



Document title	BalticBOOST application assessment tools
Code	4J-2
Category	INF
Agenda Item	4J - HELCOM indicators and assessments
Submission date	19.10.2015
Submitted by	Secretariat
Reference	HOD 46-2013 (para 4.30), GEAR 8-2014, para 3.30)

Background

In July 2015 HELCOM was informed that the European Union has granted funding for the project "BalticBOOST - Baltic Sea project to boost regional coherence of marine strategies through improved data flow, assessments, and knowledge base for development of measures". The application was submitted in response to a call on: "Best practices for action plans to develop integrated, regional monitoring programmes, coordinated programmes of measures and addressing data and knowledge gaps in coastal and marine waters" (DG ENV/MSFD Action Plans /2014).

The application was developed based on needs for e.g. the HELCOM HOLAS II project as well as other priority areas and initiated activities supported by the GEAR Group (GEAR 8-2014, paragraph 3.30, HOD 46-2014, para 4.30).

HELCOM is coordinator of the project that includes eleven partners from six HELCOM countries as well as ICES. It aims to engage all Contracting Parties through the active guidance of HELCOM Working Groups, HOLAS II Core Team as well as planned HELCOM workshops. The project started on 15 September 2015 and will extend for 15 months.

This document contains a summary of the application as a whole and a **full length extract** of the application concerning components related to **biodiversity and hazardous substances**. Key activities that will take forward tasks on the State and Conservation workplan are:

- development of HELCOM assessment tool for biodiversity,
- development of databases for coastal fish, birds and mammals,
- data arrangements for HELCOM indicators related to offshore fish,
- development of HELCOM assessment tool for hazardous substances,
- improved data labelling and data flow for hazardous substances.

In addition, the project will evaluate the possibility to align BSAP, MSFD and Habitats Directive assessments using seal abundance and distribution as a case-study. Since one year has passed between submission of the application and start of project some adjustments to the project activities will be necessary. Further planning for the development of assessment tools will be carried out at the fourth meeting of the HOLAS II project, 24-25 November 2015, Berlin.

Action required

The Meeting is invited to take note of the information.

PROGRAMME CONCERNED

BEST PRACTICES FOR ACTION PLANS TO DEVELOP INTEGRATED, REGIONAL MONITORING PROGRAMMES, COORDINATED PROGRAMMES OF MEASURES AND ADDRESSING DATA AND KNOWLEDGE GAPS IN COASTAL AND MARINE WATERS

REFERENCE NUMBER OF THE CALL FOR PROPOSALS

DG ENV/MSFDMSFD Action Plans /2014

SUMMARY OF THE APPLICATION

Title: **BalticBOOST**: Baltic Sea project to boost regional coherence of marine strategies through improved data flow, assessments, and knowledge base for development of measures

Identity of the coordinator: Helsinki Commission

SUMMARY OF ACTION

The role of HELCOM as the coordination platform for the regional implementation of the Marine Strategy Framework Directive (MSFD) in the Baltic Sea region was established in 2010. The implementation is carried out in concert with the implementation of the HELCOM Baltic Sea Action Plan (BSAP). The long-term cooperation between HELCOM countries forms a strong foundation for delivery of joint assessments, coordinated monitoring, and agreements on measures to improve the state of the Baltic Sea. Still, the European Commission Article 12 assessment showed a disappointingly low to medium level of regional coherence in the implementation of MSFD Articles 8, 9 and 10 by HELCOM EU Member States, except for some aspects of eutrophication and hazardous substances (SWD(2014)49). Since then, HELCOM has taken steps to improve regional coherence i.e. through the agreement and continued development of HELCOM core indicators through the projects CORESET II¹ and EUTRO-OPER² and through the development of a joint Monitoring Manual³. HELCOM has also just agreed to start the HOLAS II project⁴ that will produce a HELCOM holistic assessment of the Baltic Sea that HELCOM EU Members can use as a joint roof report in the 2018 MSFD reporting. Existing plans are collated in the "Roadmap of HELCOM activities"⁵ that provides an outline and timetable for major HELCOM's activities and deliverables until 2021.

General objectives

BalticBOOST gives the opportunity to significantly boost planned and aspired HELCOM activities. The project is coordinated by HELCOM and has 10 partners from the HELCOM EU Member States and one international organisation (ICES). The general objective of the project is to enhance regional coherence in the accomplishment of the 2018 reporting under the MSFD by developing joint tools,

¹ Operationalization of HELCOM core indicators (HELCOM CORESET II) (2013-2015)

² Making HELCOM Eutrophication Assessments Operational (HELCOM EUTRO-OPER), 2014-2015

³ <http://www.helcom.fi/action-areas/monitoring-and-assessment/monitoring-manual/>

⁴ Second holistic assessment of Ecosystem Health of the Baltic Sea

⁵ <https://portal.helcom.fi/meetings/GEAR%208-2014-141/MeetingDocuments/5-1%20Roadmap%20of%20HELCOM%20activities.pdf>

defining data needs and to set up data arrangements to support indicator-based assessments of the state of and pressures on the Baltic Sea. The project will also take a step towards development of joint environmental targets for pressures affecting seabed habitats by developing a knowledge base and principles for defining such targets. Furthermore, the project will through a number of activities support the development of a joint document on regional coordinated Programmes of Measures (PoMs) for HELCOM EU Member States. The project addresses in particular MSFD Descriptors 1, 6, 8 and 11 and the reporting of PoMs under Article 13.

