

## O03.4

### **Decision support tools – performance and end-user needs for supporting coastal and marine policy implementation**

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#### **Abstract**

Coasts and seas are under intensive human use and subject to degradation and spatial conflicts. To address these pressures, the European Union (EU) has adopted a wide spectrum of coastal and marine policies. Yet, their practical implementation is often challenging, causing delays and leaving policy objectives unmet. Decision support tools (DSTs), like models, GIS-based planning tools and assessment tools, play an important role in incorporating scientific information into decision-making and facilitating policy implementation. Yet, their use for supporting policy implementation is limited.

In an interdisciplinary Baltic research group, we compiled 43 DSTs developed to support ecosystem-based management of the Baltic Sea and conducted a thorough review. Analyzed DSTs cover a wide variety of policy issues (e.g., eutrophication, biodiversity, human uses) and address environmental as well as socio-economic aspects. Based on a set of performance criteria we analysed the current performance of DSTs available in the Baltic Sea Region. In addition, we conducted two surveys, in which we assessed awareness and use of DSTs in general, as well as policy implementation challenges and DST needs of representatives of public authorities, in particular. Furthermore, we conducted a policy review to identify major policy issues, policies, and general implementation steps and requirements and develop a synthesis-matrix, which was used to compare DST demand and supply to identify gaps, and to provide recommendations for future DST development.

The Baltic Sea Region serves as a best practice case for studying DSTs and their practical use, as it is intensively studied and regional management has been ongoing for decades. Hence, our results can provide insights for DST development in other marine regions. Furthermore, our methodological approach is transferable to other areas.

#### **Keywords**

science-policy interface, tools and approaches, end-user needs, decision support