companies) requested NIOZ to participate in a long term survey on the effects of BWT and operational procedures.

A delegation of the Chinese administration has been invited to discuss potential collaboration on the field test and compliance enforcement.

BSH is a federal agency. Therefore they work closely together with other (sister) agencies in Germany and the NSR. Thus, also their needs are taken into account in this project.

GoConsult attended many meetings around the world. Ship voyages pre-meetings with port authorities, ship owners and manufacturers of treatment systems were attended in Baltic countries, Portugal, UK, NewYork and San Fransisco.

All project partners provide input for the development and design of BWT systems, the development of legislation and the development of enforcement within and outside the NSR.

7b) Are there any difficulties in the partnership?

If a partner wishes to withdraw or change responsibility within/from the partnership please refer to question 4 in the Changes Explanation form

Full beneficiaries:

For the 4th reporting round Ovizio Imaging Systems and Brockmann Consult are not reporting. Both organisations only started recently with their work for the project. Both organisations are contributing to the project and will report in the 5th reporting round.

A replacement has been found for Enviromar. Cathelco, a German UK company will take over this role as provider for cofounding for the test bed and demonstration equipment. ALOI is signed. Change will be filed when possible in the online system.

The problems with 2 of the 3 non reporting beneficiaries (GoConsult, DHI and ImaREST) have been solved.

The implications on the administrative level at GoConsult demanded more work than envisioned. However, as these issues are resolved they have been able to report and provide us with an FLC checked payment claim. These are consolidated in this report.

Within DHI the responsible project co-worker has left and the responsibility was shifted to a new contact person. His first priorities where to set the administrative part of the project in order en arrange a number of changes to allow DHI to efficiently continue their work. They have reported their progress at the annual meeting in Newcastle, thus enabling other participants to contribute and make use of their models. As soon as the BWO website is revised from project support tool to dissemination tool a demo will be embedded. Their report and payment claim are consolidated in this report.

The problems with ImaREST are not yet resolved. They have submitted a first draft activity report on the support in organizing the first annual meeting and setting up the communication and dissemination plan. They have also jointly organized Ballast Water Workshops and contributed to the kick off meeting and both annual conferences. However, they have not submitted a payment claim. They still need to designate an FLC, although they have found accountants willing to fulfill this role. However the major difficulty has arisen as the in kind contribution from their expert members (highly trained professionals) is blocked by UK officials due to UK regulations (as communicated previously in collaboration with John Jordan). Only in July 2011 we can sit down with some of their expert members and the board of ImaREST to find a solution or find a way to replace ImaREST. Replacements are already identified, in case this is needed. As the role of ImaREST focusses on dissemination of project results and consolidation after the project is finished, there are no significant problems in the partnership as a result of their limited contribution.

Effectuated changes in beneficiaries:

Evonik and ProSea are already actively involved in the project, although the changes are not yet formally acknowledged.

The FLC control of the subpartners is being rearranged. The control is expected to be in place by the 5th reporting round. In this it is expected that:

- For the Norwegian subpartners with the exception of NIVA, Ernst & Young Norway will become designated as FLC. To this end the responsibility may be shifted from BSH to NIOZ.
- For Sweden the subpartners will forward their payment claim to the national FLC.
- For Denmark the FLC from DHI will be requested to act as national FLC.
- For Germany the issue is resolved by designation of BDO.
- For the Netherlands the issue is resolved by designation of E&Y.
- For Belgium a solution is sought in collaboration with the Port of Antwerp.
- For the UK the budget is shifted and none of the subpartners claims will be submitted through the UK.

Partnership as a whole:

With finalization of the dissemination plan, we expect that the project will become more outward focused. The first high level stakeholder workshops, after the ballast water week at Malmo, for non-project participants have been planned for May and November, they will also be announced on the interreg NSRP website.

The collaboration with the partners in the work packages is increasing according boarders and sectors.

To gain a more in depth insight in the transnational partnership two master students are investigating knowledge exchange and motivation in the consortium. This will form a basis for reporting, improvement and consolidation of the project.

8. Knowledge transfer and links

8a) Which European /national or other policies has the project contributed towards during the reporting period?

Global:

The project's contribution to the discussion at IMO level is continuing., various papers are in preparation to be submitted. As these become public they will be enclosed in the report.