Selection of activities

The components of BalticBOOST have been chosen based on:

- **Level of progress** - giving precedence to areas that are less developed in HELCOM and where knowledge gaps have been identified. Biodiversity related descriptors were recognized to have particularly poor regional coherence in the first implementation cycle of the MSFD (COM(2014)97, SWD(2014)49). HELCOM core indicators will be used as a basis in regional biodiversity assessments and are currently operationalized in the CORESET II project. Key components still missing for achieving regional coherence are a commonly agreed tool for assessing biodiversity and prompt access to required data for such assessment.
- **Timeliness** – focusing on activities that can be carried out in the short-term, with the potential to give a boost to upcoming commitments such as the 2015 reporting of Article 13 and the 2018 reporting of Articles 8, 9, and 10. Such activities include the development of a joint documentation of coordinated PoMs for the Baltic Sea region aimed to be ready by the end of 2015. The HOLAS II project aims at updating and revising assessment tools during the first 18 months of the project (i.e. by June 2016). Updating of a tool for assessing hazardous substances as well as for biodiversity will make a significant contribution to the status reporting of these descriptors in the 2018 MSFD reporting.
- **Existing plans** – from the “Roadmap of HELCOM activities” and new aspirations that have been identified in the “HELCOM plan to improve regional coherence in the implementation of marine policies to reach Good Environmental Status of the Baltic Sea” that is currently being developed by HELCOM. In this plan, it is proposed to develop principles for environmental targets for pressures that have a negative impact on seabed habitats. Furthermore, the need to plan and make progress in the area of underwater noise has been recognized.

Specific objectives

BalticBOOST is based on five themes with one or several work packages (hereon referred to as WPs, see section e) Figure 1). Themes 1 (Biodiversity) and 3 (Physical loss and damage to seabed habitats) are the two major themes in terms of requested resources, required work and number of partners.

Theme 1, Biodiversity, focuses on development of a biodiversity assessment tool (WP 1.1) and improving data arrangements (WP 1.2, WP 1.3) for the biodiversity elements where this is limited (e.g. coastal fish, birds and seals) so that a comprehensive assessment of biodiversity in the Baltic Sea can be carried out by 2018. Furthermore, the possibility to align assessments under the MSFD and the Habitats Directive will be explored using the condition of seal populations as a case study (WP 1.4).

Theme 2, Hazardous substances, will refine an existing HELCOM tool for assessing that state hazardous substances (WP 2.1). Key components for adequate assessment of hazardous substances are to agree on matrices for indicators and to have access to quality assured data which will be addressed in WP 2.2.

Theme 3, Physical loss and damage to seabed habitats, will develop joint principles for defining environmental targets for pressures affecting seabed habitats (WP 3.1). The development of such environmental targets is expected to be challenging and will, as a starting point, explore ways to

determine how much disturbance from different activities that specific seabed habitats can tolerate while remaining in Good Environmental Status (GES). Under this Theme, a tool for assessing the impacts of fishing gear on specific habitat types and species will also be developed (WP 3.2). Finally, an arrangement for regular collection of data and information on pressures and activities that affect the Baltic Sea will be piloted, to provide support to this Theme as well as future assessment of pressures impacting the Baltic Sea (WP 3.3).

A shared component across Themes 1-3 is improving access to high quality data to carry out future assessment that will feed into the MSFD reporting. An inherent component of these activities is to align the formats of reported data to relevant international or European data format and making the resultant spatial data products (indicator maps) available as INSPIRE compliant (OGC WMS/WFS) web map services.

Theme 4, Noise, will focus on Underwater Noise. This is an area with ongoing research projects in the Baltic Sea but as yet with no formal plans for future coordinated work in HELCOM. Under this theme, a roadmap to facilitate the production of a comprehensive regional action plan on underwater noise will be developed (WP 4.1). The WP will review existing knowledge on impact of noise in the Baltic Sea, explore ways for defining environmental targets for underwater noise, and survey possible measures to manage and mitigate relevant impacts on the Baltic Sea.

Theme 5, Joint documentation of Programmes of Measures, provides support for HELCOM GEAR, the working group responsible for regional coordination in the implementation of the HELCOM BSAP and the MSFD. Support will be provided to the agreed development of a joint document on regional coordinated PoMs and a system to follow-up actions agreed by HELCOM.

Project management

Partners in the consortium are key institutes of knowledge in the fields considered in the application. HELCOM, as the applicant and coordinator of the project, will oversee all steps of the project through different modes.

The development of assessment tools carried out under themes 1-3 will directly contribute to the initial phase of the implementation of the HELCOM HOLAS II project (2014–mid-2016). Guidance for the work will be provided by the HOLAS II Core Team which consists of nominated participants from HELCOM Contracting Parties.

All themes will be given technical and strategic guidance from relevant HELCOM Working Groups as specified in the application. The HELCOM Secretariat is participating directly in all Themes with an implementing or supporting function.

The development of status assessment tools (WP 1.1 and 2.1), joint principles for seabed environmental targets (WP 3.1), a tool for assessing fisheries impact (WP 3.2), and the development of roadmap on underwater noise (WP 4.1) will be guided through workshops with participation of experts from HELCOM Contracting Parties, appropriate external expertise, and with the invitation to other Regional Sea Conventions as relevant.

As coordinator of the project, HELCOM will provide the deliverables as requested in the 'Call for proposals, DG ENV/MSFD Action Plan /2014' i.e. an interim report 8 months after signing the contract, a draft final report after 14 months, and a final report after 15 months.

Duration (in months): 15

Requested amount (in €): 633 652€

Starting date of the action: Planned starting date 1 March 2015

1 DESCRIPTION OF THE ACTION

Title:

BalticBOOST: Baltic Sea project to boost regional coherence of marine strategies through improved data flow, assessments, and knowledge base for development of measures

Abbreviations of HELCOM groups and projects used in the application

Groups (hereon referred to as WGs):

GEAR: HELCOM Group on the Implementation of the Ecosystem Approach, works towards region-wide co-operation on all elements of national marine strategies.

