

3. Project strategy

3.1 Origin of the project

3.1.1 Is the project a follow up of any of the projects financed under any of the EU financed programmes?

no

3.1.2 Predecessing project name/acronym

3.1.5 Project background

The governments of the Baltic Sea countries adopted the HELCOM Baltic Sea Action Plan (BSAP) at a Ministerial Meeting on 15 November 2007. One of the four priority areas within HELCOM's work is to reduce the pollution by hazardous substances with the goal to achieve a "Baltic Sea with life undisturbed by hazardous substances". Hazardous substances in the marine environment cause adverse effects on the Baltic Sea ecosystem, such as health problems and impaired reproduction of animals. The Baltic Sea countries have agreed to develop national implementation programmes which would include the needed measures to reach the ecological goal. The sources, inputs and cost effective solutions for reduction of the hazardous substances of concern to the Baltic are, however, still largely unknown. The countries around the Baltic Sea need to jointly identify the sources, assess and develop the necessary common actions in order to reach the targets of the BSAP with regard to hazardous substances.

All HELCOM Contracting Parties have given their support to the proposed project at the highest policy level in March 2008, as it will provide input to the implementation of the BSAP. The BSAP will also be the instrument to implement the EU Marine Strategy Directive in the Baltic Sea Region.

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3.2 Specific problem to be addressed

The HELCOM BSAP addresses 11 hazardous substances of specific concern to the Baltic Sea. The information available on the sources, inputs and management options does, however, not allow for development of programmes of measures addressing these substances in the whole Baltic Sea region. There is a need to jointly evaluate the major sources and to quantify the inputs of the target substances to the Baltic Sea in order to be able to develop the measures needed to reduce the levels of contaminants in the Baltic Sea to an acceptable level. There is also still a lack of knowledge especially on the Eastern side of the Baltic Sea to control hazardous substances, both within authorities and industries. To raise the awareness there is a need to develop technical guidelines for e.g. environmental permitting addressing hazardous substances and to enhance the capacity of the authorities to introduce restrictions of uses of hazardous substances.

Monitoring of single chemical substances is extremely expensive and the majority of effluents comprise a mixture of chemicals, the effects of which are poorly understood. Therefore there is a need to investigate the possibility to regulate discharges on the basis of direct assessments of the biological effects of the effluents by means of bioassays, to complement the chemical analyses, which would be a cost effective monitoring method. The Whole Effluent Assessment (WEA) method differs from the chemical-specific approaches, because it requires no knowledge of the effluent composition, nor does it set out to regulate defined chemicals or groups of chemicals, but it gives a total picture of the chemical load.

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3.3 Objective(s) of the project

The overall goal of the project is to support the Baltic Sea countries in jointly implementing the Baltic Sea Action Plan with regard to hazardous substances, and to enhance the application of the ecosystem approach also to the management of hazardous substances. The aim is to:

- identify the most important sources of the selected hazardous substances, identified as being of specific concern to the Baltic Sea
- to analyse the flow patterns from production, processes and uses as well as to quantify inputs to the Baltic Sea of hazardous substances and to develop recommendations adopted by HELCOM for cost effective management options to reduce the discharges, emissions and losses of the selected hazardous substances.
- provide input to the development of national implementation programmes, serving also the requirements under the EU Water Framework Directive
- provide input to the HELCOM integrated assessments on hazardous substances as a basis for decision making

The aim is also to develop innovative toxicity based cost-effective monitoring practices based on the Whole Effluent Assessment (WEA) approach. One important aim is also to enhance the capabilities especially on the Eastern side of the Baltic to control hazardous substances by knowledge transfer of best practices and capacity building for authorities and industries

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3.4 Expected results of the project

3.4.1. Common result(s) and output indicators

3.4.1.1. Identification of common result(s) and output indicators

Common result		Output Indicators
Increased political recognition	✓	Number of politicians directly involved in project activities
		Number of open public events with politicians participation
		Number of political statements to be endorsed, resulting from project activities and signed within the project lifetime
Increased sustainability of transnational co-operative structures		Number of established transnational co-operative structures based on official agreements (networks, platforms, fora, councils etc)
Unlocking investments		Amount (EUR) of investments realised with Programme's funding within the project lifetime
		Amount (EUR) of investments realised with other than Programme's funding within the project lifetime

3.4.1.2. Specification of output indicators for selected common results

The results and progress will be presented at HELCOM Stakeholder events held in conjunction with annual Commission meetings and the International Baltic Sea Day arranged annually in St. Petersburg with some 400-500 participants, including national parliamentarians from most Baltic Sea countries, MEPs, representatives of organisations such as Baltic Sea Parliamentarians, CBSS, ministries etc.

The Baltic Sea Day produces statements for the arranged round tables which will then be commonly adopted. The project will be present during 3 international Baltic Sea days and hazardous substances will be one of the round table issues.

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3.4.2 Priority Specific Results

Acronym: COHIBA Index: -- Version: 30/05/2008

Priority 3 Specific Results		Code	Result Specification
Improved institutional capacity and effectiveness in water management in the Baltic Sea	✓	3.1	The project will provide a joint assessment on the major sources and recommendations for cost effective measures to reduce the input of hazardous substances of specific concern to the Baltic Sea as basis for decision making.
Increased sustainable economic potential of marine resources	✓	3.2	Reduced pollution by hazardous substances will improve the viability of Baltic Sea wild life and other resources, such as fish resources, which today are partly restricted.
Improved institutional capacity in dealing with hazards and risks at onshore and offshore areas	✓	3.3	The transfer of knowledge on best practices for chemical controls will improve institutional capacity, especially on the Eastern side of the Baltic Sea.
Influenced policies, strategies, action plans and/or regulations in the field of management of Baltic Sea resources	✓	3.4	The project will provide joint input to the implementation of the HELCOM BSAP in order to reach "A Baltic Sea undisturbed by hazardous substance" serving also the purposes of the proposed EU Marine Strategy Directive. The results of the project will influence the development of the national implementation programmes required by the BSAP.

3.4.3 Additional results

Additional Results
The project will develop a draft recommendation for adoption by HELCOM on the principles of how to include whole effluent toxicity testing and limit values for the effluent toxicity providing a innovative tool in the environmental monitoring of effluents, having a potential to drastically reducing associated monitoring costs.
The project will develop a draft recommendation on harmonised chemical and ecotoxicological methods for adoption by HELCOM in the Baltic Sea region in order to have comparable and reliable results for assessments and evaluation of sources for hazardous substances, serving also the purpose of the EU WFD
The project will raise capacity and competency at state authorities and industry in the four new EU member States and Russia on hazardous substance management for chemical control by knowledge transfer of best practices;

Acronym: COHIBA Index: -- Version: 30/05/2008

3.5 Main outputs of the project

Category	Specification	Corresponding result code	To be tested	To be transferred (utilised elsewhere)	Total number per category
Guidelines and manuals	The project will develop fact sheets/substance reports on the 11 substances of specific concern in the BSAP, for adoption by HELCOM, concerning sources and available cost effective measures	3.1			16

	Technical guidance for (IPPC) permits addressing the hazardous substances in de-tails in 4 languages with national variations (EE, LV, LT, PL) plus an English template; a Russia-adopted version formulated as recommendation	3.1		
Preparatory documents for specific investments				
Thematic expertises (including economic analysis)				

Business plans					
Management plans	The project will provide input to the development of national implementation programmes with regard to hazardous substances required by the BSAP in all 9 coastal countries	3.4			1

ICT-based supporting tools					
Territorial development concepts covering at least 3 countries	The project will assess the capacity of the participating countries to sample and analyse the addressed substances and test the toxicity of effluents required by HELCOM and EU, and based on the results develop an investment plant plan to fulfil obligations for chemicals control.	3.4			5
Transnational action programmes or plans	The project will provide crucial input to the implementation of the BSAP	3.4			1

Branding and marketing concepts and strategies for BSR products				
BSR tourism products				

Educational products (e.g. training programmes or methods, curricula, etc.)	The project will produce a set of training courses, guidance materials and publications targeted for the stakeholder groups on the Eastern side reflecting closing the gap of non existing instructions or break down from national legislation to implementation at site level.	3.1			5
	Train the expert teams from the four new members States and Russia for competent project implementation by providing background information, organising study visits etc and accompanying with supporting documents, publications or guidance materials;	3.1			
Others					

3.6 Strategic potential

Do you see that the project has potential to be a 'strategic project' in the BSR Programme 2007-2013?

yes

3.7 Horizontal issues

3.7.1 Transnational approach

joint development

yes

joint implementation

yes

joint staffing

yes

joint financing

yes

3.7.2 Application of integrated territorial approach

The project has a strong transnational character aiming at jointly assessing the necessary measures to reduce the input of hazardous substances in order to reach a good ecological status; "a Baltic Sea undisturbed by hazardous substances. The economic situation as well as production and use patterns of chemicals differs hugely in the different Baltic Sea countries implying that the measures to reduce and eliminate hazardous substances might differ from country to country. However, there needs to be joint assessment of the cost effective measures needed to reach the target for our common sea. Hence, the project aims at providing input for joint development of national implementation programmes with regard to hazardous substances, serving also the implementation of the proposed EU Marine Strategy Directive.