Europe:

Through contacts with EMSA and through contacts with the involved national administrations and working groups for the marine framework directive (invasive species, eutrofication, that are chaired by project partners) the project is continuing to contribute to Europe. The project also contributes to the EU-biocide directive and REACH. When invasive species are successfully reduced in ballast water, the project will contribute to Natura 2000 too.

North Sea Region:

Through BSH and the Dutch Ministry of Infrastructure and Environment, the project is continuing to contribute to the development of regional (NSR) strategies and policies.

The Cytosense technique of Cytobuoy is now used by the Dutch Ministry of Infrasructure and Environment with the intention to use it in a standard method for surface water monitoring in The Netherlands.

NIOZ will file a proposal on the potential impact of toxic harmful algae forming phytoplankton. This proposal is a part of a new German/Dutch collaboration effort on the problems of bio-invasion in the Wadden Sea.

NIOZ is actively participating in the working group on Exemptions and Exchange zones in the North Sea Region.

8b) Does the project make any links to any current and former programmes and projects during the reporting period? If yes, please present how these links are implemented in your project.

NIOZ participates in MARES – (Doctoral Programme on Marine Ecosystem Health and Conservation) a EU Erasmus Mundus Joint Doctorates project.

Ships as well as ports participating in the ship board test are currently approached to participate in a research program of a full scale genetic analysis of organisms present in treated and untreated ballast water tanks. NIOZ will liaise in this matter after been contacted by researchers from the Station Biologique de Roscoff (France) and Stazione Zoologica 'Anton Dohrn' (Naples, Italy). This activity is scheduled for spring 2011.

BSH participates in the Due Innovator Program sponsored by ESA. This project aims to identify the risks associated with ballast water exchange using satellite technology.

CaTO monitored follow-up inventories in large-scale land-locked saline mesocosm "KP zijk" to draw public attention to the ballast water issues and the NSBWO project.

WMU is closely collaborating with and using data of the partners in DAISIE and HELCOM Baltic Sea Action Plan.

GoConsult became a partner in the newly launched FP7 project VECTORS. This project envisions to make a new coastal alien species list, which can contribute to the North Sea Alien Species Database.

DHI links the NSBWO project with an internal R&D project that is focusing on the development of generic modeling tools combining ABM, classical water quality modeling and hydrodynamic modeling.

CytoBuoy is contributing to the Interreg Deux Mères project Dymaphy as external expert and advisor.

CytoBuoy participates in a project called UV-MON. Full title: An Integrated and Modular Bio-Monitoring Ballast Water Treatment System based on Advanced UV Plasma Technology Delivering Maximum Performance and Lowest System Lifetime Cost. It was awarded in the program: Research for Benefit of SMEs (FP7-SME-2011-1). The coordinator is Paul Luen (CEO), Martek Marine Ltd. This project will benefit and further build on the results obtained during the BWO project.

8c) Have other contacts have been made during the reporting period?

NIOZ has had contact with ship-owners (Holwerda, Flinter, Dockwise) and shipyards (Damen shipyards, IHC). They contacted NIOZ to gain further knowledge.

A group of 4 students of the Maritime Institute De Ruyter, The Netherlands (higher vocational education/polytechnic) did a small research project on ballast water operations off board of ships. Main focus was on the place and time of actual operations and the volume and pressure (see enclosure 3). This project can be extended in the future.

BSH: WP2 is in contact with the relevant Portuguese authority on the assessment of risk for humans from ballast water. WP2 also made contact with the US Coast Guard on technical matters related to implementation of the BWMC. WP2 collaborates with Californian scientists and engineers from the CMA and Moss Landing Institute.

WMU continued its contacts with GloBallast, HELCOM and OSPAR.

CaTO continued its contacts with University of Groningen, ship owners and ballast water treatment system developers.

GoConsult had contact with Prof. Dr. Rubens Mendes Lopes of the University of Sao Paulo, Brazil, who is involved in a developing ballast water study in Brazil. They also had contact with Allan Robinson of Harvey Coleman Ltd. Who presented their tool to take ballast water samples.

Imares together with Dutch authorities is setting up a programme for quick-scan port survey in the Netherlands Antilles.

CytoBuoy is continuing its contacts with Prof. Linda Medlin, Université Pierre et Marie Curie, Paris.

9. Innovation

How has your project contributed to promoting innovation within the North Sea Region during the reporting period?

R&D innovation:

NIOZ: The use of the knowledge exchange centre and pilot test bed at NIOZ provide a strong impulse on innovation and development of new treatment technologies.