MARITIME: Maritime Working Group, works to ensure clean and safe shipping in the Baltic Sea and enables regional pre-negotiations on IMO matters.

PRESSURE: Working Group on Reduction of Pressures from the Baltic Sea Catchment Area, provides the necessary technical basis to the work on inputs of nutrients and hazardous substances.

STATE: Working group on the State of the Environment and Nature Conservation, covers monitoring and assessment functions as well as issues related to nature conservation and biodiversity protection.

FISH Group: Group on Ecosystem-based Sustainable Fisheries, deals with fisheries in relation to the implementation of the ecosystem-based approach.

Projects, expert groups and intersessional activities:

CORESET II: Operationalization of HELCOM core indicators (2013-2015)

EUTRO-OPER: Making HELCOM Eutrophication Assessments Operational (2014-2015)

FISH-PRO II: Project for Baltic-wide assessment of coastal fish communities in support of an ecosystem-based management (2013-2018)

HOLAS II: Second holistic assessment of Ecosystem Health of the Baltic Sea (2014-2018)

IG PoM: Intersessional Group on Programmes of Measures (under GEAR)

SEAL EG: HELCOM *ad hoc* Seal Expert Group

THEME 1: BIODIVERSITY

a) Describe the action on the basis of the main activities planned and where it will be implemented.

WP 1.1 Development of a biodiversity assessment tool

Partners: SYKE (Finland, coordinating role), EMI (Estonia), NIVA Denmark

HELCOM has assessed biodiversity since the early 1990's but only since 2009 begun to explore the use of multi-metric indicator-based assessment tools. The latest integrated biodiversity assessment consisted of case studies with local data and various indicators and was carried out using a pilot

version of the so-called BEAT tool (HELCOM BSEP 116B⁶, BSEP 122⁷). Since the application of the first version of the BEAT tool HELCOM has developed and agreed on a set of biodiversity core indicators that will form the basis for future assessments on the progress towards achieving GES.

Currently there are at least three biodiversity assessment tools of interest to explore for use in HELCOM assessments: (1) developments of BEAT that has been carried out by a project external to HELCOM, (2) a tool developed by the Life+ project MARMONI, and (3) the development of a MSFD-targeted biodiversity assessment tool in the FP7 project DEVOTES. HELCOM WG STATE concluded at its meeting in November 2014 (STATE 1-2014) that the HOLAS II project should make use of the best components of these existing biodiversity assessment tools in the further development of the assessment tool while also considering what is available elsewhere.

The development of a HELCOM biodiversity assessment tool will be based on the technical comparison of the mentioned tools and an analysis of policy requirements. WP 1.1 will furthermore validate the biodiversity assessment tool in case study areas, and deliver an operational tool as a component to the HOLAS II project.

WP 1.2 Database and data arrangements for coastal fish, birds and seals

Partners: SLU Aqua (Sweden, coastal fish), SMNH (Sweden, seals), Latvian Fund for Nature (birds), HELCOM

For several of the elements that the HELCOM biodiversity core indicators are built on, monitoring data is currently held nationally or in temporary storage files by HELCOM expert groups. To cater for regular indicator updates and assessments, it is essential to establish a permanent host for the data or to set up data arrangements for systematic and regular retrieval of data from existing national or international databases.

WP 1.2 will develop functional data arrangements for seals, coastal fish, and marine birds. At present there are no established long-term data arrangements for these organisms in HELCOM.

WP 1.3 Data arrangements for fish indicators

Partner: ICES

HELCOM is currently developing two indicators that are based on data from trawl surveys; the core indicator 'Proportion of large fish in the community' and the candidate indicator 'Mean maximum length (MML) of the fish community'. To cover the entire area of the Baltic, a combination of data from trawl and acoustic surveys are needed i.e. from Baltic International Trawl Surveys (BITS) and the Baltic International Acoustic Survey (BIAS).

WP 1.3 will set up an arrangement to provide processed data from ICES to HELCOM for these indicators.

WP 1.4 Pilot study on aligning the assessments of Good Environmental Status in the MSFD/BSAP with assessments of Favourable Conservation Status in the Habitats Directive regarding status of seal populations

Partner: SMNH (Sweden), tentatively Aarhus University (Denmark) as sub-contractor

HELCOM EU Member States provide assessments of the state of the Baltic Sea seal species based largely on the same monitoring data for BSAP and MSFD purposes of assessing GES, as well as for assessing the Favourable Conservation Status (FCS) under the Habitats Directive (HD). Ongoing work

⁶ <http://www.helcom.fi/Lists/Publications/BSEP116B.pdf>

⁷ <http://www.helcom.fi/Lists/Publications/BSEP122.pdf>

on developing HELCOM core indicators for assessing GES have identified marine mammals as a good case study for streamlining the reporting and aligning the assessments for the mentioned legislative needs⁸.

The assessment of GES and FCS may differ as the requirements as well as assessment scales differ. Furthermore, FCS assessments include a historical requirement to assess abundance, distribution, structure and function of species largely using qualitative judgements whereas MSFD GES assessments strive to define quantitative GES-boundaries. Guidelines for the implementation of the MSFD recommend that FCS boundaries are to be used also for the implementation of the MSFD (see e.g.⁹). The experts working on biodiversity indicators in HELCOM and OSPAR proposed the opposite approach at a recent joint meeting¹⁰, i.e. that the quantitative boundaries developed for MSFD/BSAP GES-assessments could be evaluated as a basis for FCS assessment.