The project further aims at developing harmonised assessment methods of hazardous substances in the Baltic Sea region serving also the implementation of the EU Water Framework Directive purposes on identification and control of hazardous substances.

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3.7.3 Impact on environment

The project will have a positive impact on the environment. The project aims at identifying sources and reducing the discharges, emissions and losses of hazardous substances jointly by all Baltic Sea coastal countries in order to reach levels in the Baltic Sea that fulfilling the goal of the HELCOM Baltic Sea Action Plan. The project will develop recommendations for cost effective management measures, including pilot industries with the aim to provide input to the development of national implementation plans serving also the programmes of measures under the EU WFD for hazardous substances.

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3.7.4 Promotion of equal opportunities

The project is neutral with regard to equal opportunities

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3.8 Durability and transferability of project results

3.8.1 Durability of project results

The durability of the results is strongly ensured in the project as it will be carried out closely linked to the regular work of HELCOM. The HELCOM work and structure will be utilised and the progress and results will be considered both by the policy (decision making) and expert level ensuring 1) wide input from different stakeholders and coordination with other ongoing activities nationally, regionally and globally 2) the coordination of different activities within the project, 3) timely preparation of agreed outputs and 4) wide distribution and utilization of the outputs of the project ensuring durability of the results. The project output for e.g. management measures will be delivered to HELCOM for adoption as HELCOM recommendations. HELCOM has already approved the project as support for implementation of the BSAP, which ensures that the jointly evaluated management options will be considered in the development of national implementation programmes.

The project aims at capacity building and knowledge transfer to the eastern side of the Baltic to enhance the control of chemicals in future according to best practices in the region.

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3.8.2 Durability through investments

The project will elaborate investment proposals related to state monitoring programmes and to laboratory capacities for participating countries, especially on the eastern side of the Baltic Sea, where the largest needs have been identified already during project preparation. Pilot studies in industries (focussing on largest emission sources among industry branches) will bring general guidance about investment planning in each country for an optimised reduction strategy for the selected substances.

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3.8.3 Extension stage

There are no plans an extension stage at this moment

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3.8.4 Transferability of project results

The results on the identification of sources and measures for the target substances to be provided reports can be valuable information for the implementation of e.g. the EU Water Framework Directive also in countries outside the Baltic Sea Region.

The developed recommendations for adoption by HELCOM on the principles of how to include whole effluent toxicity testing and limit values for the effluent toxicity in environmental monitoring could be transferred for consideration e.g. in the OSPAR region or utilised under the EU WFD.

The project results can be further transferred to other non-EU neighbouring countries with a similar background situation from former USSR times like Ukraine, Belarus etc. Technical guidance and other documents prepared in the project in Russian language can be used in all EECCA region and in other regions of the Russian Federation.

Pilot studies in industries will provide transferable knowledge on management options which can be used by other plants.

Knowledge on the efficiency of different treatment methods in the municipal waste water treatment plants in the case studies can be used with regard to the target substances by dissemination of this information through EUREAU.

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3.9 Possible constraints

There are no foreseen constraints to the project activities

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3.10 Work Plan

Acronym: COHIBA Index: -- Version: 30/05/2008

3.10.1 Description of activities co-financed from the programme

W O R K P A C K A G E 0	WORKPACKAGE 0	
	Name	Preparation activities
	Partners	SYKE has been leading the preparation activities, BEF, HELCOM
	<p>The preparation of the projects has been carried out lead by SYKE, in close cooperation with the HELCOM Secretariat and other involved partners in order to involve all Baltic Sea coastal countries. In the preparation due consideration has been given to the necessary actions identified and included by the HELCOM countries into the Baltic Sea Action Plan. This ensures the support for the activities to the implementation of the Action Plan, as well as other international obligations such as the EU Water Framework Directive.</p> <p>Emphasis has been put on the interlinkage of the different Work Packages and the composition of partners around the Baltic Sea, with representation of different stakeholders from ministries, industries and national institutions</p>	
	<p>The preparation has included travelling of the Project Manager to Russia and Sweden in order to define the specific tasks included in the project. Also a project preparation work shop has been arranged on 24 April 2008 in the premises of the lead Applicant SYKE in Helsinki, to define the interconnection of the different activities plannned in the work Packages.</p>	

WORKPACKAGE 1	
Name	Project Management and Administration
Partners	SYKE will have the overall responsibility. BEF will coordinate on the Eastern side and Helcom structure will be utilised.
W O R K P A C K A G E 1	<p>SYKE will have the overall management role in the project and will be responsible for coordination as well as financial and day-to-day management. SYKE has wide experience from coordinating international projects. Each Work Package will have its own leader, who will manage and monitor the activities of this WP. Although the Work Packages are interrelated, they may be considered as entities for managerial purposes. Work may be distributed over a number of experts from partners involved in the WP. In WP 3 (case studies) a stakeholder target group in each country will be established, with one main contact nominated. The case studies will both produce input to the other Work Packages and form an activity utilising results produced in the other Work Packages for national purposes, e.g. technical guidelines.</p>
	<p>In the Baltic States BEF will have a coordinating role serving as a link between the different Work Packages and the case studies, in order to ensure that outputs will be communicated and utilised in best possible and cost effective manner.</p> <p>The existing working structure of HELCOM will be used for the overall coordination to ensure adequate feedback and durability of results. HELCOM Heads of Delegation (HODs) will act as an overall steering group on the policy level. The HODs consisting of representatives from 9 Baltic Sea countries and the European Commission, meets twice a year. The progress of the project will be presented and considered by the HELCOM Land-based Pollution group (HELCOM LAND) and the Monitoring and Assessment Group (HELCOM MONAS) with experts from each Contracting Party, which will ensure that input from all countries is taken into account, providing a holistic and integrated approach to the project.</p>
	<p>The use of the existing HELCOM structure in the management and coordination will ensure a) wide input from different stakeholders and coordination with other activities related to the project ongoing in the region 2) the coordination of different activities within the project, 3) timely preparation of agreed outputs and 4) wide distribution and utilization of the outputs of the project. SYKE has experience on coordination of large projects and as an international organisation the HELCOM Secretariat is experienced from coordinating activities of different partners in several countries keeping track of agreed timetables and arranging international stakeholder meetings.</p>
	<p>The project will incorporate the lead partner principle. We will decentralise the financial management arrangements. Each partner will pay its own invoices, arrange time registration, keep records of its part of the project and have its own part audited. Partners will provide the Lead Partner with copies of invoices in order to support their claims. Once the claim has been audited by the partner's auditor, they will submit their claim to the Project Manager. The lead partner will have a complete overview of all incurred expenditure by means of reporting, and will forward an aggregated claim on behalf of the partnership to the JTS Secretariat. Internal reporting to the Lead Partner will take place on a regular basis; reporting to the JTS will take place every six months.</p>
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WORKPACKAGE 2	
Name	Communication and information
Partners	HELCOM will lead this WP. Partners will communicate their information to HELCOM.
Aim	<p>The main aim will be to maintain political back-up for the project activities and to transfer the technical outputs of the project to the decision making level, thus ensuring successful integration of the project results into the relevant national and Baltic-wide policies addressing pollution by hazardous substances. It will also aim at support of improvement of public awareness on actual threats related to pollution of the Baltic Sea by the hazardous substances, which nowadays attract substantial media and public attention. Through the C&I activities the societies around the Baltic will be informed in a reliable, professional and factual way about the risks from hazardous substances to human and environmental health, sources and inputs of hazardous substances to the marine environment, as well as their amounts and pathways. Different Work Packages will communicate their results externally via HELCOM network of governmental, scientific and public communities and international fora.</p> <p>The project results will be utilised to provide decision-makers with supportive information on pollution of the Baltic Sea to be applied to counteract their negative impact on marine environment to the evaluate the cost efficient management options and as input in planning of programmes of measures.</p>
Description of work package activities	
<p>The main target groups are politicians and decision-makers on national and regional level, primarily from ministries and other governmental agencies responsible for environment, but also from other sectors, and the general public in the Baltic Sea region and beyond. The C&I activities will also aim at reaching cooperation structures similar to HELCOM in other European marine regions to replicate the experience gained within the project.</p> <p>Main communication channel will be HELCOM's regional cooperation structure, covering all Baltic Sea countries and the European Community, consisting of the Heads of Delegation representing political/management level and HELCOM working groups representing expert level as well BSAP Implementation Group. HELCOM co-operation networks beyond its own structure will be used to channel Baltic environmental interests to other international forums and to replicate gained experience and best practices to other marine regions of Europe.</p>	
<p>Activity 1. Communication and Information strategy will be based on the milestones under each of the work package and serve both purposes of delivery of Project results to decision-makers as well as giving feedback to scientific community. It will comprise of 3 tasks:</p> <p>Task 1.1 Development of the Communication strategy will define most appropriate tools to be applied and way to address both policy-makers, research community and general public on the problem of hazardous substances, including its historic perspective.</p> <p>Task 1.2 Project meetings and networks will serve for internal update of the project implementation status and planning of activities, as well as for dissemination of project results and reporting to various expert groups under HELCOM as well as to larger BSR community.</p> <p>Task 1.3 Addressing policy-makers and other stakeholders will aim at both internal and external feedback on interim and final results from project stakeholders on the proposed measures.</p>	
<p>Activity 2. Communication and Information tools will be developed within 2 tasks</p> <p>Task 2.1 Project Website will consist of background information on project, partners with links to their webpages, relevant information and news about project activities, project publications, information and training material.</p> <p>Task 2.2 Information material of the project will comprise both of regular means, i.e. press releases, newsletters and activities' reports, as well as project specific material to be elaborated under different work packages.</p>	
milestones and outputs in months 1-6	<p>Development of Project Communication Strategy - will be discussed at the Kick-off Meeting with other partners</p> <p>Creation of project webpage at HELCOM website; Setting up a dedicated project website</p> <p>Coverage of the project activities in press releases, newsletters and HELCOM Activities Report 2008</p> <p>Development of Glossary of terms in all languages around the BSR as basic tool for project partner and stakeholder communication in cooperation with WP6 and dissemination it through HELCOM channels</p> <p>Outcomes of the Seminar on hazard concepts for project partners and selected stakeholders will be presented at website and disseminated</p> <p>Start/up of the Project to be reported at HELCOM 30/2009, HOD 28/2009, BSAP IG 3/2009, LAND 14/2009, HELCOM 2009 Stakeholder Conference, X Baltic Sea Day</p>
milestones and outputs in months 7-12	<p>Updating and maintenance of the project website</p> <p>Press releases, via electronic means, covering project activities and meetings article in HELCOM Newsletter</p> <p>Presentation of the project to the European marine protection commissions and other relevant organizations and stakeholders</p> <p>Progress with first round of toxicity testing of the effluents in the locations will be reported to relevant HELCOM Meetings (WP3)</p> <p>Dialogue seminar with Russian stakeholders on EU and global hazard concepts and the difference towards Russian system, needs for adaptation will be promoted via HELCOM information system</p> <p>Progress of the Project to be reported at HOD 29/2009, BSAP IG 4/2009, MONAS 12/2009</p>