A small device to concentrate plankton organisms, without affecting their viability, is currently tested in the laboratory using different types of plankton (phyto- and zoöplankton).

NIOZ has started to monitor the long-term effect of a ballast water treatment system. The institute has therefore equipped its own research vessel with a BWT system in the upcoming period and a variety of ballast water scenarios will be studied over a longer period (years). It is also very likely that NIOZ scientists can use a naval vessel with a different technology onboard for a long-term study too.

BSH and Brockmann are collaborating in a project that uses satellite images for the evaluation of ballast water exchange areas. Results will be reported to IMO.

WMU aims, through research and model studies, to develop innovative mitigation strategies to reduce the effects of acute and chronic outbreaks of invasive species in the North Sea. This will feed directly into the management and monitoring coordinated by national agencies in the North Sea Region. Future functionalities can include an intuitive web-based map of alien species status, a downloadable PDF format of a species specifics and an interactive system where not only scientists but also the general public can participate and contribute to the database.

DHI: The developed methodology on how to combine hydrodynamic modeling, ABM and statistical post-processing techniques for addressing risk assessment of ballast water release and the threat from invasive species is a new innovative approach.

Imares: Marine stagnant mesocosms facilitate assessment of the effects of active substances at community level, thereby bridging the gap between laboratory and field. They are not only suitable for ballast water treatment systems, but also in a broader sense when environmental risks of substances have to be assessed.

Culturing marine species to provide sufficient numbers and diversity of animals for testing the performance of BWMS for G8 Type Approval is innovative. Not only is it important that organisms grow and reproduce, the organisms also need to survive transfer from culture conditions (often indoors) to the test conditions (often outdoors) to ensure good control survival with respect to D-2 criteria. With the gained experience the opportunity window for land-based testing is theoretically extended to 12 months a year at the three salinity regimes described in the IMO guidelines. Additionally, testing at low environmental temperatures is made possible, providing realistic testing schemes with regard to ballast water exchange during winter and at high latitudes.

Zebra: The development of Biomagnetic enrichments methods for human pathogen from sea water, in combination with Real time DNA is new to the project. The goal is to provide robust detection tools for the detection of low amounts of many human pathogens, such as bacteria and

viruses, in sea/ballast water. The combination of immune-beads, High-Five beads and DNA is very innovative. The introduction of the innovative detection tool "ATP measurement of bacterial growth" into the ballast water project, if successful, could prove to be a very powerful and effective detection method. The rapid detection tool for human pathogens is ready for field testing. This field testing is scheduled for spring 2011.

Innovation of policies:

The project contributed on the innovation of (among others):

- Exemptions and exchanges policies in the North Sea;
- Evaluation of UV and Chlorine BWT systems at IMO level;
- Coherence in the implementation of the IMO Ballast Water Convention in the NSR.

GoConsult: Work at sea contributed to the already existing knowledge on how to take representative samples of ballast water onboard, especially during longer sampling times. During longer sampling times organism survival is critical due to the crowding effect (concentration of organisms in a smaller volume of water). The future involvement in shipboard tests of ballast water treatment systems will enable detailed experiments to proof the suitability of organism detection technologies and sample processing approaches onboard.

10. Publicity

10a) What kind of communication and publicity activities have been carried out?

An excel file is included in which the different publications during the 4th reporting period are listed (see enclosure 4). The type of publications listed in this file are:

- Conferences and workshops (presented and attended);
- Presentations at international meetings (scientifically and policy);
- Press releases and publications in magazines.

10b) Have any particular activities obtained particular attention for the project or Programme?

Dr. M. Veldhuis was asked to present the key note lecture in the 17th 5th International Conference & Exhibition on Ballast Water Management (ICBWM) in Singapore.

10ci) If you fulfil the following conditions as beneficiary, you should during the implementation of the operation, put up a billboard at the site of each operation.

