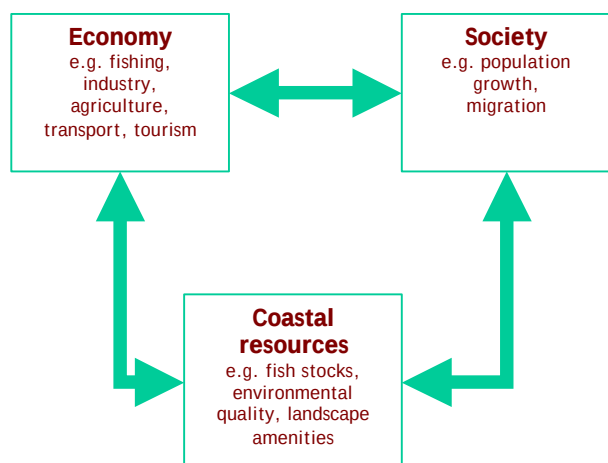


MULTYFUNCTIONALITY & VALUATION

Initiative for a **Coordination Action** in the European coastal research **and** practitioners community

WHY ?



In the densely populated coastal areas intense relations among environmental and anthropogenic processes take place that have important effects on coastal resources and their future availability. Population density and the concentration of many uses exacerbate pressure on natural resources as well as on the social and economic structures of coastal communities

Managing coastal zones implies continuous confrontation with conflicts over the allocation and use of coastal marine resources. Conflicts link variables and processes that are not naturally commensurable and require some common valuation method.

The management of such a complex system requires an integrated and holistic approach in order to bring together the interests of the coastal area in a co-ordinated and rational manner, managing coastal resources for optimum social and economic benefit for present and future generations without prejudicing the state of ecosystems and resources.

Hence, there is a need to develop common strategies focusing on practical aspects and implementing knowledge related to ICZM practices. The theme will focus on methods, approaches and tools regarding the integration of socio-economic impacts on coastal areas as a part of an integrated and interdisciplinary approach to ICZM.

WHAT ?

The network will focus on approaches and instruments which allow addressing the most relevant processes that determine socio-economic impacts and affect livelihood in coastal areas. Particularly the topics to be addressed will be:

- Land use and land cover changes in coastal areas
- Water and other scarce resources allocation and management in coastal areas
 - o Supply and demand management
 - o conflicts for allocation and management among users and between users and between users and responsible authorities;

- Coastal Tourism
 - o Changes in traditional socio-economic patterns
 - o Changes in coastal landscapes
- Demographic pressure in coastal areas
 - o Migration patterns towards coastal areas

Identification, prediction and valuation of impacts of economic activities on coastal areas, as well as impacts of management policies on the socio-economic structure, are all necessary steps to:

1. ensure that coastal resources are maintained, balancing short-term needs with long term sustainability;
2. interface science and policy, and establish a coherent framework for assessing different policy options;
3. provide an early warning system, identifying unwanted or unforeseen consequences of actions and policies;
4. harmonise information demand for ICZM in Europe, as well as enhance the transferability of assessment studies.
5. exchange and disseminate best practices for ICZM

HOW ?

There is a need for a coordinated action and the support from the scientific and practitioner community to address and evaluate the socio-economic impacts in coastal areas. Particularly the network will aim at:

- standardizing methodologies to identify and assess socio-economic impacts on coastal areas
- identifying and adoption of common instruments
- exchanging Best practices among different the different European areas

The network activities will focus on strengthening the coordination action with the following:

- adoption of a methodology of analysis
- Specific coordination actions: Proposed major networking activities

Methodology of analysis

The analysis of the links between socio-economic activities, coastal resources and management policies can be structured around three main topics.

- i. Identification of possible impacts and stakeholders: network analysis is one of the tools to be used to make impacts and stakeholders explicit;
- ii. Valuation: social, economic and environmental impact appraisal, where valuation methodologies are employed to evaluate impacts; indicators and values;
- iii. Policy recommendation: scenario building and risk assessment techniques can be used to explore different potential options.

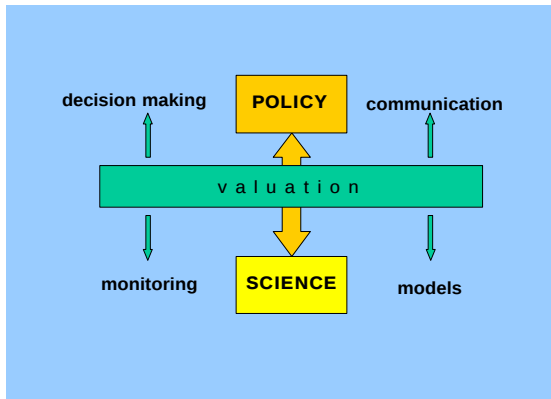
On the methodology side, various techniques are developed and tested for two main purposes: to establish a quantitative relation between socio-economic activity and coastal impact; to reduce environmental and socio-economic impact to a common currency, facilitating individuation of trade-offs and scenario analysis. Combining these techniques with, for instance, geographical information systems, will facilitate the use of information in stakeholder participation processes.

Coordination action shall provide:

- a) comparison of instruments used;
- b) diffusion of good practices;
- c) identification of best practices.

i. Identification of impacts, stakeholders and values

Socio-economic pressures, processes and impacts affecting coastal areas need to be analyzed in order to be dealt with correctly in ICZM processes; Stakeholders and relationships among actors must be identified and criteria and tools they



use in attaching values to coastal zone state have to be made explicit.