WP 1.4 will carry out a pilot study to evaluate the possibility to align the HD and MSFD assessments regarding seal abundance and distribution.

b) Methodology to be followed.

WP 1.1 Development of a biodiversity assessment tool

In this WP the applicability of existing tools for MSFD purposes will be analyzed, possibilities to merge ideal features will be explored and a tool will be developed and tested. The tool will be developed against assessment needs arising from the MSFD, the BSAP and the HELCOM Monitoring and Assessment Strategy. Three existing tools will be explored as a starting point.

The HELCOM BEAT tool is based on quantitative indicators, associated quantitative GES boundaries and a secondary assessment of confidence. The tool groups indicators to three elements (species, communities and marine landscapes), underneath which indicators are integrated by weighted averaging. Between the elements, the one-out-all-out principle was used to classify the state of biodiversity. The tool has been further developed in the North Sea in the HARMONY project.

The Life+ project MARMONI has developed a biodiversity assessment tool that is also based on quantitative assessment of individual indicators of reaching GES and hierarchical aggregation of the assessment results according to assessment principles of MSFD together with assessment of different types of uncertainty. This tool is designed to utilize any type of available indicator data for the geographical assessment unit. The indicators can have the GES boundary defined through acceptable deviation or a fixed value from a reference condition, GES defined by range of values, trend-based GES definition or expert judgment.

The FP7 project DEVOTES is developing and currently testing a multi-metric indicator-based biodiversity assessment tool. Test cases from the Baltic Sea include the Gulf of Finland and Kattegat. This tool is supposed to be a flexible state of the art tool with three interrelated products in addition to the tool itself: 1) a biodiversity status assessment (numerous aggregation options are foreseen), 2) a secondary confidence assessment (100% data driven), and 3) a back log documenting the indicators included and the aggregations choices made. A prototype tool exists, and a public version is expected in 2016.

⁸ HELCOM/OSPAR joint working session on biodiversity indicators, 1 October 2014. Communication paper resulting from the joint meeting of HELCOM CORESET II and OSPAR ICG-COBAM, 1 October 2014, Gothenburg, Sweden.

⁹ Review of the GES Decision 2010/477/EU and MSFD Annex III – cross-cutting issues, GES_12-2014-03

¹⁰ HELCOM/OSPAR joint working session on biodiversity indicators, 1 October 2014. Communication paper resulting from the joint meeting of HELCOM CORESET II and OSPAR ICG-COBAM, 1 October 2014, Gothenburg, Sweden.

Tasks and approaches:

I Planning

- 1) Review methods to integrate indicators in the tool and to consider the grouping of indicators: the work will take into account on-going development in MSFD CIS WG-GES¹¹, development of the HELCOM core indicators, reports and scientific studies¹², the BSAP, the EC Decision 477/2010 as well as the review and revision work of the Decision, and Annex III of the MSFD.
- 2) Consider technical requirements to include HELCOM core indicators in the tool: the core indicators have utilized various approaches to set GES boundaries which result in technical challenges in the development of the assessment tool (e.g. GES expressed as a boundary, a range or a trend).
- 3) Technical solutions that take into consideration transparency of assessment results/user-friendliness and to gain understanding of the method and the results among the experts in HELCOM Contracting Parties.
- 4) Carry out 2 workshops with participation of experts from HELCOM Contracting Parties, under the HOLAS II project, for guidance and knowledge input for the development of the tool.

II Development

- 5) Develop principles to define and possibly quantify uncertainty which can affect the assessment outcome.
- 6) Develop a tool to assess biodiversity status of the Baltic Sea building on the findings of the previous steps.

III Validation

- 7) Validate the tool based on a desk study in case study areas (n = 6) against environmental data; the test results will be compared with scientific studies, other marine assessments of the areas as well as known anthropogenic impacts in the areas.

IV Dissemination

- 8) Prepare a final report that together with the test results and the operational tool (e.g. code in R and a data format) will be delivered as a component of the implementation of the HELCOM HOLAS II project.

SYKE will coordinate the work carried out under the WP. The work will be done by NIVA Denmark, EMI and SYKE. The following table indicates the amount of working days expected to be allocated by the partners to each of the four tasks of the WP.

Tasks	SYKE (days)	NIVA Denmark (days)	EMI (days)
Coordination of the WP	19,5	-	-
Task I: Planning	39	7	17
Task II: Development	39	29	18
Task III: Validation	19,5	15	17
Task IV: Dissemination	39	7	17

¹¹ Document "GES_12-2014-03 Review of the GES Decision 2010/477/EU and MSFD Annex III – cross-cutting issues"

¹² For instance, Borja et al. (2011: Tales from a thousand and one ways to integrate marine ecosystem components when assessing the environmental status, *Frontiers in Marine Science*), Prins et al. (2014, Coherent geographic scales and aggregation rules for environmental status assessment within the Marine Strategy Framework Directive. Towards a draft guidance. Deltares/AZTI/HCMR, Report 1207879-000-ZKS-0014 to the European Commission).

WP 1.2 Database and data arrangements for coastal fish, birds and seals

The WP will recommend suitable data formats and data arrangements for coastal fish, birds, and seals. For all elements the WP will investigate if current data formats need to be revised or if transformation services are needed in order to be in compliance to international standards.

The work will take into account existing data formats and the need to fulfil the data requirements for the relevant core indicators. Data reporting workflow, if in place, will be analyzed to detect gaps or problems, and the WP will recommend permanent data flow arrangements to enable regular and timely reporting for HELCOM assessment purposes.

Seals

Current situation: a database is developed in the BALSAM project¹³ to be finalized by end of 2014.