WORK PACKAGE 2

W O R K P A C K A G E 2	milestones and outputs in months 13-18	<p>Press releases, via electronic means, covering project activities and meetings article in HELCOM Newsletter, HELCOM Activities Report 2009, including the results of the toxicity screening under WP3 with information on toxicity (acute and chronic), persistence, bioaccumulation and environmental risks of the selected municipal and industrial effluents are presented to the public</p> <p>Publication on status and impacts in English and national languages for stakeholders will be prepared in cooperation with WP6</p> <p>Outcomes of various project workshop will be promoted via HELCOM Information system</p> <p>Progress of the Project to be reported at HOD 30/2010, BSAP IG 5/2010, LAND 15/2010, HELCOM 2010 Stakeholder Conference, XI Baltic Sea Day</p>
	milestones and outputs in months 19-24	<p>Press releases, and meetings article in HELCOM Newsletter</p> <p>The results and proposed harmonisation and toxicity testing recommendations will presented in cooperation with WP3</p> <p>Outcomes of the Workshop on elaboration of draft HELCOM recommendations on of integration of WEA in obligatory environmental monitoring of effluents and on harmonised chemical and ecotoxicological methods for assessments and evaluation of source for hazardous substances are published</p> <p>Outcomes of pilot training on WEA for WWTP/ industry, for inspectorates/regional authorities will be published</p> <p>Training for national stakeholders – state authorities will be promoted and supported via HELCOM information system</p> <p>Progress of the Project to be reported at HELCOM policy and experts level</p> <p>Interim outcomes to be used for preparation of the input to national action programmes for hazardous substances under BSAP</p>
	milestones and outputs in months 25-30	<p>Information support to the final workshop to consider jointly results on sources of hazardous substances to be arranged in cooperation with WP 3</p> <p>Communication of regional investment plan for chemicals control to fulfill obligations of HELCOM and EU (gap analysis) to relevant stakeholders</p> <p>Information support to the training on selected hazardous substances testing methodologies (Helsinki – support/implementer SYKE), national trainings for WEA application for WWTPs</p> <p>Information support to national trainings on permitting and national trainings on industry permitting in NW RU</p> <p>Progress will be presented at relevant HELCOM Meetings HELCOM 32/2011, HOD 32/2011, BSAP IG 7/2011, LAND 16/2011, HELCOM 2011 Stakeholder Conference, XII Baltic Sea Day</p>
	milestones and outputs in months 31-36	<p>Dissemination of the final report of project activities and outcomes</p> <p>Preparation and dissemination of brochures for selected industry branches with guidance (accompanying the training) how to properly manage the substances of concern with references to relevant BAT/BREF to be elaborated in cooperation with WP6</p> <p>Joint assessment of most important sources of hazardous substances in the whole Baltic Sea region as basis for decision making on actions to reduce the input of hazardous substances to the Baltic Sea will be published at project website and communicated to relevant stakeholders via HELCOM information system</p> <p>Information support to national trainings on permitting and national trainings on industry permitting in NW RU</p> <p>Progress will be presented at HELCOM policy (HOD 33/2011, BSAP IG 8/2011) and expert level (MONAS 14/2011)</p>