(a) the total public contribution to the operation exceeds EUR 500 000; Yes

(b) the operation consists in the financing of infrastructure or of construction operations. Yes

If you have answered both questions with yes, please provide details about the infrastructure or construction and the billboard:

During construction of the pilot test bed no details for a billboard where available. Due to the short construction time non would have been relevant (1week)

10cii) If you fulfil the following conditions as beneficiary you should put up a permanent explanatory plaque that is visible and of significant size no later than six months after completion of an operation:

(a) the total public contribution to the operation exceeds EUR 500 000; Yes

(b) the operation consists in the purchase of a physical object or in the financing of infrastructure or of construction operations. Yes

If you have answered both questions with yes, please provide details about the purchase of a physical object, financing of infrastructure or construction operations and the explanatory plaque

As the instructions are now available a plaque will be installed at the pilot test bed during the open day for "Europa om de hoek" (Europe is just around the corner) at NIOZ on May 13th.

10ciii) All information and publicity measures aimed at beneficiaries, potential beneficiaries and the public should include the following (for small promotional objects points (b) and (c) do not apply):

(a) the emblem of the European Union, in accordance with the appropriate graphic standards, and reference to the European Union No

(b) reference for the ERDF: 'European Regional Development Fund' No

(c) The statement investing in the future by working together for a sustainable and competitive future

No	
(d) as stated in the guidance, the North Sea Region programme logo and related references should be used	No
Please provide details of the information and publicity measures	

14. Communications

Plaque to identify the source of funding
No

11. Indicators

Indicators

Indicators									
14.2i Compulsory Indicators - each of the indicators must be established for the project									
Output/ Result/ Impact	Priority/Programme Indicator description	Description	Unit	Baseline	Project target	Source of information	Reported previously	Reached in total	Reached this period
Raising awareness / dissemination									
Output	transnational dissemination outputs	exhibitions	number	0	1	Appendix 3 WP 5	0	3	3
Output		own events	number	0	5	Appendix 3 WP 2&5	0	11	11
Output		published material	number	36	120	Appendix 3, WP 2,3,4, this includes public and scientific papers, press communications and targeted information	0	25	25
Output		websites	number	1	2	Appendix 3 WP 5	0	2	2
Output		TV and radio appearances	number	0	0		0	3	3
Result	individuals reached by (priority) specific awareness raising activities	exhibitions	number female	0	0	appendix 3, WP5	0	0	0
Result		other	number male	75	1,150	Reached by Priority 1,2,3	0	0	0
Result		other	number female	34	575	Reached by Priority 1,2,3	0	0	0
Result	organisations in target groups reached by (priority) specific awareness raising activities	exhibitions	number	103	395	This includes all from priorities 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 3.1, 3.3 as described in appendix 3 WP 2, 4 and 5, which include shipping companies, ports, technology providers, coastal ecosystems, transport and reduced negative impact on living resources, bio-invasions, urban, rural and coastal communities, port authorities	0	143	143
Strengthening transnational co-operation									
Result	Organisations within and outside the official core partnership involved in the project (i.e. as contributor to activity or output)	activity	number	15	50	Paragraph 8, partners and sub-partners	0	119	119
Result	individuals within and outside the official core partnership involved in the project (i.e. as contributor to activity or output)	activity	number	100	1,000	Appendix 3, WP 2-5	0	120	120

Output	project administration outputs (I): transnational partner management meetings		number	12	15	Appendix 3, WP 1-2	0	21	21
Territorial coverage									
14.2ii Generic Indicators - indicators must be chosen which are relevant for the project									
Output/Result/Impact	Priority/Programme Indicator description	Description	Unit	Baseline	Project target	Source of information	Reported previously	Reached in total	Reached this period
Core activities									
Output	developed:	transnational training	number	2	5	Appendix 3 WP 3-5	0	0	0
Result	individuals in different social and age groups undertaken transnational training	female 18-24	number	0	0		0	1	1
Result		male 25-54	number	10	30		0	0	0
Result		female 25-54	number	5	20		0	0	0
Result		male 55+	number	0	3		0	0	0
Result		female 55+	number	0	1		0	0	0
Output	initiatives that provide or help find investment resources		number	0	1	Appendix 3 WP 3 and 5	0	0	0
Result	complementary financing secured (financing additional to approved project budget)		Euro	5,400,000	12,400,000	see par. 2.4-5 and budget, part is specified in project budget by BWT developers €645,000 secured, €645,000 searched for, duch matchings subsidy €500,000. Private and Public RTD Triggered	0	3,000,000	3,000,000
Output		transnational demonstration projects	number	9	17	Appendix 3 WP 3 and budget; this includes: feasibility monitoring, validation BWMS, Compliance Control and enforcement best practises, BWM implementation knowledge transfer database, NIOZ BWM technology and WMU Emerging Issues and strategies	0	3	3
Raising awareness / dissemination									
Impact	individuals within and outside the NSR with greater awareness of project outputs	male	number	200	2,000		0	219	219
Impact		female	number	100	1,000		0	41	41
Impact	organisations within and outside the NSR with greater awareness of project outputs		number	28	200		0	23	23
Strengthening transnational co-operation									
Output	project administration outputs (II): shared IT systems		number	2	4	Sgared web based administration and 1 to 3 information databases for dissemination of wp 2, 3, 4	0	2	2
14.2 iii. Priority indicators - chose at least 1 output and 1 result indicator									
Output/Result/Impact	Priority/Programme Indicator description	Description	Unit	Baseline	Project target	Source of information	Reported previously	Reached in total	Reached this period
Priority2 promoting the sustainable management of our environment									
Output	contingency plans	new	number	1	2		0	0	0
Output		improved	number	0	1		0	0	0
Output	common databases	new	number	2	2		0	1	1
Output	new transnational model approaches		number	4	9	This includes priority 1, adding 2 to baseline, 4 to target, ind. on tools for transnational technology transfers adopted for RTD exchange	0	2	2

