

“SPICOSA”

Towards the sustainable development of our European coasts

Coastal ecosystems are under increasing human pressure while policy has not been able to respond properly to the resulting negative impacts. Realising sustainable development is maybe the greatest challenge of our modern society. There is no doubt that our coasts, being characterised by very specific ecological and social features and exposed to particularly strong pressure from global change and human uses, are in need of special concepts, tools and targeted actions to tackle this challenge. SPICOSA, in this context, is taking essential steps to overcome barriers which currently still restrain the sustainable development of our European coasts.

Sustainable development is a major cross-cutting dimension of EU policies. Major elements in relation to Integrated Coastal Zone Management (ICZM) are the Bird and Habitat Directives, Agenda 21, Lisbon and Göteborg Strategies, the Water Framework Directive, the Sustainable Impact Directive, ICZM

Recommendations and the forthcoming Maritime Strategy and new ICZM Directive. SPICOSA aims at supporting the implementation of the Sustainable Development framework in the area of Coastal Zone Management by considering the need for a better integration of scientific knowledge into policies at the most appropriate level.

SPICOSA is a European funded Integrated Project that will strengthen the research throughout the European region and produce products useful to society. The project's goal is to **create a self-evolving, operational framework for making prognoses of the effects that certain policy options for sustainable management will have on Coastal Zones.**

Based on a system approach, a multidisciplinary assessment framework will be developed with a balanced consideration of the Ecological, Social and Economic sectors (ESE) of Coastal Systems.

This System Approach Framework (SAF) will be used to explore the dynamics of Coastal-Zone Systems and potential consequences of alternative policy scenarios. Achieving this objective will require a restructuring of the science and methodology needed to understand and to quantify the response of coastal zones to changing environmental and anthropogenic conditions and to the resulting impacts on ecosystem services. It will also demand integration of disciplines and of geographic, political and social scales.



MUSSEL VESSELS IN LIMSFJORD, DENMARK.
SOURCE: ERIK HOFFMANN, DIFRES.

Furthermore, SPICOSA will contribute to a more integrated policy-science interface, i.e. specifically by developing and testing deliberation support tools for the transfer of scientific products to policy decision makers, stakeholders and end-users. In order for the SAF to become an operable tool for both science and policy, its applicability to ICZM will be tested and demonstrated over a wide variety



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Science and Policy Integration for Coastal System Assessment.

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of European coasts that differ in geomorphology, environmental conditions, cultures and human activities. To this extent, 18 Study Site Applications (SSAs) have been selected ranging from Norway to Portugal to Turkey and to Romania.



OCCURRENCE OF ANOXIC WATERS (« WHITE WATERS ») IN A SMALL URBANIZED EMBAYMENT LOCATED IN THE SOUTH-EAST PART OF THE LAGOON, BOARDING THE TOWN OF SÈTE, FRANCE. SOURCE: THIERRY LAUGIER.

With each application of the SAF, a significant SSA data set is being created from which those human activities that generate the greatest impacts and those types of coastal zone systems most vulnerable to human activity can be distinguished. Moreover, the SSAs will allow the project consortium to understand which policy controls can be considered as independent of the natural characteristics of a coastal zone system, which controls need to be made specific to a particular coastal zone, and to which policy changes public perceptions are most sensitive.

This way, SPICOSA will offer the possibility to document both good and bad examples from ongoing coastal management practice and thus contribute significantly to making ICZM more tangible. Such examples could provide the basis for further policy development as well as educational activities on all levels.

Sustainable development must be carried out by all parts of society, not only by academics and high level decision makers. Education on the basis of sound, comprehensible messages is the key to reaching all these parts, raising awareness of problems and solutions and thus enabling them to participate in the ICZM process. SPICOSA has the capacity to provide such messages.



ZOOM ON A SHELLFISH REARING TABLE, FRANCE. IT IS MADE OF RAILS OF SEVERAL METERS DRIVEN IN THE GROUND ON WHICH HORIZONTAL WOODEN OR METALLIC POSTS ARE FIXED. THE REARING ROPES ARE THEN SUSPENDED TO THESE POSTS. SOURCE: THIERRY LAUGIER.

“SPICOSA WILL DOCUMENT BOTH GOOD AND BAD EXAMPLES FROM ONGOING COASTAL MANAGEMENT PRACTICE AND THUS CONTRIBUTE SIGNIFICANTLY TO MAKING ICZM MORE TANGIBLE”