WORKPACKAGE 3	
Name	Innovative approaches to chemical controls of hazardous substances
Partners	SYKE will lead this WP. Case studies with partners in all 9 coastal countries will be established
Aim	<p>The aim is to contribute to the identification of sources for the selected hazardous substances, for which there is currently scarce information available, especially on the Eastern side. The activity also aims at a joint evaluation of toxicity and ecotoxicity of the effluents for the whole region, based on the Whole Effluent Assessment (WEA) approach with the aim to define toxicity-based discharge limits, a threshold toxicity, to effluents discharged into receiving waters in the Baltic Sea region.</p> <p>An important aim is also to harmonise the assessment methods in the whole Baltic Sea region serving also EU Water Framework Directive purposes. Involvement of all countries ensures that the different conditions are taken into account and facilitates the elaboration of country specific recommendations and practices.</p> <p>The results will be used as input to the integrated HELCOM assessment of hazardous substances and of the sources for the substances of concern to the Baltic Sea.</p> <p>The results will also be utilised in the other work packages to assess the main pathways to the Baltic Sea and to evaluate the cost efficient management options and as input in planning of programmes of measures.</p>
Description of work package activities	
W O R K P A C K A G E 3	<p>The activity will further the work on the identification of sources and the development of measures for hazardous substances being of concern for the Baltic Sea, as required by the HELCOM BSAP. The project will focus on the identification of sources for the 11 substances listed in the BSAP, complementing the already ongoing HELCOM screening project on the occurrence in the marine environment of selected hazardous substances. This project funded by the Nordic Council of Ministers does not include the identification of sources.</p> <p>There is for the time being very scarce information available on releases of the selected organic hazardous substances and hence this step in the project is crucial for the outcome of the whole project, i.e. the selection of management measures to be included in the national implementation programmes to reach a good status with regard to hazardous substances.</p>
	<p>The Contracting Parties have also agreed to introduce the Whole Effluent Assessment (WEA) approach to monitoring of complex discharges of hazardous substances into the HELCOM framework, by making a toxicity survey in the HELCOM countries in e.g. municipal wastewater treatment plants and some specific industrial sectors.</p> <p>At the moment most of the restrictions concerning discharges and emissions are based on the determination of chemical concentrations. However, the majority of effluents comprise a mixture of chemicals, whose ingredients vary in composition and over time. It is impossible, firstly to identify all these substances and their transformation products in the environment, or to have any idea of the effects of individual substances or their synergistic interactions in the environment. The aim of this activity would be to recommend PBT (persistent, bioaccumulating, toxic)-based discharge limit values based on the WEA approach for the Baltic Sea region.</p>
	<p>National stakeholder groups will be established in all the Baltic Sea coastal countries for the Case studies to identify sources and develop cost effective measures. The stakeholder groups will comprise authorities, municipalities and industries and utilise further national expertise. The involved partner institutes have wide experience in international projects and knowledge on Baltic sea specific characteristics. The partner composition ensures that national knowledge can be utilised in assessing the most appropriate local implementation of the identified measures and methods, which are developed jointly in the project utilising the wide international experience of the involved partner institutes.</p>
	<p>Activity 1. Definition and planning of the screening in detail</p> <p>The participating countries will choose locations (case studies), where municipal and industrial waste waters as well as landfill effluents and storm waters are screened during one year to identify sources of the selected hazardous substances. The cases and substances to be screened will be defined based on an initial evaluation of potential sources and main uses, based on previous HELCOM and national activities. The idea is to take samples from the chosen waste waters and analyse them both with regard to the selected target substances as well as toxicity. The first analysis round will be performed concerning toxicity only and the results will be used to target the screening of the single substance analysis in a cost effective way (as waste water samples with higher toxicity indicate the presence of hazardous substances).</p>
	<p>Activity 2. Screening of the toxicity of effluents by using WEA</p> <p>The participating countries will perform a toxicity survey in the case studies e.g. municipal wastewater treatment plants and some specific industrial sectors. The aim is to evaluate the toxicity of the effluents jointly for the Baltic Sea region and to possibly establish PBT (persistent, bioaccumulating, toxic)-based discharge limit values based on the WEA approach.</p> <p>All countries should themselves carry out the tests that they can perform. At least acute tests (Daphnia, algae, bacteria) should be performed in each country. These tests are the minimum requirements for WEA.</p> <p>Task 2.1 The survey of toxic effluents with acute tests</p> <p>Acute toxicity is determined by testing samples of whole effluent against a suite of aquatic organisms. Test methods will be based on standardised methods adopted in participating countries e.g., Daphnia magna acute toxicity test, luminescent bacteria test, algae growth inhibition test.</p>

W O R K P A C K A G E 3	<p>Task 2.2. The survey of toxic effluents with chronic tests</p> <p>In addition to the acute short-term tests it is important to study the ecotoxicity of the effluents by performing standardized longer-term tests representing the chronic toxicity of the effluents, e.g., <i>Daphnia magna</i> 21-d reproduction test, fish embryo-larvae toxicity test, duckweed growth inhibition test.</p> <p>The conventional standardized tests are basic elements in ecotoxicological risk assessment</p>
	<p>Task 2.3. The survey of toxic effluents with in vitro techniques</p> <p>Because the majority of effluents comprise a mixture of chemicals whose ingredients vary in composition and over time and it is impossible, to identify all these substances and their transformation products in the environment or to have any idea of the effects of individual substances or their synergistic interactions in the environment. Thus, it is important to use early warning biomarkers for the detection of the harmful disruption</p>
	<p>Activity 3. Screening of the 11 target substances in the chosen effluents will be performed to identify sources</p> <p>The production and pollution abatement profiles as well as the product use patterns differ hugely from country to country in the Baltic Sea region and therefore available information and estimations of potential sources in one region can not necessarily be directly utilised in other countries. Thus, it is important to assess the extent of the occurrence of the effluents containing hazardous substances across the Baltic Sea countries. Not only will this define the extent of the potential problem but, if marked differences in the effluents are found between countries which can be related e.g., to the nature of the different treatment processes, this will provide the countries with important information regarding the most effective, preventive treatment processes.</p>
	<p>Activity 4. Harmonisation of both chemical analysis and ecotoxicological test methods</p> <p>The aim of the activity is to harmonise both the chemical and ecotoxicological methods in the Baltic Sea region in order to have comparable and reliable results for assessments and evaluation of sources for hazardous substances, serving also the implementation of the EU WFD and REACH requirements. There is still more experience in the Nordic countries and there is a need to enhance the capability on the Eastern side of the Baltic Sea to assess and control sources of chemicals.</p>
	<p>Task 4.1. Ring-testing of effluents</p> <p>In whole effluent testing, there are sources causing uncertainties; differential test organism sensitivity, different laboratory practices and procedures etc. Therefore it is important to include reference compounds (organic and inorganic) into each test. The same relates also to the chemical analyses. Also, it is important to ring-test some effluents between participants.</p>
	<p>The lead partner SYKE will arrange study visits to its laboratory to train in sampling and analysing methods. Workshops will be arranged to harmonise assessment methods and to enhance the capacity on the Eastern side to identify, control and monitor hazardous substances serving also EU Water Framework Directive purposes. Involvement of all countries ensures that the different conditions are taken into account and facilitates the elaboration of country specific recommendations and practices.</p>
	<p>Task 4.2 Development of regional (investment) plan for chemicals control to fulfil obligations of HELCOM and EU obligations (gap analysis).</p> <p>The aim is to assess the capacity of the participating countries to sample and analyse the addressed substances and test the toxicity of effluents required by HELCOM and EU, and based on the results to develop an investment plan to fulfil obligations for chemicals control.</p>
<p>Activity 5. Development of toxicity-based discharge limits to effluents</p> <p>At the moment most restrictions concerning discharges and emissions are based on the determination of chemical concentrations. Because the majority of effluents comprise a mixture of chemicals whose ingredients vary in composition and over time it is impossible, to identify all these substances and their transformation products in the environment or to have any idea of the effects of individual substances or their synergistic interactions in the environment. Often the identities and concentrations of the substances present will be only poorly understood and the regulatory interest goes beyond specific classes of compounds. The current controls are insufficient to demonstrate that human health and wildlife are protected. Therefore there is a need to regulate discharges on the basis of direct assessments of their biological effects, to complement the chemical analyses.</p>	
<p>Whole effluent assessment (WEA) differs from the chemical-specific approaches, because it requires no knowledge of the effluent composition, nor does it set out to regulate defined chemicals or groups of chemicals. WEA can be a method promoting the Water Framework Directive (WFD) which emphasises chemical and ecological measures. This approach could be applied at sites where there is evidence of biological impacts that can not be readily ascribed to chemical or physical parameters or to contamination of sediments. Although WEA may not be the perfect tool, if such exist, in the identification of environmental risks, it is a tool that enables to reduce the harmfulness of effluents discharged into the environment. Based on the obtained WEA results recommendations on toxicity-based discharge limits for effluents and guidance on how best to use the bioassays to deliver sustainable cost-effective water control methods will be developed.</p>	
<p>Activity 6. Reporting of the results from the activities in each case study and for the whole Baltic Sea region</p> <p>Task 6.1. National reports</p> <p>The task is to produce national reports on the identification of sources for both the toxicity and target substances.</p> <p>Task 6.2. Joint assessment of the most important sources of hazardous substances in the whole Baltic Sea region</p> <p>The aim of the task is to produce a joint assessment of the most important sources of hazardous substances in the whole Baltic Sea region, as a basis for decision making on actions to reduce the input of hazardous substances to the Baltic Sea</p>	

