







In this folder you will find a brief overview of the SUSCOD project. Each of the partners presents itself and their activities within the project.

If you are interested in following SUSCOD please visit our website: www.SUSCOD.eu

About SUSCOD

Gertjan Nederbragt, project manager: nederbragtg@noord-holland.nl

Kim Uittenbosch: Uittenboschk@noord-holland.nl

SUSCOD aims to make a step change in the application of integrated coastal zone management (ICZM). In doing so coastal potentials can be utilised to full advantage and broader support for coastal management measures can be secured.

The North Sea Region coastal area is an area with high value assets, where the pressure for competing user functions is being strongly felt. It faces the anticipated impacts of climate change. Precautionary measures are required to guarantee safety for inhabitants and safeguard its values. The challenge is to find positive solutions that also ensure fully integrated social, economic and environmental development.

SUSCOD brings together partners who want to realise this through a well coordinated transnational team approach. They all have eroding coasts. They share the urgent need to act proactively because of safety reasons and also the ambition to find practical solutions. Leading forces can be characterised as the wish for sustainable solutions and the improvement of spatial quality.



Central in SUSCOD is the development of a practical tool: the ICZM-assistant, its introduction to potential users and its demonstrated value at test locations. Coastal practitioners are currently lacking a practical ICZM tool to assist in the development and/or implementation of coastal plans. Existing tools that assess the state of ICZM are of ex post and scientific character. The SUSCOD team will develop the required tool - the ICZM-assistant - with the participation of all stakeholders.



Project objectives

1 Exchange knowledge and expertise

2 Review ICZM implementation

3 Inventory ICZM tools

4 Development new ICZM assistant

5 Practicing and testing integrated development in pilot projects

6 Inspiration to other regions

7 Influence ICZM strategies

EU IZCM principles for the implementation of the

Province of Noord-Holland

Martijn Vos: vosj@noord-holland.nl

Kim Uittenbosch: uittenboschk@noord-holland.nl

Through participation in the SUSCOD project the province of Noord-Holland aims to get improved, more integrated results on coastal zone projects that are related to the reinforcement of coastal defences, vitality of coastal towns and maintenance works on the sandy coastline.

The project "spatial restrictions" engages with the significant number of stakeholders involved in the Dutch Coastal zone. As a result, there are many institutional boundaries to operate within, when developing such a coastal project. Effective cooperation is essential to ensure an integrated approach to coastal management. Therefore, we started a research project consisting of an historical comparison, an in-depth study, international comparison, and an ideal-type study. These studies helped to formulate strategies and concepts to deal with the institutional boundaries. We plan to bring this a step further and make it part of the ICZM assistant.

The project 'Identity of Coastal Towns' aims at strengthening the identity and spatial quality of coastal towns along the Noord-Holland part of the North Sea coast. The coastal towns often struggle with their identity and are having difficulties linking identity to spatial quality. The project consists of two pilots with separate coastal towns (Zandvoort and Petten) and a broad cultural and communicative process in which all coastal towns can participate. It is mainly this broad cultural process that we want to share with SUSCOD.



For the reinforcement of the dune area of the Province of North Holland and the rest of the Dutch North Sea coastline, sand nourishment is used. The sand nourishment program is a nationwide project and is executed by Rijkswaterstaat. When the desired coastline was determined in 1990, recreational use was not explicitly accounted for. However, there has been an increase in tourism and recreation in the coastal area since then. In SUSCOD we have investigated how the beach area should support recreational activities. The results will be used in a discussion at the national level about nourishment strategies which has been initiated by the Dutch Delta Program.

Results so far (June 2011)

1 Spatial restrictions

This report gives an insight into institutional fragmentation in the Netherlands, an international comparison, and strategies for effective and legitimate coastal zone development.

