

ENCORA - Theme

Effect of Development and Use on Eco-morphology and Coastal Habitats

initiative for a **Coordination Action** within the European coastal research **and** practitioners community

WHY ?

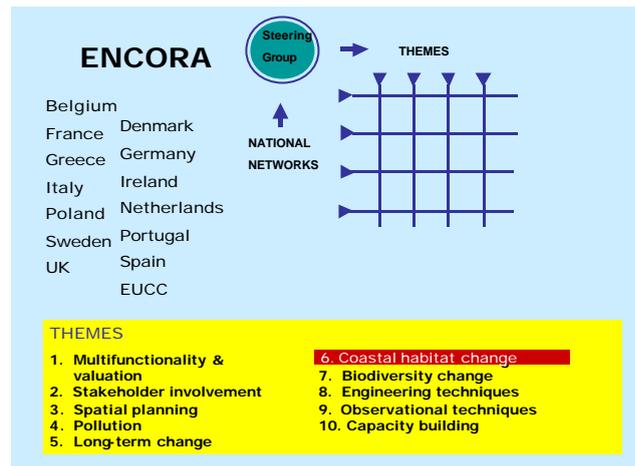
Increased human exploitation and infrastructure developments in the coastal and estuarine zones influence the geo-and eco-morphology resulting in enlarged stress on coastal habitats. Examples of negative impacts are:

- Changes in flow and sediment transport regimes
- Water quality changes
- Coastal erosion
- Dune erosion
- Erosion of mud flats
- Habitat destruction

WHAT ?

- ➔ Innovative tools and methods for assessment and quantification of development- and use-related impacts on eco-morphology and coastal habitats
- ➔ The theme programme will be directed to the following issues:

- physical processes in the coastal and estuarine zone
- coastal and estuarine habitats
- interaction between flora, fauna and physical processes
- innovative tools and methods
- dissemination of knowledge
- exchange of experience



The theme integrates research on the Effects of Development and Use on Ecomorphology and Coastal Habitats in the different European countries.

HOW ?

Topics for research networking activities

❑ Data on eco-morphology and coastal habitats

Focus will be placed on identifying physical and ecological/biological data that can serve to support the understanding and quantification of the physical and ecological processes. There already exist a lot of field data related to both physical and biological processes; the question is whether they are appropriate for understanding and assessing how coastal habitats are evolving.

We aim at using existing knowledge from the scientific community in Europe to combine and exploit valuable knowledge in a joined effort held together by the ENCORA theme.

Data from sites all over Europe will be included where applicable from varying

coastal environments representing both sandy and muddy coasts, tidal, river and wave dominated locations

Existing knowledge from recent projects such as EUROSION, will be included in the considerations of this theme. This enhances the potential to explore promising new methods for collecting field data, evaluate existing mechanisms for making data accessible and identify priority research topics all based on the advances of the European research community today.

□ Innovative tools and methods

This topic will concentrate on identifying innovative tools and methods to evaluate and quantify the impact of use and development on coasts and estuaries. Specifically, innovative numerical models of physical, ecological and biological processes, long-term morphological changes in coasts and estuaries will be discussed

The purpose of this topic is to identify existing tools as well as to work on potential improvements. Modelling is an efficient tool for assessing impact in the coastal environment. This includes the increasing demand to distinguish between natural fluctuations and new trends from human and climatic impacts.

There are already several ongoing projects that are addressing this issue through the application of state of art knowledge. Existing indicators as well as possible new are investigated and/or identified to assess coastal habitat change identifying the most critical issues and indicating what type of fresearch should be undertaken to make further progress.

□ Remedial measures

A catalogue of well-proven and documented measures to counteract negative impacts of development and use will be prepared as a way of sharing the experience gained by researchers and practitioners from the application of tools and methods to real-life cases. The outcome of this topic will be a practitioners manual addressing all aspects of the effect of development and use on eco-morphology and coastal habitats.

Existing concepts for dealing with habitat change and identifying obstacles

to effective management will be evaluated and knowledge gaps repaired. An important result will be the identification of promising technologies for recovery of habitats through the development of environmental technologies that are focused on the coastal environment. This will be carried out in close co-operation with the coastal authorities all over Europe dealing with the practical management of the coastline.

- **Help find partners in similar or complementary fields**
- **Help policy makers and practitioners to address EU-wide knowledge and experience**
- **Identify young researchers and practitioners for exchange visits**
- **Stimulate learning from mutual experience by contributing to workshops, seminars and conferences**
- **Make links with other related organisations and projects**
- **Develop bespoke communications materials**

WHO ?

Theme lead

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