W O R K P A C K A G E 3	milestones and main outputs in months 1-6	<p>The countries will have a plan ready where to perform screening of the single substances and toxicity. The cases and substances to be screened will be defined based on an initial evaluation of potential sources and main uses in each country. The proposal is that each country will take samples from:</p> <ul style="list-style-type: none"> • 2 municipal waste water treatment plants, (waste water & sludge) • 2 industries (either connected to the municipal sewers or industrial plants with own purification of the waste waters). • stormwaters in the case area/municipality • 1-2 landfills <p>A kick-off meeting will be arranged to jointly define methods and consider the cases The start up and progress will be presented at HELCOM LAND 12/2009-meeting</p>
	milestones and main outputs in months 7-12	<p>The first round of toxicity testing of the effluents in the locations are finalised providing a basis to finalise the planning of the rest of the toxicity testing, as well as the single substances screening in the chosen effluents.</p>
	milestones and main outputs in months 13-18	<p>The results of the toxicity screening are ready with information on toxicity (acute and chronic), persistence, bioaccumulation and environmental risks of the selected municipal and industrial effluents. First results from single substances screening are available. A work shop on the toxicity testing results will be arranged with the following outputs:</p> <ul style="list-style-type: none"> - assessment of suitability of different methods to screen effects of effluents and to identify sources - to decide on the final screening plan for single substances <p>Progress will be presented at the HELCOM Land-based Pollution Group (HELCOM LAND) 13/2010-meeting</p>
	milestones and main outputs in months 19-24	<p>The final results from both the toxicity testing and the screening of the single substances are available. A work shop will be arranged which will contribute to the following outputs:</p> <ul style="list-style-type: none"> - a draft recommendation for adoption by HELCOM on the principles of how to include whole effluent toxicity testing and limit values for the effluent toxicity in the obligatory environmental monitoring of effluents and combine this information with the chemical monitoring - a draft recommendation on harmonised chemical and ecotoxicological methods for adoption by HELCOM in the Baltic Sea region in order to have comparable and reliable results for assessments and evaluation of source for hazardous substances <p>The progress will be presented at HELCOM policy level (HELCOM HOD/Implementation Group) The results and proposed harmonisation and toxicity testing recommendations will be presented and considered by the HELCOM</p>
	milestones and main outputs in months 25-30	<p>Based on the experience of the screening and toxicity testing the activity will develop a regional investment plan for chemicals control to fulfil obligations of HELCOM and EU obligations (gap analysis).</p> <p>National reports on the identification of sources of the selected substances and the proposed measures will be ready as basis for national implementation programmes for hazardous substances.</p> <p>A final work shop to consider jointly the results on the sources of hazardous substances from a Baltic Sea point of view will be arranged in conjunction to the International Baltic Sea Day in St. Petersburg, March 2011.</p> <p>Progress will be presented at HELCOM LAND 14/2011 meeting</p>
	milestones and main outputs in months 31-36	<p>A joint assessment report of the most important sources of hazardous substances in the whole Baltic Sea region, as a basis for decision making on actions to reduce the input of hazardous substances to the Baltic Sea will be delivered</p> <p>The progress will be presented at HELCOM policy level (HELCOM HOD/Implementation Group)</p>

WORKPACKAGE 4	
Name	Identification of sources and estimation of inputs/impacts on the Baltic Sea
Partners	This package will be led by IVL. All partners in the WP will contribute by collecting data and participation in the assessments.
Aim	<p>The overall aim is to produce a picture of the sources, releases and inputs of the substances of concern linked to the effects in the Baltic Sea marine environment, which is as complete as possible with today's knowledge.</p> <p>The aim of the WP is to assess the release patterns and paths to the Baltic Sea marine environment of the substances of concern.</p> <p>The aim is also to quantify the inputs of the selected hazardous substances to the Baltic Sea by assessing and using models. This would in the long term facilitate the understanding of the link between the sources and releases of the selected substances to the effects in the marine environment enhancing the ecosystem approach to the management of human activities also with regard to hazardous substances.</p> <p>The results of this work package would also be crucial to the assessment of management options to reduce discharges, emissions and losses of hazardous substances in WP 5.</p>
Description of work package activities	
W O R K P A C K A G E 4	<p>An important part of the development and assessment of measures for hazardous substances is the analysis of flow patterns and quantification of releases of hazardous substances from different sources. Several efforts to identify the sources and the releases from different sectors, uses and stages of processes of the selected hazardous substances have been made, but with poor results. All countries do not have chemical registers and the available information in existing registers, especially on the eastern side of the Baltic Sea is scarce.</p> <p>HELCOM has made several assessments on discharges, emissions and losses as well as inputs of hazardous substances to the Baltic Sea, but these assessments have been limited to heavy metals and a few organic compounds.</p>
	<p>For many of the organic substances identified as being of concern to the Baltic Sea, there are no reliable estimates on releases and inputs. In addition, there are no common methods for quantifying inputs of hazardous substances to the Baltic Sea.</p> <p>The HELCOM hazardous substances comprise a variety of different organic substances and heavy metals with different release patterns and pathways to the Baltic Sea marine environment. The substances may be released from different stages in the production processes and some of them are unintentionally formed and/or released during e.g. combustion processes (e.g. dioxins, heavy metals). Others are mainly released due to usage of products. In order to quantify the releases of the selected substances, consideration must be given to the potential for releases that may occur during the entire lifecycle of these chemicals (production, transport, storage, use and disposal).</p>
	<p>Information on inputs of hazardous substances and the effects in the marine environment and subsequent advice to management is in the core of the ecosystem approach to the management of human activities. In order to assess and to quantify the inputs to the marine environment quantitative assessment tools are needed. For assessment of discharges, emissions and losses of nutrients from different sectors in the catchment area and their effect on the Baltic Sea, models have frequently been applied. This has e.g. facilitated the allocation of concrete figures on required nutrient reductions between the countries in the BSAP in order to reach a good status concerning eutrophication.</p>
	<p>The next step is to develop analogous tools for hazardous substances linking the sources of hazardous substances to the effects in the marine environment. By having the aforementioned assessment tools in place, HELCOM can make a quantitative holistic assessment covering the main environmental issues, and thus evaluate the effectiveness of the HELCOM Baltic Sea Action Plan. Using the whole suit of assessment tools would make HELCOM and the Baltic Sea as the forerunner in the field of providing best scientific advice for management purposes.</p> <p>This WP will provide better knowledge of the release patterns of the selected substances and the link from sources to the effects on the marine environment as basis for decision making on controls for hazardous substances.</p>
	<p>Activity 1. Analysis of flow patterns of the target substances</p> <p>In order to evaluate and develop the most appropriate and cost effective measures for hazardous substances there is a need to assess the main uses of the substances in different sectors and the releases from different process stages and sources. Due consideration will be given to the whole lifecycle of the substances. Previous activities on collection of uses of these substances from registers, especially on the eastern side of the Baltic have not succeeded as there exist only few data.</p> <p>Substance Flow Analysis System SFA will facilitate both assessments on a European scale and they will be applied on regional and local scale in the Baltic sea. The results of the SFA will be used in also an analysis of management options.</p>

Task 1 Collection of information for the SFA
Available information on European scale on production, use volumes, discharges, emissions and losses to assess the flow patterns and the most important sources will form the basis for the substance flow analyses (SFA).
In particular the Swedish Products Register provides valuable information. The register is however limited to the amounts of chemical products produced in Sweden or imported to Sweden and additional information will be needed to establish a quantified life-cycle for the substances. The Swedish chemicals agency has gained experience from this field working with European risk assessments of chemicals, and various information sources like export/import statistics will be used for the SFA:s for the selected substances.

The project will also utilise the results from WP 3 on the screening of the selected substances as well as the information collected from the involved industries in the case studies. Environmental data important for the SFAs will also be collected.

Task 2 SFA on European scale and regional scale for the Baltic Sea region
SFAs for the 11 selected substances will be set up on European scale. The European SFAs will then be applied for the Baltic Sea as well as regions in the Baltic (case studies).
For the SFA we will adopt a methodology developed within SOCOPSE, an EU-project co-ordinated by IVL, which is oriented towards source control of priority substances within the Water Framework Directive. Within SOCOPSE, a tool for performing SFA has been developed and applied to selected chemicals on local, regional and European scales (www.socopse.se).

The results of this activity would also be crucial to the assessment of management options to reduce discharges, emissions and losses of hazardous substances in WP 5.

Activity 2. Fate assessment and quantification of inputs of hazardous substances to the Baltic Sea
In order to quantify the inputs of the selected hazardous substances to the Baltic Sea data will be assessed and some models will be tested/developed. The availability of models to quantify inputs of hazardous substances to the Baltic Sea and a better understanding of development needs to link the sources of hazardous substances to the effects in the marine environment. Inputs of the selected hazardous substances estimated.

Several dispersion models have been developed for hazardous substances, but there are no common models in use to quantify the inputs of hazardous substances to the Baltic Sea. Multimedia models on various geographical scales can be used to predict the concentrations and distribution of a substance between the different environmental media in the Baltic Sea.
The results from Activity1, the SFA and the collected data, will be used. A number of the hazardous substances will be chosen for this case study and model exercise. The selection of substances will be based on the availability of emission factors and environmental data.

Task 1 A case study in the Stockholm region

This task will utilise the best available knowledge and data from chemical registers in Sweden combining it with the actual measurement data in the Stockholm area available from previous studies.

A large quantity of information on environmental levels of different pollutants in various matrices is available for the Stockholm area, which makes it suitable for evaluating the effect of emissions on environmental concentrations. This area is densely populated (for Swedish conditions), hence representative for an area where the use of chemicals in products is extensive and also, several other important sources of chemical release to the environment are present (e.g. traffic and sewage systems).