Tasks and approaches:

- Develop a database format (reporting guidelines) and data entry tool in cooperation with HELCOM SEAL EG. The database is planned to be hosted by the HELCOM Secretariat.
- Develop a system for regular data product extraction of core indicators to the HELCOM Data and Map service.

Coastal fish

Current situation: data is stored in national databases with ad hoc data extractions for regional assessment products within the HELCOM project FISH-PRO II.

Tasks and approaches:

- Develop a database format (reporting guidelines) to be agreed at a relevant aggregation level required for indicator processing in cooperation with FISH-PRO II. The database is planned to be hosted by the HELCOM Secretariat.
- Develop a data reporting tool.
- Develop a system for regular data product extraction of core indicators to HELCOM Data and Map service.

Marine birds

Current situation: data is stored in national or institutional databases with ad hoc data extractions for regional assessment products. Reporting is partly taking place to other international organizations e.g. IWC data to Wetlands International. The BALSAM project is developing a metadatabase of existing data sources.

Tasks and approaches:

- Carry out a workshop with experts from HELCOM Contracting Parties to agree on common data format and data arrangements.
- Analyze the BALSAM output (metadatabase) and recommend on whether to have a distributed or centralized database solution, taking into account other international data reporting activities.
- Develop a database format (reporting guidelines) and data input tool.

¹³ Baltic Sea Pilot Project: Testing New Concepts for Integrated Environmental Monitoring of the Baltic Sea. Grant agreement number: 07.0335/2013/659519/SUB/C2.

The three external partners in the WP have specific expertise on the relevant ecosystem elements and will carry out the gap analysis and specify data requirements for HELCOM core indicators. The HELCOM Secretariat will coordinate the development of data flows and implement the suitable database or data collection arrangement.

WP 1.3 Data arrangements for fish indicators

ICES WG BIFS processes data from BITS trawl surveys from the demersal fish communities in the Baltic Sea and store the data in DATRAS. Agreed standard population and size class indices algorithms would be applied to these data to provide output data products that can be used in the core indicators LFI and MML. The group also processes national assessments made based on the BIAS surveys (acoustic survey) in the pelagic fish communities, although primary data from the acoustic surveys are hosted nationally. The aim would be to make the aggregated data derived from the national surveys standardized and available within a regional data system, and to develop standard products in cooperation with the survey groups.

Tasks and approaches:

- 1) Develop the required output data-flow for the LFI and MML indicators for demersal fish communities from BITS trawl surveys, involving ICES WG BIFS in defining methods for appropriate processing of the data and output products.
- 2) Explore possibilities to retrieve aggregated data from HELCOM Contracting Parties from BIAS surveys and define a mechanism for data arrangements for acoustic surveys to regularly update the calculations for mentioned indicators as part of the ongoing work in ICES.
- 3) Define a method to process acoustic survey derived data into standard products for HELCOM core indicators.

All tasks will be carried out by ICES in close cooperation with HELCOM. Estimated time allocated to each task:

Task	ICES (days)
Task 1	9
Task 2	23
Task 3	13

WP 1.4 Pilot study on aligning the assessments of Good Environmental Status in the MSFD/BSAP with assessments of Favourable Conservation Status in the Habitats Directive regarding status of seal populations

A superficial comparison of the main aims and criteria applied in the MSFD/BSAP and the Habitats Directive (HD), as they relate to the reporting of seals, clearly shows similarities that could provide an option for streamlining the reporting. Under the proposed project, the superficial comparison will be supported by detailed technical studies.

A main task is to evaluate the consequences of the definitions of FCS and GES, where FCS is a philosophical / political / legal concept used in EU legislation, but can be defined and interpreted in many ways. The FCS constitutes the overall objective to be reached for all habitat types and species of community interest (EC 2006). FCS is defined as a situation where a habitat type or species is prospering (in both quality and extent/population) and with good prospects to do so in future. FCS is assessed across all national territory (or by biogeographical region within a country where 2 or more regions are present) and should consider the habitat or species both within the Natura 2000 network

and in the country at large. According to the HD, the conservation status of species will be taken as 'favourable' when:

- a. population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- b. the natural range of the species is neither being reduced nor likely to be reduced within the foreseeable future, and
- c. there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

In contrast, the aim of the MSFD is to achieve or maintain GES of Europe's marine environment by 2021¹⁴. In this case GES should be defined for elements in the ecosystem that are affected by human induced pressures.

Tasks and approaches:

- 1) Make an initial comparative analysis of the practical requirements and definition of good/favourable status in the two directives as they concern Baltic seal species.
- 2) Document the different approaches reported by HELCOM EU Member States in the MSFD 2012 reporting and analyse where the greatest differences and similarities can be found from the perspective of possibly aligning FCS assessments with GES assessments.
- 3) Provide case study examples on how the use of the different approaches of the MSFD/BSAP and HD influence the outcome of status assessment when based on the same data e.g. seal abundance and distribution.
- 4) Clarify how aggregation of regional data can be used to support the reporting requirements of the two Directives. The distribution of seals differs significantly between the countries, and thus the adequacy of the data produced through national monitoring also varies.
- 5) Based on the above tasks, prepare a background documentation for a workshop with expert participation from HELCOM Contracting Parties.
- 6) Prepare a concluding report based on conclusions from the workshop, including proposals for how the assessment of seals can be aligned between the two Directives.

The planned workshop will be held back-to-back with a meeting of the HELCOM SEAL EG. Close contacts will be established with OSPAR ICG COBAM, ICES WGMME, and by inviting representatives from other Regional Sea Conventions to the workshop.

Swedish Museum of Natural History (SMNH), and tentatively Aarhus University (AU) as subcontractor, will carry out the WP jointly. SMNH will take lead on the initial comparative analysis (1), while AU will tentatively take lead on case study examples (3). The remaining tasks and reporting will be carried out in cooperation.

c) Expected results and their use.