2 Identity of Coastal Towns

We have done multiple studies: 1) 'never build, once demolished' focus on disappeared cultural heritage and urban quality; 2) in six coastal towns we analyzed the citizen's user values and appreciation of their own towns. We are using a cultural approach with a story pavilion in Bergen and Den Helder, and organized 'artists in residence' as part of the North-Holland Biennial in four coastal towns.

3 Sand nourishments

The report "Recreational space on beaches" describes the different types of beach use from a recreational point of view and identifies methods for maintaining the desired beach

Fife Coast and Countryside Trust

The Harbourmaster's House, Hot Pot Wynd Dysart, Fife, Scotland

Project Manager: julian.inglis@fifecountryside.co.uk

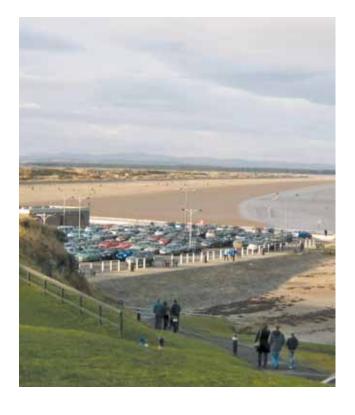
The SUSCOD project represents a shift from ad hoc approaches to tackling coastal erosion, and flood risk in high-value coastal areas towards a participatory planning process based on the principles of ICZM. This process is being developed in a project area encompassing the Firth of Tay – Eden Estuary SAC and surrounding coastal zone. The coast is highly developed with major assets such as St. Andrews - the "Home of Golf" - with its world famous, 600 year old golf courses. It is also one of the most designated conservation areas in Scotland. This location is very vulnerable to erosion, flooding and extreme weather.

Developing sustainable solutions for the management of vulnerable coasts in the Kingdom of Fife, Scotland

The project area is one of the sites where the ICZM Assistant is being developed and tested. Activities are geared toward tackling a number of intractable problems and demonstrating how experience from around the North Sea Region can result in tangible, sustainable solutions. An integrated programme of activities in the project area includes:

• implementing a partnership approach to the long term planning and management of the project area

- remediating an eroding, coastal landfill
- planning for managed realignment in the Eden Estuary
- developing state of the art information and communications



- 1 Practical solutions to intractable coastal zone management issues at the local level, building support and confidence in the SUSCOD approach
- **2** A strong and enduring partnership of agencies and organizations to resource, implement and monitor the plans and projects
- **3** A substantive contribution to the ICZM Assistant
- 4 An interactive simulation and visualisation platform, allowing project partners to communicate the main features of project sites, the effects of climate change on the shoreline and hinterland, and the effects of alternative shoreline management measures. The visualisation platform will enable the effective engagement of stakeholders by developing realistic development scenarios

Belgium

Flanders Hydraulics Research: toon.verwaes@mow.vlaanderen.be and johan.reyns@mow.vlaanderen.be Belgian Coastal Division: tina.mertens@mow.vlaanderen.be and irene.vandercraats@mow.vlaanderen.be Coordination Centre for ICZM: kathy.belpaeme@kustbeheer.be

The existing sea defence structures (sea dikes, beaches, dunes and sluices + quay walls in harbours) in several coastal towns in Flanders have to be strengthened. A master plan is set-up for the whole Flemish coast which proposes general solutions to strengthen the sea defences and improve the coastal safety against flooding in the weak links, with a time horizon to 2050. The goal for the Flemish partners of SUSCOD is to prepare these detailed plans with full application of the ICZM principles as recommended by the EC, thus bringing ICZM practice to a higher level in Flanders/Belgium. Since the execution of the master plan is planned in the coming years (2011-2015), the ICZM application for sea defence improvement works guarantees a very realistic and focussed pilot.

Flemish Pilot Cases

To balance the needs of different interest groups during the design of protection measures, mutual cooperation is needed. Since tourism at the Flemish coastline is a key player, making the visual appearance of the coast an important issue, this stakeholder is chosen as communication partner in the Flemish SUSCOD pilot cases. Therefore, two coastal towns have been selected which form important touristic landmarks: the

coastal town of De Haan-Wenduine and the marina of Blankenberge. Coastal protection measures are needed in both areas. For these an optimisation for the design of safety measures with regard to tourism will be discussed and elaborated using numerical and physical models as a communication tool.