IVL has previously performed modelling attempts of this kind within a subsection of the Stockholm area using the CeStoc model. This urban model, which has been upgraded to a dynamic time-resolved format within an EU-project (REBECCA: www.environment.fi) will be adopted within the current project.

Task 2. Generalisation of the results from the Stockholm case

The results from the Stockholm area will be used to estimate the occurrence of the contaminants in the other areas around the Baltic Sea and to further test and assess the used methods in order to estimate and quantify the inputs of the targeted substances in the different regions around the Baltic Sea.

In order to generalise over the Baltic Sea, screening results on environmental levels and sources from the different countries will be used. Data from air and deposition measurements in different countries will be used to estimate the atmospheric input to the Baltic Sea. The results from the HELCOM project on the occurrence of the selected substances in the marine environment will be utilised in this WP providing a link between the source information from this project and information on the concentrations in the marine environment.

A dynamic multimedia fugacity model, describing the entire Baltic drainage basin will be used. This model was originally developed in the EU project POPCYCLING-Baltic and applied by IVL in cooperation with NILU to the polybrominated diphenyl ethers, to assess their current and future fate in the Baltic and Arctic areas, based on various future emission scenarios. The model has since been further developed by various international research groups

W O R K P A C K A G E 4	milestones and main outputs in months 1-6	<p>A kick off meeting with the partners in the WP where the work plan for the different partners will finalised</p> <p>Preparation of routines for collecting and storing information for the SFAs including quality control procedures and a joint database.</p> <p>Selection of substances for the case study and model exercises.</p> <p>Data for the case study in the Stockholm area will be collected</p>
	milestones and main outputs in months 7-12	<p>The SFA will be applied on regional and local scale in the Baltic sea.</p> <p>Models will be tested/ of the selected substances e.g using the results from the Stockholm case</p> <p>Identification of gaps.</p> <p>Data collection on substance flow and releases will continue</p> <p>The European SFAs will be completed and reported</p>
	milestones and main outputs in months 13-18	<p>The SFA will be applied on regional and local scale in the Baltic sea.</p> <p>Models will be tested/ of the selected substances e.g using the results from the Stockholm case</p> <p>Identification of gaps.</p> <p>A mid term work shop for project partner will be arranged back-to-back with WP 5 (Baltic Sea Day, St. Petersburg)</p>
	milestones and main outputs in months 19-24	<p>The work with SFA on regional and local scale in the Baltic sea will continue and updated</p> <p>Models will be tested for the selected substances e.g using the results from the Stockholm will continue.</p> <p>Inputs of the selected hazardous substances estimated.</p> <p>Harmonisation work shop (Sweden)</p>
	milestones and main outputs in months 25-30	<p>The work with generalisation release patterns and pathways of the selected substances to the Baltic Sea marine environment.</p> <p>Identification of gaps</p> <p>Identification of important hot spots in the Baltic region</p> <p>The results, which will be implemented in the assessment of management options to reduce discharges, emissions and losses of substances, will be in WP 5.</p> <p>Final work shop in St Petersburg March 2011</p>
	milestones and main outputs in months 31-36	<p>A joint assessment of the most important sources of hazardous substances in the whole Baltic Sea region as basis for decision making on actions to reduce the input of hazardous substances to the Baltic Sea will be delivered</p> <p>The final report</p>

WORKPACKAGE 5	
Name	Cost effective management options to reduce discharges, emissions and losses of hazardous substances
Partners	UBA supported by Fraunhofer institute will lead. SYKE, IVL, IETU, BEF, CTC-STP
Aim	<p>The aim is to identify cost effective management measures and options for the selected hazardous substances with regard to both process- and product controls. This includes the assessment of the application of BAT and BEP, including end-of-pipe treatment methods for emissions and discharges as well as possible use restrictions, including bans and substitutions for the selected substances.</p> <p>The aim is to produce/update guidance documents on the 11 substances of concern to be adopted by HELCOM.</p> <p>The aim is also to support the development of implementation plans for the pilot industries in the selected case studies.</p> <p>An additional aim is to provide input to the development of national implementation programmes /programmes in the Baltic region of measures under the EU Water Framework Directive for hazardous substances.</p>
Description of work package activities	
W O R K P A C K A G E 5	<p>The Contracting Parties have also in the BSAP agreed to reduce the discharges from identified potential sectors and main uses, and by 2010 to develop measures for this purpose for inclusion into national programmes. This approach is very much in line with the legally binding requirements of the Water Framework Directive for the HELCOM Contracting Parties being also EU-Member states, where measures to reach good chemical and ecological status are bundled in the Program of Measures (POM).</p> <p>Furthermore the forthcoming Daughter Directive on Priority substances will require the EU-Member states to compile inventories of the Priority Substances Most of the substances concerned are either priority / priority hazardous substances or covered by the „indicative list of the main pollutants“ in Annex VIII of the WFD. In the latter case the river basin districts shall select those which are relevant for their basin.</p>
	<p>For Russia (as being the only non-EU member state) this corresponds to some national legal requirements, however, due to relevant legal differences it would mean a tailor-made approach under the project.</p> <p>Work Package 5 will utilize these information as well as the results from the HELCOM hazardous substances projects for the development of the BSAP and will – after a comparative analysis of the POMs - go deeper in identifying management measures and options for the selected hazardous substances with regard to both process- and product controls including economic effects. This includes the assessment of the application of BAT and BEP, including end-of-pipe treatment methods for emissions and discharges as well as possible use restrictions, including bans and substitutions for the selected substances. Special consideration will be given to measures which will be necessary to reach the environmental objectives for the Baltic Sea and are not already covered in the POMs.</p>
	<p>HELCOM has already carried out projects to identify sources and the appropriate management measures to reduce, discharges, emissions and losses of the substances of concern to the Baltic Sea, but there is a need to go deeper in assessment of cost effective management options based on both results gained in this project on the sources and analysis of flow patterns from different stages as well as on available information from EU documents and projects.</p> <p>This was clearly seen during the development of the HELCOM BSAP.</p> <p>This work package will hence utilize available information from the ongoing WFD implementation as well as earlier HELCOM and EU projects as well as work packages 3 and 4. The case studies in the Baltic Sea region will include municipalities and industries and some pilot industries on the eastern side of the Baltic will be scrutinized to evaluate and plan the measures needed either for process or product controls, including possible substitution.</p>
	<p>The effectiveness of the treatment methods applied in the municipal waste water treatment plant - case studies will be evaluated for the different substances.</p> <p>This includes the assessment of the application of BAT and BEP, including end-of-pipe treatment methods for emissions and discharges as well as possible use restrictions, including bans and substitutions for the selected substances.</p> <p>Main inputs into the activity 5 are actual emission inventories of the substances for the Baltic Sea States. These should be an outcome from the other work packages.</p> <p>It is planned to work out a questionnaire for each substance of concern.</p>
	<p>These papers will consist in each section of a background part, in which information from the HELCOM projects, from the ongoing European WFD process, substance specific regulations, monitoring results, production and application, emission situation, approaches for emission abatement measures and relevant literature is summarized. The second part consists of questions, to which the Baltic States should give their input.</p> <p>Activity 5.1 Evaluation of management measures for the substances of concern</p> <p>Task 1 Inventory and analyses of existing measures (implemented, under implementation or planned), especially for EU-Member states in the context of the WFD implementation. Definition of similarities & differences to Russian system and recommendation for legislation harmonisation. This task will compile existing measures and make a first evaluation of the remaining gap from the Baltic Sea perspective.</p>

