

BONUS BALTCOAST PROJECT

Publishable summary report – Second reporting period (1 April 2016 to 31 March 2017)

Date: 29 May 2017

1 BONUS BALTCOAST overall goals and expected final results

The **overarching aim** of the BONUS BALTCOAST project is to:

Overcome the lack of a holistic approach for coastal research and management which integrates different human activities with ecosystems capacity and environmental forcing, therefore, BONUS BALTCOAST has the ultimate objective of developing a coherent and systematic management approach that encompasses multiple impacts in a spatially heterogeneous context, by using Systems Approach Framework (SAF) as a tool to be applied through case studies that reflect current regional management challenges and develop a generic tool for integrated system assessment.

Major objectives are:

- a) to further-develop a SAF for science and policy integration in the coastal zone into an applicable, user-friendly tool with high practical relevance that allows users to manage with multiple, complex, and diverse issues in the coastal zone and integration of spatial information and concerns;
- b) to tackle major thematic coastal issues that require a comprehensive interdisciplinary approach, in a manner that is structured, transparent and provides a framework to deal with complex issues and applicable for evaluating solutions with end-users;
- c) to further-develop and apply an indicator-based concept that allows users to measure the sustainability and the success of SAF, Integrated Coastal Zone Management (ICZM) and Maritime Spatial Planning (MSP), as well as a concept to integrate the SAF into existing policy frameworks of EU (e.g. EU Strategy for the Baltic Sea Region (EUSBSR), EU Integrated Maritime Policy, EU Marine Strategy Framework Directive (MSFD), Water Framework Directive (WFD), Natura 2000 as well as the HELCOM Baltic Sea Action Plan (BSAP));
- d) to carry out intensive SAF training and education for academics and professionals in order to increase the capacity to deal with complex coastal issues in a systematic way;
- e) to strengthen and link existing Baltic activities and initiatives on Integrated Coastal Management (ICM) into a lasting Baltic coastal management competence network.

2 Work carried out during the reporting period

The broad range of BONUS BALTCOAST work continued also during the second year and included the further development of SAF and its supporting tools, as well as the application within the six case study sites. Furthermore, project results were widely disseminated to external experts, stakeholders, the scientific community and broad public and external training through graduate courses and a BONUS BALTCOAST summer school was carried out.

Internal SAF training for project partners continued during project and skype meetings. During the second reporting period, the main focus was on the System Formulation. For this, data for model simulations needed to be prepared. On the basis of the conceptual models that were developed in the first reporting period, sub-models were built and tested. Moreover, preparations for System Appraisal have started.

The SAF report format, which provides guidelines for a stepwise SAF application, was further developed based on the experience gained from the case study site applications and insights from the reanalysis studies. Consequently, the two additional steps 'Implementation' and 'Monitoring and Evaluation' were included. The

SAF report format provides the basis for the SAF handbook, which will be published in the next reporting period.

Supporting tools for SAF were further developed and applied. The indicator-based system to assess success of ICM initiatives and progress towards sustainability was applied to selected re-analysis studies to test the tool's applicability as a supporting evaluation tool for SAF. A manuscript for this research was submitted to a peer-reviewed journal. The stakeholder participation and preference tool was further tested and broadened in order to be applicable within SAF. Guidelines for the tools' applications within different SAF steps were integrated into the SAF report format.

During the second reporting period around 80 students received SAF training as part of graduate courses and the BONUS BALTCOAST summer school. Teaching modules have been prepared for the summer school and are now under review and will be updated and included as e-learning material in connection with the SAF handbook.

3 Main results achieved during the reporting period

The systematic analysis of the re-analysis studies showed that several elements of SAF are already commonly applied within ICM cases within the Baltic Sea Region. However, late or unbalanced involvement of stakeholders was identified as a shortcoming and caused a prolonging of the ICM process in several cases. Furthermore, a systematic thinking and inclusion of integrated, cross-sectoral and ecological-socio-economic assessment as well as scenario simulations were lacking in most cases and often led to one-sectorial solutions. It was shown that the SAF with its stepwise approach provides guidelines and quality insurance for sustainable ICM processes. Results of the reanalysis studies were published in peer-reviewed publications and were further included in the modification of the SAF guidelines.

Supporting tools that can be applied by practitioners within SAF applications were finalized and are accessible on the BONUS BALTCOAST website (www.baltcoast.net). Suggestions for their use within the SAF steps have further been included in the SAF guidelines.

To raise awareness about BONUS BALTCOAST and its SAF, public dissemination of project results was carried out through the project's website and social media sites and via newsletters. In addition, a photo competition was carried out to raise awareness about the beauty of the Baltic Sea coast as well as the problems associated to the diverse usages of the coast. Furthermore, project results were published within two special issues of the popular scientific Coastal & Marine magazine with an edition of 750 copies each. They were sent to the project's endusers including national and regional authorities from all Baltic states and international organisations such as EUCC, ICES, HELCOM and VASAB. They were also sent to all partner for further distribution to case study site stakeholders (e.g. municipalities and local authorities) and distributed at conferences and events (e.g. Littoral 2016 in Biarritz, 2nd Baltic MSP Forum in Riga, 2nd International Conference on MSP in Paris, and 35th Annual Conference 'Geography of Seas and Coasts' in Kiel). The magazine was further promoted in the EUCC-D Newsletter (~1300 recipients), in the EUCC network (1075 subscribers), on facebook and the BONUS projects website and can be downloaded as PDF version at the national and international EUCC websites and on the BONUS BaltCoast project website.

Cooperation within other BONUS projects are systematically assessed. As a result, a joint sampling campaign in the Szczecin lagoon was conducted with participants from BONUS BALTCOAST and COCOA projects. Moreover, a combination of the BONUS BALTCOAST and BONUS BALTSPEACE summer schools at Klaipeda University allowed participants to gain insights into ICM and MSP and the tools and approaches used therein. In order to promote an effective science-policy interface, BONUS BALTCOAST end-users have been informed about ongoing project activities and results via the Coastal & Marine magazines. Furthermore, meetings and workshops with end-users and local stakeholders were carried out to enhance an uptake of BONUS BALTCOAST research results.

BONUS BALTCOAST project has received funding from BONUS (Art 185), funded jointly by the EU and the Innovation Fund Denmark, the Estonian Research Council, the German Project Management Jülich (Forschungszentrum Jülich Beteiligungsgesellschaft mbH (FZJ-Bt.GmbH)), the Latvian Ministry of Education and Science, the Research Council of Lithuania, the Polish National Centre of Research and Development and the Swedish Environmental Protection Agency.