< The coastal town of De Haan-Wenduine

- **1** An optimised safety design with regard to tourism for the protection of De Haan-Wenduine and Blankenberge marina
- **2** Implementation of the principles of integrated coastal zone management for the pilot cases.
- 3 Lessons learned from the pilot cases to be implemented for the entire Belgian coastline
- 4 Tools on how to communicate the need and efficiency of coastal protection works towards nonexperts.

Region Zealand, Alleen 15, 4180 Sorø, Denmark

Mikkel Østergård: mo@regionsjaelland.dk +45 57875829

The municipalities of Odsherred, Lolland and Slagelse, with Local Government Association (LGDK) and Region Zealand, are working together on challenges around climate change and spatial integrated coastal zone management.

Coastal classification of the shores

The Danish part of the project will include three case studies in the above communities as well as a broader regional analysis of the challenges that climate change will lead to the management of the coasts throughout the region of Zealand. Region Zealand is also work package leader for WP5: Climate impact and risk awareness.

Slagelse municipality focuses on how to deal with flood risk management in an inner city with many stakeholders, both public and private. Odsherred municipality is working with sea level rise impact

Fiatheyat

Fiatheyat

Tidgurangak yet

15 30 00 Extendion

along the coast line on the tourism industry. The Lolland case study will focus on sea level rise, storms and fresh water management along the coast line. LGDK joined the SUSCOD project because they are the interest organization of all the municipalities in Denmark. The municipalities are responsible for spatial planning, and therefore also coastal development.

The regional analysis will highlight on regional ICZM challenges in terms of Zealands geography in relation to natural conditions (coastal type) and culture prevailing circumstances (urban, tourism, infrastructure) and how ICZM principles can be used prospectively and dynamically in light of climate-induced sea level rise. Zealand will: perform a comprehensive ICZM vulnerability assessment in relation to coastal types in the region in light of climate-induced sea level rise; write a proposal for conflict management and solutions in ICZM and collection of examples of good solutions; work on a management guidance and checklist for the organizational and practical work on ICZM issues; and identify knowledge.

- 1 Locate the key challenges in coastal zone management in relation to climate.
- **2** Awareness of the expected effects of climate change such as sea level rise.
- **3** Exchanging and integrating knowledge, expertise and experiences on ICZM implementation on a practical level
- 4 Innovative development of the ICZM-assistant in a

North Bohuslän – The municipality of Strömstad, Tanum, Sotenäs, Munkedal and Lysekil

elsie.hellstrom@stromstad.se

The municipalities entered the SUSCOD project to further develop and continue their common work concerning a sustainable development of their coast and hinterland. A lot of reports and material where produced and trough participation in the SUSCOD project, it now becomes possible to put these into action: to incorporate the knowledge into daily work and also into the political decision making process.

Cooperation for a sustainable development and growth in a unique environment

The case studies in north Bohuslän are focusing on a sustainable development and growth within the coast and hinterland. One of the cases is a fair which aims to increase the number of inhabitants to ensure a sustainable and living north Bohuslän. Another part is focusing more on a good platform, an action plan for all the five municipalities. The action plans is based on the previous common work and we are now focusing on putting all the available knowledge into action and long-term decisions. The issues that are

addressed within the action plan stretch from boat life and planning evolutions to the tourism of tomorrow. The plan gives the five municipalities a better chance to raise the common questions and make long term political decisions based upon the principles of IZCM. The municipalities are small, thou working together helps lifting the common questions to both regional and national level.



