Policy Brief

BONUS BALTIMARI policy brief no. 3

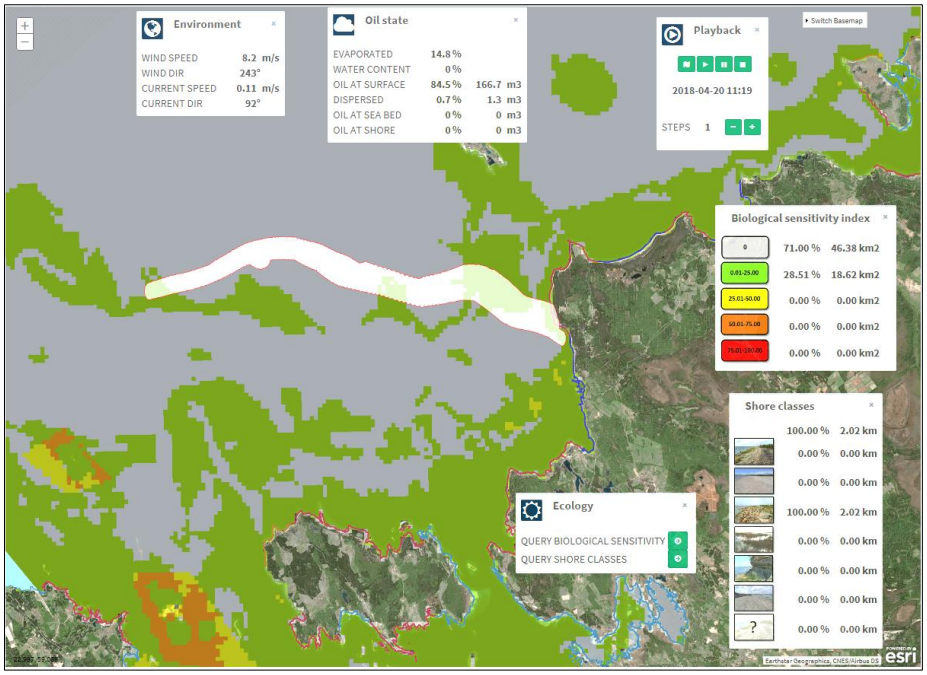
More accurate information and assessments needed to support best response action in a case of an oil spill

To support the best response action possible in case of an oil spill, better real-time information is required. Also more dynamic assessment of the oil spill's potential impact on often sensitive shores of the Baltic Sea and related ecological values are needed. These findings are based on BONUS BALTIMARI review carried out on the practices surrounding current shipping-related spatial decision support systems in the Baltic Sea.

Global policy objectives. In 2016, the European Commission and the EU's High Representative set out a **joint agenda for the future of our oceans**, proposing 50 actions for safe, secure, clean and sustainably managed oceans in Europe and around the world. The joint communication is an integral part of the EU's response to the **United Nations' 2030 Agenda for Sustainable Development**, in particular **Sustainable Development Goal 14** 'to conserve and sustainably use the oceans, seas and marine resources'.

Serious threat. **Oil spills can have severe long-term impacts on near-shore biodiversity and functioning.** Advice on sensitive shoreline likely to be impacted by the oil washing ashore is of critical importance in order to support decisions whether or not a response is necessary or what kind and extent of response is appropriate. Choices made in clean-up strategies and the decision-making process in the aftermath of a spill are significantly affecting the clean-up costs.

Efficient tools for threat mitigation. Almost all emergency situations have a clear spatial component and a role for **Spatial Decision Support Systems (SDSS)** including marine oil spill response. **The aim of SDSS** is to help policymakers and practitioners to access, interpret and understand information from data, analyses and models, and guide them in identifying possible actions during a decision-making process.



SDSS - NG-SRW application enables the integration of spill monitoring and evaluation functions directly into oil spill preparedness and response management processes (HELCOM, 2018).

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Baltic Sea Case

According to HELCOM RESPONSE the maritime traffic in the Baltic Sea is intense, has grown remarkably during the recent years, and is predicted to grow also in the future. The increasing density of shipping and rapidly rising amounts of oil being transported by sea mean that the risk of an accident involving serous oil pollution will increase correspondingly, unless counteractive measures are implemented.

Emergency problems represent a leading edge of SDSS application, owing to the nature of the issues that arise, the urgency of the problems, the complexity of the modelling required and consequentially the data required for this modelling, and the challenge of making these powerful techniques available in a way that is easily controlled by the decision maker, often in demanding circumstances.

Critically important environmental information is needed. Environmental Sensitivity Index (ESI) maps have been an integral component of oil-spill contingency planning and response in the United States since 1979, serving as a quick reference for oil spill responder (NOAA, 2002). The ESI ranks shoreline into 10 classes in relation to sensitivity, natural persistence of oil, and ease of clean-up. Some countries outside the US have adopted the ESI methodology to classify their own shorelines for similar oil spill contingency planning, the resulting maps being referred to as Regional Environmental Sensitivity Index (RESI) maps.

More efficient approach has to be implemented. Net Environmental Benefit Analysis (NEBA) is a structured approach used by the response community and stakeholders during oil spill preparedness planning and response, to compare the environmental benefits of potential response tools and develop a response strategy that will reduce the impact of an oil spill on the environment.

Recommendations

At the HELCOM RESPONSE level implement as a harmonized standard for all the Baltic Sea region countries:

- **RESI mapping and ranking of the shoreline and the ecological sensitivity of coastal habitats to accidental oil pollution** as an essential step in oil pollution preparedness, response and transboundary cooperation efforts, and RESI maps are a crucial tool to assist responders during an oil spill response
- **Harmonized collaborative implementation of the Net Environmental Benefit Analysis (NEBA)** as a structured approach to be used by the response community and stakeholders during the oil spill preparedness planning and response

References

HELCOM. 2018. OpenRisk guideline for regional risk management to improve European preparedness and response at sea. HELCOM, 108 p.

NOAA. 2002. Environmental Sensitivity Index Guidelines, Version 3. NOAA Technical Memorandum Nos OR and R11. Hazardous Materials Response Division, National Ocean Service, Seattle, WA, 192 p.

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