

Tools and approaches of Integrated Coastal Zone Management in Maritime Spatial Planning

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A Systems Approach Framework for Coastal Research and Management in the Baltic







What is Integrated Coastal Zone Management (ICZM)?

ICZM is a dynamic, continuous and iterative process designed to promote sustainable management of coastal zones

ICZM seeks to balance the benefits from

- economic development and human uses of the coastal zones,
- protecting, preserving, and restoring coastal zones,
- minimizing loss of human life and property and the
- public access to and enjoyment of the coastal zone, all within the limits set by natural dynamics and carrying capacity.



ICZM is the sustainable development of coastal zones



ICZM takes into account the ecosystem approach to management



Maritime Spatial Planning and its requirements

- ➤ Maritime spatial planning will contribute to the effective management of marine activities and the sustainable use of marine and coastal resources
- > Requires an integrated planning and management approach
- ➤ Should...build upon existing national, regional and local rules and mechanisms, including those set out in Recommendation 2002/413/EC (ICZM)
- > Shall apply an ecosystem-based approach
- > Shall take into account land-sea interactions
- ➤ Shall take into account environmental, economic and social aspects, as well as safety aspects
- > Shall ensure the involvement of stakeholders
- Member States shall establish procedural steps.....

(DIRECTIVE 2014/89/EU)



ICZM principles are included in Maritime Spatial Planning



BaltCoast The ICZM-Cycle & Maritime Spatial Planning

ICZM-Cycle



Maritime Spatial Planning... "should cover the full cycle of problem and opportunity identification, information collection, planning, decision-making, implementation...and the monitoring of implementation..." (DIRECTIVE 2014/89/EU)

A major weakness that hampered success of ICZM in practice was the lack of a systematic, stepwise, user-friendly approach/tool with high practical relevance that guides through a full ICZM process cycle.

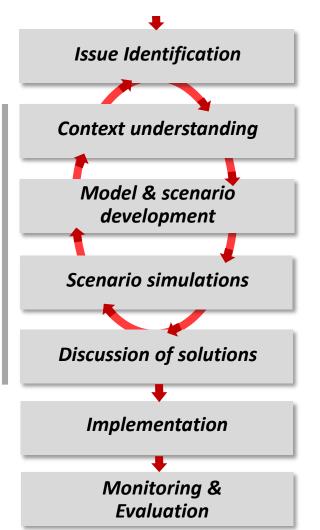


This may happen to Maritime Spatial Planning, as well!



Systems Approach Framework (SAF)

Ecological-Social-Economic-Assessment



Policy & stakeholder mapping, stakeholder dialogue, dysfunction diagnosis, policy & management options, definition of indicators

Cause & effect network, definition of ,virtual system', identification of social & economic components, institutional mapping, external hazard analysis

Data and tool analysis, creation of conceptual & simulation models, development of alternative management solutions (scenarios)

Model calibration & validation, simulations of the scenarios simulations & interpretive analysis

Preparation of decision taking process, evaluation of scenarios stakeholders & managers dialogues and meetings

Plan & measure execution including institutional, legal and financial arrangements

Social, economical & ecological data collection, indicator based evaluation of process and state



The SAF refines the ICZM cycle and makes it applicable!





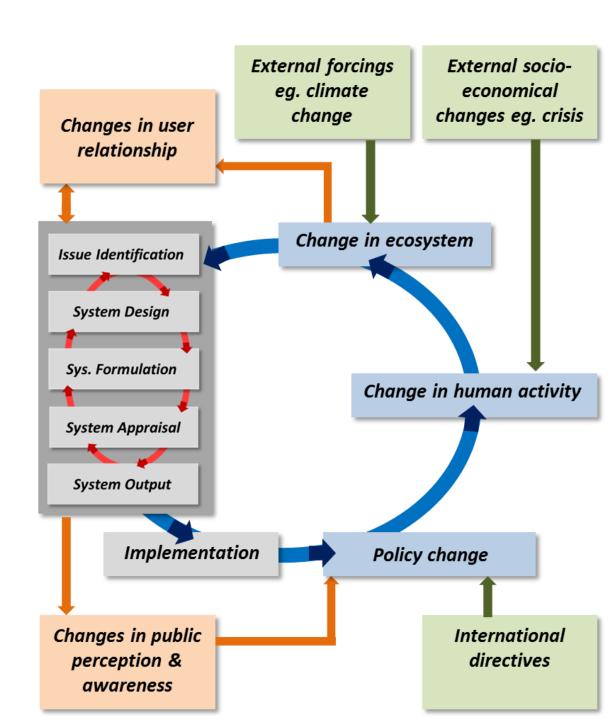
- > A manual with guidelines how to stepwise carry out an ICZM process/cycle or an Ecological-Social-Economic-Assessment
- > Practical examples and lessons learnt from applications in 6 case studies
- > Tools and supporting methodologies that help to carry out neccessary steps, examples are:
- A preference tool that helps to guide discussions with stakeholders and to extract and visualize their views and perceptions
- An **indicator tool** that allows to assess the present state of sustainability and ist changes after the implemnation of a plan/measure, as well, as to assess the qulity of the process from initiation to the implementation
- An **Ecosystem Service assessment tool** for coastal and marine waters. It allows to assess state, interactions and changes in Ecosystem Service provison and supports decison making.



Systems Approach Framework (SAF)

The Systems Approach
Framework serves as broader
context for the EcologicalSocial-Economic-Assessment
(ESE).

It takes into account changes, resulting from the assessment process itself or from external drivers, that lead to revision or modification of the ESE.







Major future challenge will be to adapt the "Systems Approach Framework (SAF) for Integrated Coastal Zone Management" and its supporting tools to the needs of Maritime Spatial Planning and to test its benefits in planning case studies!

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