In the following section, deliverables are outlined mainly as tools, databases and reports to be used directly in the HELCOM framework. It should be noted that several of WPs are also expected to result in the production of articles to be published in the peer-reviewed journals. The main forum for dissemination is meetings of relevant HELCOM WGs as specified for the respective WP and depicted in Figure 1 (section e).

WP 1.1 Development of a biodiversity assessment tool

¹⁴ "good environmental status' means the environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions, and the use of the marine environment is at a level that is sustainable, thus safeguarding the potential for uses and activities by current and future generations, i.e....." (MSFD, Article 3, 5).

A biodiversity assessment tool to follow-up progress towards GES and achieving the objectives of the MSFD and BSAP. It will directly contribute to the implementation of the HELCOM HOLAS II project and thereby to the production of a joint roof report for the 2018 MSFD reporting for HELCOM Contracting Parties also being EU Member States.

WP 1.2 Database and data arrangements for coastal fish, birds and seals

Operational data arrangements for seals, birds and coastal fish that will enable efficient and regular reporting of data and thereby enable regular updates and indicator based assessments. The results of the WP will also expand the range of accessible data products in the HELCOM Data and Map services' thematic HELCOM Biodiversity portal (to be published in November 2014) as well as further enhance the portal's functionalities and data compatibility towards European standards (INSPIRE).

WP 1.3 Data arrangements for fish indicators

An operational system for delivering from ICES controlled processed data, documented methodologies and regular updates for HELCOM core indicators 'Proportion of large fish in the community (LFI)' and the candidate indicator 'Mean maximum length (MML) of the fish community'.

WP 1.4 Pilot study on aligning the assessments of Good Environmental Status in the MSFD/BSAP with assessments of Favourable Conservation Status in the Habitats Directive regarding status of seal populations

An analysis of the possibility to align the quantitative GES assessments produced for the MSFD/BSAP with assessment of FCS under the HD. The WP also contributes to regional coherence in the implementation of the mentioned polices and will furthermore contribute to the MSFD CIS as appropriate.

d) Project management and implementation contracts.

WP 1.1 Development of a biodiversity assessment tool

Guidance for the development of the assessment tool will be provided through two workshops with expert participation from HELCOM Contracting Parties. The workshops aim to be organized back to back with other project workshops. Overall guidance will be given by the HOLAS II Core Team and HELCOM WG STATE.

The consortium of partners (SYKE, NIVA Denmark, EMI) have worked with the development of biodiversity assessment tools, previous HELCOM assessments, the development of core indicators in HELCOM, and have taken part of the national MSFD implementation process.

WP 1.2 Database and data arrangements for coastal fish, birds and seals

The WP will be coordinated through the HELCOM Secretariat. Work on coastal fish and seals will be carried out in communication with the HELCOM SEAL EG and the HELCOM FISH-PRO II project. For birds, a workshop with experts from HELCOM Contracting Parties will be held. Overall guidance will be provided by HOLAS II Core Team and HELCOM WG STATE.

The external partners (Latvian Fund for Nature, SLU Aqua, SMNH) have experience and in-depth knowledge of the needs of HELCOM assessments and core indicators.

WP 1.3 Data arrangements for fish indicators

The WP will be guided by the HOLAS II Core team and HELCOM WG STATE. Working groups of ICES, the partner, are processing the data needed for the specified indicators.

WP 1.4 Pilot study on aligning the assessments of Good Environmental Status in the MSFD/BSAP with assessments of Favourable Conservation Status in the Habitats Directive regarding status of seal populations

The work will be guided by HELCOM WG STATE and HELCOM SEAL EG. One workshop with participation from HELCOM Contracting Parties will be carried out.

The partners (SMNH and tentatively Aarhus University as sub-contractor) are participating in the development of core indicators for seals and in the HELCOM SEAL EG.

THEME 2: HAZARDOUS SUBSTANCES

a) Describe the action on the basis of the main activities planned and where it will be implemented.

WP 2.1 Development of a tool for assessment of hazardous substances

Partner: NIVA Denmark, in close cooperation with ICES (WP 2.2)

The latest HELCOM integrated hazardous substance assessment consisted of case studies with local data and various indicators (i.e. substances) and was carried out using a prototype of the so-called CHASE tool (The HELCOM Chemical Status Assessment Tool; HELCOM BSEP 120B¹⁵, BSEP 122). Since the application of the first version, the CHASE tool has been developed further and applied in the North Sea through the HARMONY project¹⁶ and HELCOM has developed a set of core indicators for hazardous substances. Both versions of the tool are based on EQS¹⁷ values (or the likes) for specific substances (indicators) as well as biological effects in specific matrices (water, sediment, biota).

The basis for the development of a tool for assessment of chemical status will be the existing CHASE tools (1.0 and 2.0) as well as other relevant tools for integrated assessment of hazardous substances/biological effects.

WP 2.1 will explore different ways of aggregating indicators for hazardous substances (substance-wise, matrix-wise, criteria-wise, descriptor-wise), validate the updated tool using existing data, and develop an updated operational tool as a component of the HELCOM HOLAS II project.

WP 2.2 Improved data labelling and data flow for hazardous substances

Partner: ICES, in close cooperation with NIVA Denmark (WP 2.1)

The HELCOM core indicators on concentrations of hazardous substances in the environment are structured around data reported to ICES through the COMBINE programme. In the past years, when data has been extracted as a combined table containing all contaminants and matrices, problems with the data processing and quality emerged. Duplications of data records were detected, and some unclear issues relating to the matrix used and the measured concentrations were detected when the data was processed in the relevant core indicators.

