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Background

Cumulative effects assessment addresses impacts on the environment from co-occurring human activities, based on information on spatial distribution of pressures caused by these human activities in combination with data on species or habitats. In MSP, outputs from different scenarios can be compared, and the assessments can be linked to economic and social analyses to address probable impacts on human well-being.

In the PanBaltic SCOPE project, co-funded by the European Maritime and Fisheries Fund of the European Union, the activity on Cumulative Impacts is led by HELCOM with SwAM, MoEPRD, BSH, RCS, EE, and UMS as participating partners. The overall aim of the activity is to develop a Baltic view on the assessment of cumulative impacts when doing MSP.

This document presents the work plan and current state of art of Pan Baltic Scope regarding cumulative impacts assessment.

Action requested

The Meeting is invited to take note of the plans and discuss how the activities can contribute to the work of the Group.

Work plan for the cumulative impact activity in PanBaltic SCOPE

The work of the activity builds on data from the regional Baltic Sea Impact Index (BSII, produced within the HOLAS II project) as well as on national activities, including for example the Swedish Symphony project on cumulative impacts. The project also seeks exchange of experiences with corresponding work in other sea-basins. In line with the project application, the main tasks of the activity are to:

1. compare and align metadata for spatial information at different scales with the aim to enhance harmonization of spatial data sets on human activities, pressure, and ecosystem components;
2. evaluate robustness and evidence-base of sensitivity scores for assessing the impact of pressures on ecosystem components (common development of knowledge);
3. perform tests of how to incorporate green infrastructure/blue corridors in the scenarios and assessment, and for integration with economic and social data, and
4. identify key outputs for assessment and evaluation at different spatial scales and for different legal frameworks.

The different work tasks are presented in more detail in table 1. The tasks are kept together by *i)* the development of a tool for assessing cumulative impacts, which is based on the Baltic Sea Impact Index, and *ii)* the production of a report to be presented in a report in the end of the project. A time table for the latter is given in table 2.

In table 1, points that may be of particular interest for the Meeting to consider are marked*.

Table 1. Tasks of the work plan, in relation to the project application, and the current state-of-art. Specifications to the tasks are presented under each sub-heading. Generic aspects are presented in the top of the table.

Task	State of the art
Generic aspects to develop cumulative impact assessments when doing MSP	
Overview existing tools for cumulative impact assessment and MSP to compare experiences and identify commonalities, data requirements, and development needs. Identify what already existing tools are missing, and may need new development	*The project has been considering the HELCOM BSII, Swedish Symphony, BONUS BASMATI (Latvia), Estonian tool, MSP work in Germany, Poland and Finland.
Collect information on potential case study areas and perform tests of cumulative impacts under different scenarios in these areas.	*The project has suggested to focus on the pan-Baltic Scale as much as possible, as this is seen as the overarching benefit of the PanBaltic Scope. Proposals for smaller scale case study areas are the Arkona basin and the Archipelago Sea-Bothnian Sea, respectively.
Develop first version regional GIS-based tool for carrying out desktop index calculation, and make available for further development as needed	A first version of the tool is available for evaluation by project partners for texting and feedback. The next step is to also make it work in Arc GIS pro, and to develop a more detailed output matrix

Task 1. Compare and align metadata for spatial information at different scales with the aim to enhance harmonization of spatial data sets on human activities, pressure, and ecosystem components;	
Discuss priority datasets and ways to cooperate and exchange knowledge and data	The project has suggested that the HELCOM BSII data is used as basis. This data contains information on the current (2011-2016) distribution of human activities, pressures and species/habitats at Baltic Sea scale according to the HOLAS II project *Additionally, marine plans, as far as made available by project partners should be included.
Task 2. Evaluate robustness and evidence-base of sensitivity scores for assessing the impact of pressures on ecosystem components	
Compare how ecosystem sensitivities are considered in national and regional work, and propose criteria for evaluating the robustness and evidence base of sensitivity scores in the estimation of cumulative impacts. Evaluate the influence of variability in sensitivity scores on the assessment output, based on test runs and using agreed criteria.	The project has suggested to propose such criteria, but on a general level to focus the work in the project on concept and tool development, and to as far as possible based that development work on already existing data in this respect.
Task 3. Perform tests of how to incorporate green infrastructure/blue corridors in the scenarios and assessment, and for integration with economic and social data, and	
Compare experiences on green infrastructure	The project works together with the activity on Green Infrastructure (activity 1.2.4) with the idea to include the resulting maps in the cumulative impact assessment.
Task 4. Identify key outputs for assessment and evaluation at different spatial scales and for different legal frameworks	
* Discuss a draft framework for connecting Cumulative impact assessment to Economic and social analyses. Identify potential variables and metrics for connecting to ESA;	Key priorities for this work was presented and discuss at the Pan Baltic Scope opening conference workshop. To be continued in Winter 2018-2019
*Identify test scenarios for the development work.	The project is considering to focus on scenarios for off shore wind farm

	development, and potentially also aquaculture.
*Discuss key variables to evaluate the assessment result. Propose how to classify and present confidence and uncertainty in the spatial data.	This part is under discussion. To be continued in Winter 2018-2019
Evaluate tests scenarios and identify further development needs based on the test runs.	Planned for winter 2019
Propose how the assessment of cumulative impacts and MSP could be further harmonized to support comparability at different spatial scales, among usages and legal frameworks	Planned for second half of 2019.

Table 2. Time line for the work to produce the final report

Task	Time
Define format, aims and audience for the activity deliverable report	May 2018
Draft outline of the report	Autumn 2019
Report writing in parallel with tool development	Winter, spring, summer 2019
Final remarks and conclusions on the report	September 2019
Report finalisation	End of 2019