Output	transnational network	new	number	8	27	incl. implementation, of BWMC.this incl all new ad improved transnational networks, alliances, collaborations, etc	0	5	5
Result	land area subject to	transnational management tools	ha	60,000,000	60,000,000	the target is over 60.000.000 tech tranf of BWM and Bio-invasions, tech tranf on BWMS, future ship borne invasions.	0	0	0
Result	sea area subject to	transnational management tools	ha	500	2,000	ports	0	0	0
Result	Coastline subject to	transnational management tools	km	30,696	35,696		0	0	0
Result	new technologies /pilots to reduce pollution and manage risks transferred transnationally and implemented		number	6	14	incl. BWM monitoring, BWM treatment systems, early warning and mitigation	0	3	3
Environmental Indicators									
Output/ Result/ Impact	Priority/Programme Indicator description	Description	Unit	Baseline	Project target	Source of information	Reported previously	Reached in total	Reached this period
	Environmental issues								
	Biodiversity, flora and fauna	Natura 2000 areas affected	number	0	0	All known maritime areas and all new areas during and after the project period	0	0	0

12. Enclosures

Enclosures		
Format e.g. book, CD, DVD etc	Description	No. of pages/photographs
Publication	Enclosure 4j: Weekblad Schuttevaer 13-06-2009	1
Publication	Enclosure 4i: Hamburger Abendblatt, Stader Tagesblatt 24-03-2009	1
Publication	Enclosure 1h: Schiffbau 24-03-2009	1
Publication	Enclosure 4f: Helcom Maritime paper November 2010	95
Publication	Enclosure 4g: Schiff&Haven Feb 2011	2
Publication	Enclosure 4e: Technisch Weekblad 13-02-2010	1
Publication	Enclosure 4d: Spits 08-09-2009	1
Publication	Enclosure 4c:Telegraaf 08-09-2009	1
Publication	Enclosure 4b: Maritiem Nederland 6-7-2009	1
Publication	Enclosure 4a: Texelse Courant 29-05-2009	1
Excel file	Enclosure 4: List of publications and presentations	Excel file
Report	Enclosure 3: Student report "Test installation ballast water" Maritime Institute "De Ruyter". Front Page only	1
Excel file	Enclosure 2: List of transnational partnerships	Excel file
Document	Enclosure 1k: Action plan dissemination	10
Document	Enclosure 1j: Dissemination plan	33
Report	Enclosure 1i: Report on detection technologies	16
Poster	Enclosure 1h: Imares presentations mesocosm studies	2
Photobook	Enclosure 1g: Overview use of NIOZ test bed 2009-2010 Front Page only	1
Flyer	Enclosure 1f2: Mahle product flyer	15
Document	Enclosure 1f1: Mahle product description	15
Presentation	Enclosure 1e: Key note lecture ICBWM Singapore, M. Veldhuis	30
Report	Enclosure 1d: Workshop report harmonisation >50um	18
Paper	Enclosure 1c: Submitted Scaling Paper	14
Report	Enclosure 1b: Report on harmonisation test facilities	24
Report	Enclosure 1a: Minutes of the 3rd Steering Group meeting and Annual Conference	4
Table	Enclosure 1: Table for part 4a "Work packages and activities"	18

Finalise

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