Network Analysis helps creating a more direct representation of the complex web interconnecting various sectors of economy, environment and society. It allows the identification of externalities and positive/negative feedback, as well as the most promising entry points for policy interventions.

Impact identification is a fundamental input into the ICZM process, as well as a support tool for monitoring and evaluating current and planned management choices, and for impact valuation. The early identification of potential unwanted negative impacts, or unforeseen feedback loops, allows policy makers to put in place mitigation measures, therefore finding a way to reconcile short-term growth objectives, with long term development objectives.

(the use of the DPSIR scheme ?)

ii. Valuation

Valuation contributes to the systematic assessment of how a project, policy and/or activity within the ICZM framework changes the environmental and socio-economic structure of the coastal zone.

Values are no intrinsic qualities of nature; they are related to human choices. Different stakeholders perceive different values based on different rational and emotional considerations.

The major challenge of science support to ICZM is to provide input to valuation processes. This support consists basically of two contributions, providing:

- Descriptions in terms of easily valuable significant parameters (indicators).
- Valuation of impacts using a common unit, in order to allow comparisons of different impacts, as well as trade-off decisions.

Inversely, practical use of these research products yields a feedback from policy to science.

To evaluate the socio-economic impacts in coastal areas indicators will be identified and adopted, as a tool for the valuation process and the development and implementation of ICZM strategies, programs and projects.

Indicators reduce real world complexity and facilitate communication between scientists, practitioners, managers and public. They refer to parameters describing:

- the state of the coastal system
- the pressures exerted on it
- the resulting fluxes (processes, interactions) changes occurring in these quantities.

Valuation of socio-economic impacts, on the other hand, facilitates comparisons across impacts, as well as across different policy options.

Research on valuation comprises the topics:

- reducing impacts to a common analysis and measurement unit: monetary impact evaluation.
- cost-benefit analysis incorporating environmental values and services
- environmental impact assessment (EIA)
- carrying capacity assessment (CCA)

Although various methodologies for identifying both environmental and socio-economic impacts, as well as quantifying them, exist, it is not possible to select among them without full knowledge of the situation to be addressed. One of the central activities of the network will be to make explicit potentials and limits, and illustrate ways of application of single methodologies presented.

Valuation is imbedded in an integrating research-theme, linking together the problem-oriented ENCoRa themes and providing a common structure.

iii. Policy recommendation

Risk assessment, as the final step valuation process, provides a useful way to integrate impact networks and their economic costs, with the ultimate aim of devising the best response to identified negative environmental and socio-economic impacts.

The purpose of risk assessment is to identify the actual or potential failure modes and factors, i.e. unwanted consequences in proposed policies or current management practices.

Instruments for risk assessment include:

- stakeholder participation
- prediction methods
- modelling and scenario building

Impact identification and assessment, as well as the proposing of remedial measures, is useful insofar as it finds an entry point into policy making: risk assessment analysis can provide such an entry point.

Because of their nature and requirements, impact identification, assessment and mitigation studies are often expensive - financially, but also in terms of human resources and time needed. Integrating efforts currently underway in various European institutions will significantly reduce the costs of conducting such studies, as well as ensuring that best practices are disseminated, synergies exploited, and duplication of efforts avoided.

Topics for analysis include:

- decision support systems: results of the processes analyses often represent contrasting interests of stakeholders; presentation forms and synthesis tools should be analysed aiming to reach consensus easily (for instance a GIS based presentation of results);
- information and communication strategy; when a decision is taken the public should be informed in a simple and convincing manner.

Problem-oriented research requires a dialogue between problem solver and problem owner. This dialogue is closely linked to valuation issues. Valuation should be part of all problem-oriented research themes in ENCoRa.

Proposed major networking activities

- Identifying and mapping key issues, methodologies and tools concerning the analysis and valuation of socio-economics aspects and processes of decision making related to coastal zones. Some case studies across Europe, and in other strategic international areas, will be analysed with particular regard to examples of good practice.

- Collecting and organizing data from participant institutions will be collected and organised into a reasoned and comparative database. Information will be made available in order to share them and to achieve an exhaustive and updated platform of investigation.
- EU and international projects and programs will be investigated in order to promote joint programs. The following list present some project which could be taken into account:
 - ICZM-VE - Integrated Coastal Zone Management in the Venice area. Valuation methods in a geographical context - FEEM
 - SMART - Sustainable Management of Scarce Resources in the Coastal Zone - EU INCO-MED
 - SABBIA - Integrated Environmental Study for Beach Management - FEEM and University of Genoa
 - NetSyMod - Network Analysis environmental evaluations and decision making
 - NOSTRUM-DSS— *Network on Governance, Science and Technology for Sustainable Water Resource Management in the Mediterranean. The role of DSS tools*
 - OPTIMA - *Optimisation for Sustainable Water Management*
- Workshops and seminars will be organized to gather and disseminate data and information, encourage and facilitate networks and at local, national and international levels. Furthermore, Interdisciplinary courses and education in ICZM techniques will be promoted.
- Exchange visits of researchers and practitioners in thematic topics will be promoted across Europe in order to develop human resources, partnerships and to facilitate ongoing community involvement in coastal zone management issues through education and activities.
- Sharing experiences and information will facilitate the revision and the implementation of existing tools and methods and to develop tools for better coastal zone management. This will supply a common instrument to back up policies and strategies concerning theme's topics and will promote the application of the new methodologies to a range of demonstration field sites across Europe.
- The results will help to implement ICZM strategies and to define good practice to disseminate across Europe.

WHO ?

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