WP 2.2 will improve the data labelling of hazardous substances and ensure an operational data flow for carrying out HELCOM assessments of hazardous substances.

b) Methodology to be followed:

WP 2.1 Development of a tool for assessment of hazardous substances

¹⁵ <http://www.helcom.fi/Lists/Publications/BSEP120B.pdf>

¹⁶ Development and demonstration of Marine Strategy Framework Directive tools for harmonization of the initial assessment in the eastern parts of the Greater North Sea sub-region, finalized 2013

¹⁷ Environmental Quality Standards

The applicability of existing version of CHASE tools will be analysed focusing on needs arising from the MSFD, the BSAP and the HELCOM Monitoring and Assessment Strategy. Other relevant tools for integrated assessment of hazardous substances will also be considered and possibilities to improve specific parts of the tool (aggregation; calculation of the 'Contamination Sum', etc.), will be explored and a 'new' tool will be tested.

Tasks and approaches:

- 1) Identify features and calculation principles/processes in the existing versions of the CHASE tool which should be further developed.
- 2) Carry out a workshop with participation of experts from HELCOM Contracting Parties, under the HOLAS II project, for guidance and knowledge input for updating of the existing tool.
- 3) Develop (coding) and test the HELCOM Chemical Status Assessment Tool.
- 4) Validate the updated tool in a desk study based on data from HOLAS I in selected offshore areas (n = 9-17).
- 5) Produce a final report that together with the test results and the tool itself (e.g. coded in R and backed by either a data format or a 'reader'), will be delivered as a component in the implementation of the HELCOM HOLAS II project.

NIVA Denmark will carry out the work in collaboration with ICES that will improve data flow for hazardous substance data under WP 2.2.

The following table indicates the estimated working days expected to be spent on the four tasks.

Tasks	NIVA Denmark (days)
Task 1: Planning	8
Task 3: Development	23
Task 4: Validation	15
Task 2 and 5: Workshop and reporting	15

WP 2.2 Improved data labelling and data flow for hazardous substance

The WP will improve the quality and data flow arrangements for hazardous substances.

Tasks and approaches:

As regards data flow,

- 1) Inclusion of EIONET derived data in the COMBINE database with duplicates check and removal.
- 2) Revision of reporting format together with WP 2.1 and relevant HELCOM experts working with indicator assessments.
- 3) Roll out 'automated submission/resubmission' facility to data providers.

As regards improved data extraction,

- 4) Labelling of data per HELCOM Assessment units as in the HELCOM M&A Strategy (2013).
- 5) Data product extraction from database, including e.g. calculation of averages as defined by CORESET experts (to be described in detail in the assessment process).
- 6) Data product outputs catalogue to be available online with possibility of referencing through unique identifier (DOI/URI).

The WP will be carried out by ICES in close cooperation with NIVA and WP 2.2. Expected time allocated to the tasks:

Tasks	ICES (days)
Task 1	11
Task 2	8
Task 3	24
Task 4	3
Task 5	12
Task 6	3

c) Expected results and their use.

WP 2.1 Development of a tool for assessment of hazardous substances

A state of the art tool for assessment of hazardous substances which can be used for assessment of environmental status and to follow-up progress towards GES and achieving relevant objectives of the MSFD and BSAP. It will directly contribute to the implementation of the HELCOM HOLAS II project and thereby to the production of a joint roof report for the 2018 MSFD reporting for HELCOM Contracting Parties also being EU Member States.

WP 2.2 Improved data labelling and data flow for hazardous substance

An improved and operational system for regular delivery of hazardous substances data required for HELCOM assessments of hazardous substances.

d) Project management and implementation contracts.

WP 2.1 Development of a tool for the assessment of hazardous substances

Guidance for the development of the assessment tool will be provided through a workshop with expert participation from HELCOM Contracting Parties. The workshop will be carried out under the HOLAS II project and overall guidance will be given by the HOLAS II Core Team and HELCOM WG STATE.

The technical development, testing of the tool and the dissemination of the results will be carried out by NIVA Denmark having previously developed the CHASE tools, participated in previous HELCOM assessments, and participated in the national MSFD implementation process.

WP 2.2 Improved data labelling and data flow for hazardous substance

The WP will be overseen by the HOLAS II Core team and HELCOM WG STATE. The partner, ICES, is hosting the hazardous substances data in the HELCOM COMBINE database.

e) Arrangements for monitoring/supervision of the operation and any risks involved in its implementation:

Key to the implementation of BalticBOOST is guidance from the appropriate HELCOM WGs and projects as specified in the application, as well as the engagement of all HELCOM Contracting Parties in the planned workshops. The working arrangements for the project are set up so that HELCOM has the possibility to guide the project to ensure country ownership and uptake of the results and

products after the project has been finalized. HELCOM has a coordinating or supporting function in all Themes.