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<p>The results will be the crucial input to Task 2. The procedure for first examples of hazardous substances and first results will be presented at a workshop in September 2009 (milestone 1), the final inventory should be available in March 2010 (after finalization of the POMs in December 2009).</p> <p>Task 2 Inventory of management options Depending on the relevant sources of the substances different management options, such as end-of-pipe techniques or product control measures, including restrictions, substitution and bans of the uses of the target substances are possible. This activity will scrutinize existing information available in EU documents, such as IPPC BREFS, fact sheets under the WFD and other sources including reports from HELCOM and EU projects.</p>
<p>The HELCOM work carried out with information on main uses in different sectors will be used as basis.</p> <p>The final outcome of Task 1 and the first results of Task 2 will be presented at a seminar in Russia with lecturers from EU partners. (milestone 2, back to back with Baltic Sea Day in March 2010)</p> <p>Task 3. Investigation of effectiveness used abatement measures and identification of appropriate measures Based on the crucial results of the other relevant work packages of this project and the outcome of Task 1 and Task 2 reduction measures (BAT for industrial installations, municipal waster water treatment installations and product control measures) will be evaluated for the 11 substances concerned and prioritized both in terms of technical feasibility, cost effectiveness and ease of implementation, taking into account the specific situation in the different countries.</p>
<p>Specific consideration will be given to the pilot industries identified in the BSAP and the possible reductions achievable by the application of BAT. Exchange of experiences in implementation of BAT covering issues both from licensing and technical implementation will be promoted by workshops, excursions etc.</p> <p>A draft overview report will be available in September 2010 (milestone 3)</p> <p>Activity 5.2 Preparation of HELCOM guidance documents concerning the 11 substances of concern to the Baltic Sea The activity aims at complementing the results of Activity 1 by producing guidance documents for each of the targeted substance for adoption by HELCOM. The documents will contain information on major sources in the Baltic Sea region, their pathways to the Baltic Sea, reduction measures already implemented or under implementation and recommendations for required additional actions on national, HELCOM and regional level.</p>
<p>The information from WP 3 on the screening of the sources of the substances and the information on the flow patterns and releases from different stages of the lifecycle from WP 4 will be combined in theses guidance documents.</p> <p>The preparation of the different guidance documents for the substances will be divided between the partners (UBA, Fraunhofer ISI, SYKE, IETU, IVL, BEF – Russian version: CTC RU); 2 partners meetings are foreseen to facilitate the discussion and exchange.</p> <p>Drafts of the guidance documents will be available by March 2011.</p> <p>Activity 5.3 Recommendation of management options to reduce discharges, emissions and losses in the Baltic Sea region to reach the goal of the BSAP</p>
<p>Based on the results achieved in activity 5.1 and 5.2 and utilizing the results in the other work packages a report on the management options to reduce discharges, emissions and losses in the Baltic Sea region to reach the goal of the BSAP will be produced. The report will provide input to the integrated HELCOM assessment on hazardous substances for the Baltic Sea region and to the joint implementation of necessary measures to reach the Baltic Sea undisturbed by hazardous substances. The report will also cover Russia's needs as being non-EU member state. The report will include the assessment of the cost effective management options to be applied around the Baltic Sea and will be available as draft by September 2011.</p> <p>Based on the results achieved in activity 5.1 and 5.2 and utilizing the results in the other work packages a report on the management options to reduce discharges, emissions and losses in the Baltic Sea region to reach the goal of the BSAP will be produced.</p>
<p>The report will provide input to the integrated HELCOM assessment on hazardous substances for the Baltic Sea region and to the joint implementation of necessary measures to reach the Baltic Sea undisturbed by hazardous substances. The report will also cover Russia's needs as being non-EU member state. The report will include the assessment of the cost effective management options to be applied around the Baltic Sea and will be available as draft by September 2011</p> <p>Long-term impacts The WP contributes to knowledge base for decision making and planning of national implementation plans to manage controls of hazardous substances in order to the goal with regard to hazardous substances "towards a Baltic Sea with life undisturbed by hazardous substances".</p>
<p>Partners This package will be lead by UBA with contracted support by the Fraunhofer Institute ISI. SYKE, IETU, IVL and BEF offices will contribute to the preparation of the different guidance documents for the substances. BEF LV will in close contact with the WP lead partner facilitate the E-BSR specific actions. CTC RU will be in charge for elaborating the focus for Russia due to not being EU member state. All Contracting Parties will contribute by collecting available data from national reports.</p>

W O R K P A C K A G E 5	milestones and main outputs in months 1-6	Inventory of existing data
	milestones and main outputs in months 7-12	First results on inventory of measures ready Workshop on Compilation of existing measures (September 2009)
	milestones and main outputs in months 13-18	Inventory on measures finalised Workshop on Evaluation of the effectiveness of measures (Baltic Sea day in St. Petersburg, back-to-back with WP5)
	milestones and main outputs in months 19-24	Report on Evaluation of the effectiveness of measures Work shop together with WP 4 in Stockholm
	milestones and main outputs in months 25-30	Drafts of Substance guidance documents WP meeting in conjunction to Baltic Sea day (1-2 participants per country)
	milestones and main outputs in months 31-36	Recommendation report on control measures Final report of the WP

WORKPACKAGE 6	
Name	Capacity building and knowledge transfer
Partners	BEF will lead this WP with input from mainly other WP leaders.
Aim	<p>The aim of this work package is to:</p> <ul style="list-style-type: none"> • accompany the implementation of other work packages by raising the competency of the stakeholders from the new member States and Russia and at the same time bridging the experiences from western experts making them aware on the situation in the eastern side of the Baltic Sea Region (further on E-BSR); • do direct capacity building measures at stakeholders in the E-BSR based on a jointly elaborated concept from the project team and with jointly elaborated methods and targets later on adapted to national circumstances; • to close the gap of misunderstanding and misinterpretation of hazard concepts at international level and give input to future EU and HELCOM work aiming at harmonising the slightly different definitions and requirements.
Description of work package activities	
W O R K P A C K A G E 6	<p>An important objective of the project is capacity building on especially the Eastern side of the Baltic Sea Region (later E-BSR). Experiences in the Nordic countries on the identification, screening and management of hazardous substances as well as the development of action programs to reduce hazardous substances will be utilised. The project will also contribute to the obligations of the BSAP for the Contracting Parties to develop technical guidance documents especially for authorities, with regard to the control of hazardous substances.</p> <p>The definition of tasks in this work package has been backstopped by an earlier fact finding project commissioned by HELCOM to the WP lead party Baltic Environmental Forum, to investigate the background for hazardous substance management in the four new EU member States Estonia, Latvia, Lithuania and Poland as well as in Russia. The following key findings have lead to the proposed actions in WP 4:</p>
	<ul style="list-style-type: none"> • The understanding of the concerns related to HELCOM hazardous substances is still low among trade, industry and authorities in the E-BSR. This in particular applies to Russia, but also the four new EU member states. Except for heavy metals and Dioxins, HELCOM priority substances are still considered "exotic" and not very relevant. This may have to do with the fact that the "hazardous substance" concept has not been translated from its scientific basis into practical life, and that a public debate on these substances is absent in the new member states and Russia. • The assessment methodology applied at EU level to identify substances of concern related to persistency and bioaccumulation is partly different from the methodology applied under HELCOM Recommendation 19/5. This concerns the role of measured concentrations of substances in the environment, the cut-off values for bioaccumulation and toxicity, and the way to deal with substances for which toxicity information is lacking.
	<ul style="list-style-type: none"> • Even for well known hazardous substances the information on uses and releases into the environment currently available in the target countries (EE, LV, LT, PL, RU) does not allow to measure the progress made so far towards ceasing releases and to target measures accordingly. This is mainly due to the fact that the primary source of information, which are in fact the companies acting in the market, lack information and understanding on use and release of environmentally hazardous substances from their businesses. • The main existing information instrument to communicate about environmentally hazardous substances in products supplied to industrial manufacturers of chemical and non-chemical products, does not work in practice in the target countries. Companies are not able to identify environmentally hazardous substances in their raw materials based on the current communication mechanisms with their suppliers and based on their knowledge about the substances of concern
	<ul style="list-style-type: none"> • The regulatory instruments existing in the EU to target environmentally hazardous substances at product or process level– for example related environmental permitting, for source and pressure analysis in river basins under the Water Framework Directive and for marketing and use restrictions related to certain substances - are not systematically applied in the new member States. • In Russia, the basic regulatory framework to control environmentally hazardous substances is not yet in place. This is due to a fundamentally different understanding of "hazardousness" and "precaution", a focus on human toxicity in classification of chemicals and practically unworkable approval mechanisms for chemicals. <p>These findings lead to the conclusion that a separate Work Package targeting capacity building in the E-BSR is needed to i) implement the COHIBA project itself in these countries and ii) to address the capacity building needs in the E-BSR directly.</p>
	<p>The Work Package can be divided into the following activities:</p> <p>Activity 1. Stakeholder mapping and training needs assessment</p> <p>Task 1.1 Questioning and mapping stakeholders in E-BSR region countries</p> <p>Task 1.2 Assessment of training and seminar organizing needs</p>