< The photo is from the fair – a living Bohuslän 2010, in Kungshamn in the municipality of Sotenäs

- **1** A common blue/sea based comprehensive plan for all the five municipalities within north Bohuslän.
- 2 A long term balanced sustainable development and growth of the north of Bohuslän

Essex County Council

For more information on the SUSCOD programme in Essex contact Hilary Rowlands:

hilary.rowlands@essex.gov.uk

Sustainable Coastal development is integral to action along the coastline in Essex. Essex County Council became involved in SUSCOD due to a desire to share best practice on Integrated Coastal Zone Management (ICZM) and action along our coastline. Learning from partners within Europe is integral to ensuring that solutions are relevant and effective.

The key approach to improving ICZM across the County is through the establishment of an Essex Coastal Forum, which will provide a co-ordinated approach to the management of coastal issues within the county of Essex. It will act as a conduit for information exchange between existing local authorities, government agencies and key stakeholders with interests on the coast, to seek to ensure an increased knowledge base for decision making and a more consistent approach.

The SUSCOD programme is also supporting two case studies in Harwich and Walton-on-the-Naze which will enable ICZM to be considered in more detail. In Harwich, the work focuses upon supporting sustainable and appropriate urban planning. Deliverables include a marina study and a detailed design brief, providing more detail to a masterplan previously drawn up for the town.

In Walton-on-the-Naze, coastal interpretation has been created on a rock groyne parallel to the beach. The area is a Site of Special Scientific Interest (SSSI) and



the works will allow residents and visitors to learn about the coastal processes and the fossils which are uncovered through erosion. Work enabled by SUSCOD will build on this project by funding the drawing of plans for a visitor centre on the site. This centre will eventually be run by a local charity and will support further interpretation and understanding of the site. In addition, interpretation boards will be erected to help visitors to better understand the coastline and species diversity along it.

Expected results

1 Harwich

The delivery of waterfront designs and strategy to support an improved public realm and tourism offer in Harwich. Funding is required for the next stage of implementation work.

2 Walton-on-the-Naze

The completion of design drawings and a location study for a visitor centre will support education and awareness raising along that stretch of coastline.
The construction of the building is dependent upon obtaining funding.

3 Essex Coastal Forum

The creation of an Essex Coastal Forum will support improved partnership working and best practice sharing between all stakeholders involved along the coastline of Essex

2nd Oldenburg Deichband (to be approved as partner)

Leenert Cornelius, chairman of 2nd Oldenburg Deichband Rüdiger Wilken, executive manager: Verwaltung@wabo-brake.de

Professor Dr. Hanns Buchholz: buchholz@km-consult.org

Our overall aim is to achieve security for the coastal population at the Butjadingen Peninsula in a sustainable way. To face the challenges we encounter in our work, the application of the rules of ICZM is of greatest significance. And due to the great variety the examples of ICZM they are enriching the base for the SUSCOD project and for its aim to create an ICZM assistant.

Whereas the Dike Zone has been a quiet and undisturbed zone in the past, devoted almost exclusively to coastal defence functions, presently the Dike Zone at industrialised and populated coasts has become more and more dynamic:

- The limits to heighten the dike due to lack of space, due to neighbouring nature protection areas and due to a failing carrying capacity of the underground.
- The growing demand of manufacturing and services industries for locations in the fore-dike area directly at the waterfront.
- Installations for tourists on the dike (e.g. observation points) and in the fore-dike zone (e.g. swimming pools, re-dressing cabins, restaurants, built-up playgrounds etc.).
- A more complicated water management for drainage of surface water due to increasing

- precipitation and an infiltration of fresh water to counter-balance the growing salinity of the groundwater at the nearshore marshland.
- The growing consideration of stability and of the functioning of the local eco-system which hinders the former mainly sectoral approach looking only to coastal defence tasks.
- The use of the dike zone sectors as balancing and compensation (based on the German Environment Laws).
- The growing integration and co-operation of the Dike Authorities with town planning of coastal communities.

Several aspects mentioned above are increasing slightly the remaining risks at the dikes which have to be solved by more adaptive defence measures, by more flexible reactions.