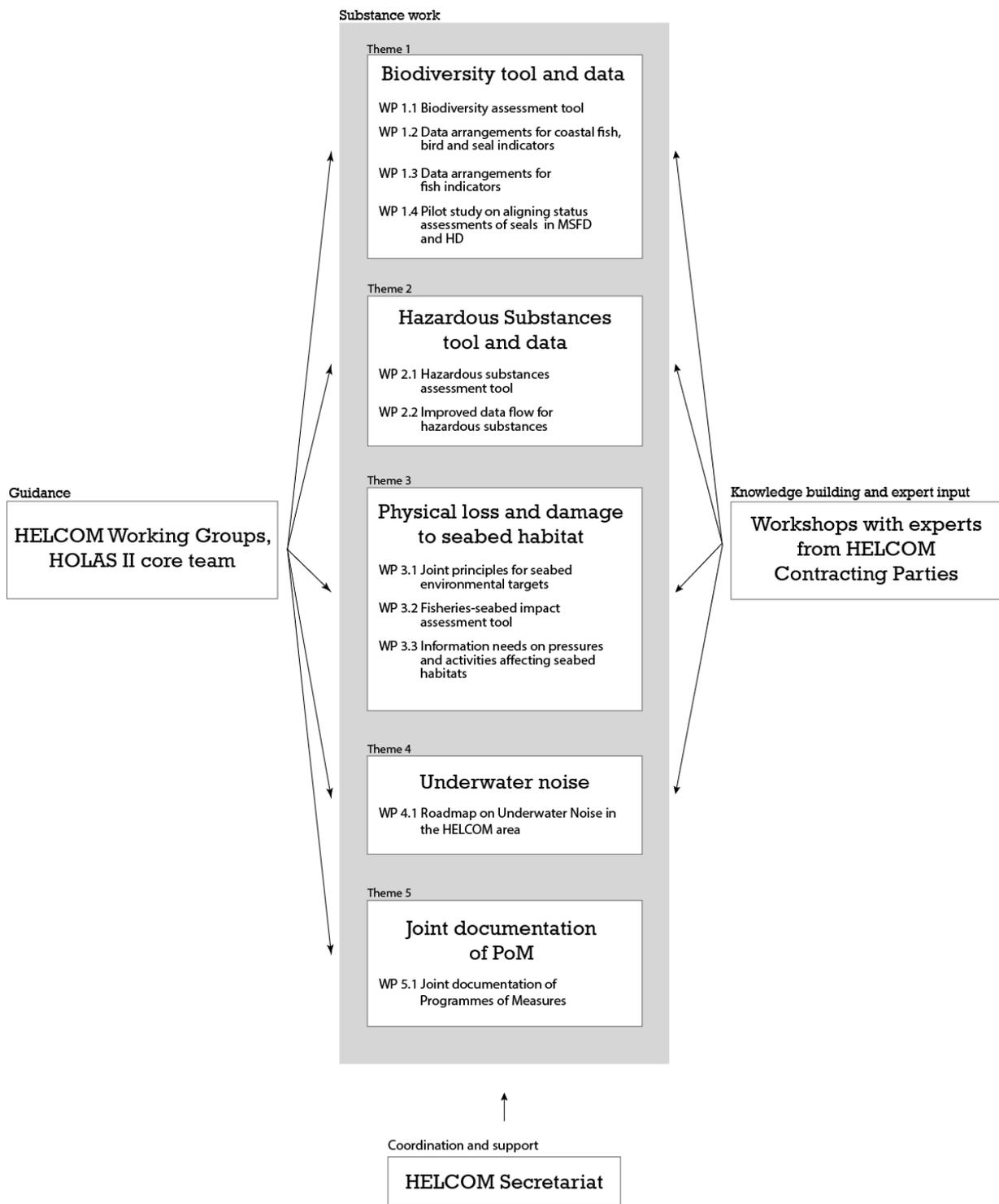


FIGURE 1. Monitoring and supervision of work carried out in BalticBOOST.

Figure 1 outlines the arrangement for monitoring and supervision. HOLAS II Core Team refers to the management structure of the HOLAS II project that will develop a 2nd HELCOM Holistic Assessment of the Ecosystem Health of the Baltic Sea. BalticBOOST will deliver several components to the HOLAS II project. The product of HOLAS II has been agreed by the HELCOM EU Stated to be developed as a joint roof report for use in the 2018 MSFD reporting of Article 8. The HOLAS II Core Team and the

Project Coordinator of HOLAS II will have a specific role in overseeing the development of assessment tools which is planned as part of the project (WP 1.1 and 2.1).

HELCOM has experience of coordinating projects of similar character and magnitude as BalticBOOST and the monitoring of progress and assessment of quality will be ensured through the guidance of HELCOM WGs. Thus, the chance for a successful achievement of the project is considered high, and the risk of failure as minimal.

Table 1. Partners in the BalticBOOST project application themes 1 and 2.

Work package	Lead Partner	Contributing partners
WP 1.1 Development of a biodiversity assessment tool	SYKE (Finland)	HELCOM, NIVA (Denmark), EMI (Estonia)
WP 1.2 Database and data arrangements for coastal fish, birds and seals	HELCOM	SLU Aqua (Sweden), Swedish Museum of Natural History, Latvian Fund for Nature
WP 1.3 Data arrangements for (offshore) fish indicators	ICES	HELCOM
WP 1.4 Pilot study on aligning the assessments of Good Environmental Status in the MSFD/BSAP with assessments of Favourable Conservation Status in the Habitats Directive regarding status of seal populations	Swedish Museum of Natural History	<i>Aarhus University (tentatively as sub-contractor)</i> HELCOM
WP 2.1 Development of a tool for assessment of hazardous substances	NIVA (Denmark)	HELCOM
WP 2.2 Improved data labelling and data flow for hazardous substances	ICES	HELCOM

Table 2. Budget breakdown for the Themes of the BalticBOOST application (total including EU co-financing).

Cost category	Theme 1	Theme 2	Theme 3	Theme 4	Theme 5	Total €
Personnel	235 986	56 648	295 821	27 175	20 767	636 398
Travel and subsistence	18 950	3 000	23 900	3 000		48 850
Equipment						0
Sub-contracting / External assistance	20 000		3 000			23 000
Other direct costs	10 000	4 000	14 000	4 000		32 000
Indirect costs / overheads	19 946	4 455	23 570	2 392	1 454	51 817
TOTAL ELIGIBLE COSTS	304 882	68 103	360 291	36 568	22 221	792 065