W O R K P A C K A G E 6	<p>Activity 2. Awareness rising on Hazardous Substance concept at E-BSR partners and selected stakeholders</p> <p>Task 2.1 Seminar on hazard concepts for project partners and selected stakeholders</p> <p>Task 2.2 Seminar concept elaboration for Russian partners and stakeholders and preparation of dialogue seminar with Russian leading scientists</p> <p>In Russia, the basic regulatory framework to control environmentally hazardous substances is not yet in place. This is due to a fundamentally different understanding of "hazardousness" and "precaution", a focus on human toxicity in classification of chemicals and practically unworkable approval mechanisms for chemicals.</p> <p>Task 2.3 Dialogue seminar with Russian stakeholders on EU and global hazard concepts and the difference towards Russian system, needs for adaptation</p> <p>Task 2.4 Elaboration of a glossary of terms in all languages around the BSR as basic tool for project partner and stakeholder communication</p>
	<p>Activity 3. Training on elements of chemicals control</p> <p>The assessment methodology applied at EU level to identify substances of concern related to persistency and bioaccumulation is partly different from the methodology applied under HELCOM Recommendation 19/5. This concerns the role of measured concentrations of substances in the environment, the cut-off values for bioaccumulation and toxicity and the way to deal with substances for which toxicity information is lacking.</p> <p>Task 3.1 Training on selected hazardous substances testing methodologies</p> <p>The assessment methodology applied at EU level to identify substances of concern related to persistency and bioaccumulation is partly different from the methodology applied under HELCOM Recommendation 19/5. This concerns the role of measured concentrations of substances in the environment, the cut-off values for bioaccumulation and toxicity and the way to deal with substances for which toxicity information is lacking.</p>
	<p>Task 3.2 Training for national stakeholders on WEA</p> <p>Training concept will be developed internationally. National trainings for 5 target countries will be carried out as 2-day pilot training for each group (WWTP/industry and inspectorates/regional authorities)</p>
	<p>Activity 4. Training on identification of sources and estimation of quantities of hazardous substances</p> <p>Task 4.1 Training Workshop for project partners addressing the impacts of Hazardous substances on the aquatic/marine environment, especially to Baltic Sea ecosystem</p> <p>Task 4.2 Training for national stakeholders – state authorities (inspectorates, regional authorities, data agencies)</p>
	<p>The regulatory instruments existing in the EU to target environmentally hazardous substances at product or process level– for example related environmental permitting, for source and pressure analysis in river basins under the Water Framework Directive and for marketing and use restrictions related to certain substances - are not systematically applied in the new member States</p> <p>Activity 5. Training and awareness rising on management tools/options for Hazardous substance reduction</p> <p>The understanding of the concerns related to HELCOM hazardous substances is still low among trade, industry and authorities in the E-BSR. This in particular applies to Russia, but also the four new EU member states. Except for heavy metals and Dioxins, HELCOM priority substances are still considered "exotic" and not very relevant.</p>
	<p>This may have to do with the fact that the "hazardous substance" concept has not been translated from its scientific basis into practical life, and that a public debate on these substances is absent in the new member states and Russia.</p> <p>Task 5.1 Training for WWTP on treatment methods/measures</p> <p>Task 5.2 Technical guidance for (IPPC) permits addressing the hazardous substances in details</p> <p>Task 5.3 Trainings on permitting for authorities, experts and pilot enterprises</p> <p>Task 5.4 Trainings specialised for Russian industries on permitting issues</p> <p>Task 5.5 Training on worked out management measures for substance reduction/substitution at selected industry branches</p>
	<p>This Work Package will:</p> <ul style="list-style-type: none"> - provide a common ground of understanding of the whole project concept by clarifying the hazard concept of HELCOM and the EU and providing a forum for exchange of views on terms and concept understanding; - train the expert teams from the four new Members States and Russia for competent project implementation by providing background information, holding in-depth discussions on the hazard concept of the EU and HELCOM, organising study visits on certain aspects of the other Work Packages and accompanying these Work Packages with supporting documents, publications or guidance materials;

W O R K P A C K A G E 6	milestones and main outputs in months 1-6	Seminar on hazard concepts for project partners and stakeholders is organized. Elaboration of glossary of terms in all languages around BSR as well as preparation for dialogue seminar with Russian leading scientists is carried out. Stakeholder mapping in 5 target countries (LV, LT, EE, PL and RU) is completed
	milestones and main outputs in months 7-12	Dialogue seminar with Russian stakeholders on EU and global hazard concepts and the difference towards Russian system is organized. Development of overall training concepts is finished. Feedback from W-BSR countries is received. Assessment of needed expert capacities is finished.
	milestones and main outputs in months 13-18	Elaboration of English template of guidance for (IPPC) permits addressing the hazardous substances in details plus 4 languages with national variations (EE, LV, LT, PL) – guidance material shall address the three target groups involved in permitting: the permitting authority, the industrial client and the experts (key consultants respectively potentially licensed institutes) elaborating the permit descriptions. Concept of training on elements of chemicals control for national stakeholders is developed in a work group meeting.
	milestones and main outputs in months 19-24	Pilot training for WWTP/industry and inspectorates/regional authorities on elements of chemicals control in 5 target countries is finished. One pilot training in each of the 5 countries on identification of sources and estimation of quantities of hazardous substances has been organized. Concept of training for WWTP on treatment methods/measures for hazardous substance reduction is developed in a work group meeting. Concept of trainings on permitting for authorities, experts and pilot enterprises is developed in a work group meeting. Concept of trainings specialised for Russian industries on permitting issues is developed in a workgroup meeting in St. Petersburg (partly together with above, plus additional Russia-targeted meeting of local partners plus WP6 leader plus WP 5 key experts).
	milestones and main outputs in months 25-30	5 – day training on selected hazardous substances testing methodologies is taking place in SYKE, Helsinki, for 15 people from 5 target countries. Single day national trainings in 5 countries for WWTP on management tools/options for hazardous substance reduction are taking place. Beginning of single day national trainings on permitting for authorities, experts and pilot enterprises. Beginning of single day national trainings in NW RU for Russian industries on permitting issues. Concept of training on worked out management measures for substance reduction/substitution at selected industry branches will be developed in a workgroup meeting.
	milestones and main outputs in months 31-36	Conclusion of single day national trainings on permitting for authorities, experts and pilot enterprises. Conclusion of single day national trainings in NW RU for Russian industries on permitting issues. National single day trainings on worked out management measures for substance reduction/substitution have been organized in 5 target countries for selected industry branches Brochures for selected industry branches with guidance (accompanying the training) how to properly manage the substances of concern respectively how to phase them out/substitute them including explanatory notes for impacts and references to the relevant BAT requirements/BREF documents (English template as PDF, brochures in national languages EE, LV, LT, PL, RU) are made.

WORKPACKAGE 7

Name

Partners

Aim

Description of work package activities

**W
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E
7**

Acronym: COHIBA Index: -- Version: 30/05/2008

W O R K P A C K A G E 7	milestones and main outputs in months 1-6	
	milestones and main outputs in months 7-12	
	milestones and main outputs in months 13-18	
	milestones and main outputs in months 19-24	
	milestones and main outputs in months 25-30	
	milestones and main outputs in months 31-36	

3.10.2 Activities taking place outside the EU territory

Activities in Russia form an important part of the project. The activities carried out in Russia will be mostly covered from the ENPI budget, but the cost for partners involved in e.g. Capacity building and knowledge transfer activities will be financed by ERDF. There are meetings planned to be held annually in St. Petersburg in conjunction to the International Baltic Sea Day.
The partner laboratory REC will analyse dioxin in the samples from the case studies of WP 3 (147 000 Euro).

The maximum number of characters in this input field is 1300.

Expenditure related to implementation of activities taking place outside the EU territory

EUR

147.000,00

3.10.3 Revenue generating activities

There are no planned revenue generating activities in the project

The maximum number of characters in this input field is 1300.

Amount to be generated:

EUR

1,00

3.10.4 Cooperation with other projects

COHIBA will be fully coordinated with other supporting EU projects on hazardous substances such as SOCOPSE and SCOREPP, building further on the results obtained from these activities. The joint interest is to identify sources and the management strategies to curb pollution by hazardous substances, but COHIBA focuses on partly different substances, which have been assessed by the 9 Baltic countries as most relevant. An important aspect is also the joint assessment of necessary common measures in the whole Baltic Sea region with a good status in the Baltic Sea marine environment as goal. The aim is also to transfer the knowledge gained and best practices in other projects to the Eastern side of the Baltic, to enhance the level of chemical control in the region. SYKE and/or other COHIBA partners have been participating in several hazardous substances projects, ensuring the utilisation of the already achieved results and that only activities with added value will be performed.

HELCOM has started an activity to screen the occurrence of the same targeted substances in the marine environment funded by the Nordic Council of Ministers. The results can be utilised to link the information from the COHIBA project on the sources to the effects in sea, providing a holistic view.

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3.10.5 Description of complementary activities

There are no identified complementary activities
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3.10.6 Sources of funding for the complementary activities

-	EUR	0,00
-	EUR	0,00
-	EUR	0,00
-	EUR	0,00