



# State of the Art ICZM analysis SUSCOD

The Interreg IVB  
North Sea Region  
Programme

*Investing in the future by working together  
for a sustainable and competitive region*



**European Union**  
European Regional Development Fund

# Preface

This state of the art inventory (end report for Work Package 4) is produced by the Coordination centre for ICZM in Belgium, with the input of the SUSCOD partners using a common template (questionnaire). It is the result of an in depth analysis of the case studies of the SUSDCOD partners including the identification of issues and ICZM techniques and a comparative analysis between the partners. The analysis does not give an appreciation of the status of ICZM in the wider partner regions or countries, but focuses on the specific SUSCOD cases. The analyses were accomplished in the second half of 2010.

The report contributes to developing and designing the *SUSCOD Tool* (Work Package 4).

**Chapter 1** gives a brief overview of the SUSCOD project and the partners. An introduction to ICZM is given in **Chapter 2**, including a description of the ICZM cases within the SUSCOD project. In **Chapter 3** the results of the individual partner analysis are presented. For each case/region the positive aspects in their ICZM approach have been highlighted and recommendations are given on how and what the partner can improve to move towards a more sustainable and integrated management of the coast. The overview shows the innovative ways of working and points out opportunities for sharing expertise.

In **Chapter 4** conclusions are summarised from the analysis. These are linked to specific principles on the one hand, but also general conclusions for all partners have been teased out.

Opportunities for sharing experience between partners are outlined in **Chapter 5**, together with instruments for ICZM and specific advice for the SUSCOD Tool.

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# 01



# Introduction to the SUSCOD project

SUStainable COastal Development in practice (SUSCOD) aims to make a step change in the application of integrated coastal zone management (ICZM). The project is co-financed by the INTERREG IVB North Sea Region (NSR) and will run until the end of 2013. The project partnership is based on a cooperation of organizations, ranging from Denmark, Sweden, Germany, UK, Belgium and The Netherlands (lead partner).

The NSR coastal area is an area with high value assets and competing user functions. On the other hand the region has to deal with impacts of climate change. Precautionary measures are required to guarantee safety for inhabitants and safeguard the regional values. In May 2002 the EU Council and Parliament adopted eight principles of Integrated Coastal Zone Management. SUSCOD picks up the challenge to develop an innovative and relevant approach to bring these principles into practice. The SUSCOD approach will help decision makers, professionals and stakeholders to achieve practical solutions that also ensure an integrated social, economic and environmental development. By doing so, opportunities for coastal development can be fully utilized and participants will benefit from a growing support for coastal management measures.

The partners involved in SUSCOD want to achieve an Integrated Coastal Zone Management approach by a well coordinated transnational team. Much of the challenge lies in promoting change in the behaviour of user groups and institutions. The SUSCOD approach is supported by the development and use of tools to make partners aware of their behaviour and to assist them and other participants to successfully implement coastal projects. The supporting tools will be based on the EU's ICZM principles and build on the work of the EU ICZM expert group.

The SUSCOD approach will be demonstrated in pilot projects which are thematically organised in four work packages:

1. assess and raise awareness of expected effects of climate change,
2. developing integrated strategies and concepts for regional and local issues,
3. translation in real plans that will be test-implemented during the project life time,
4. involvement of relevant participants in the decision making process.

Description of the participating partners can be found in the appendix to this report.

# 02



# Introduction to ICZM

Definition by the EU: "ICZM is a dynamic, continuous process designed to promote sustainable management of coastal zones. ICZM seeks, over the long-term, to balance the benefits from protecting, preserving, and restoring coastal zones, the benefits from minimizing loss of human life and property, and the benefits from public access to and enjoyment of the coastal zone, all within the limits set by natural dynamics and carrying capacity".

## 2.1 Integrated Coastal Zone management (ICZM) in general

Coastal zones are of strategic importance. They are of critical importance as home to a majority of our citizens and an increasing percentage of our economic activities. The coastal zones provides important economic, transport, residential and recreational functions, all of which depend on its physical characteristics, appealing landscape, cultural heritage, natural resources, and rich marine and terrestrial biodiversity (and living resources). This resource base is thus the foundation for the well-being — and economic viability — of present and future generations of coastal zone residents.

However this is not just an issue for people who work or live in the coastal zones. In today's complex economy, everyone – including those who live far from the coastal zone or even in a landlocked country – have a link to the coastal zone. We all use the resources of the coast either as a source of food and raw materials, as an important market for goods, or as a vital link for transport and trade. And, the coastal zone is a favoured destination for our leisure time, and the location of some of our most valuable habitats and landscapes. Resolution of the problems of the coastal zone is therefore of strategic importance to all.

ICZM is described by the European Commission<sup>1</sup> as a dynamic, continuous and iterative process designed to promote sustainable management of coastal zones. ICZM seeks, over the long-term, to balance the benefits from economic development and human uses of the Coastal Zone, the benefits from protecting, preserving, and restoring Coastal Zones, the benefits from minimizing loss of human life and property, and the benefits from public access to and enjoyment of the Coastal Zone, all within the limits set by natural dynamics and carrying capacity.

The "Integrated" in ICZM refers both to the integration of objectives and to the integration of the multiple instruments needed to meet these objectives. It means integration of all relevant policy areas, sectors, and levels of administration. It

<sup>1</sup> Towards a European Integrated Coastal Zone (ICZM) Strategy: General Principles and Policy Options. A reflection paper. 1999.

means integration of the terrestrial and marine components of the target territory. ICZM is integrated in both time and space, and is inherently multi-disciplinary.

ICZM should certainly not be just pigeon-holed under “environment”.

Although ICZM refers to “management”, in fact, the ICZM process covers the full cycle of information collection, planning, decision making, management and monitoring of implementation. “Planning” is thus intended in its broadest sense, to mean strategic policy development, rather than only land use planning or other sectoral planning. ICZM uses the informed participation and cooperation of all interested and affected parties to assess the societal objectives in a given coastal area at a given time, and to initiate the actions necessary to move towards meeting these objectives.

The ICZM process starts with the awareness of issues of common concern, which facilitates a dialogue and exchange of views among interested and affected parties, which in turn supports cooperation amongst the parties, and this is the basis for coordination of action, which - in time - fosters integration of management.

## 2.2 ICZM in a European perspective

[www.ec.europa.eu/environment/iczm/home.htm](http://www.ec.europa.eu/environment/iczm/home.htm)

Many of Europe’s coastal zones face problems of deterioration of their environmental, socio-economic and cultural resources. Since 1996, the European Commission has been working to identify and promote measures to remedy this deterioration and to improve the overall situation in our coastal zones.

From 1996 to 1999, the Commission operated a Demonstration Programme on Integrated Coastal Zone Management (ICZM) designed around a series of 35 demonstration projects and 6 thematic studies. This programme was aimed to:

- Provide technical information about sustainable coastal zone management, and
- Stimulate a broad debate among the various actors involved in the planning, management or use of European coastal zones.

The programme was intended to lead to a consensus regarding the measures necessary in order to stimulate ICZM in Europe.

In 2000, based on the experiences and outputs of the ICZM Demonstration Programme, the European Commission adopted two documents:

- A **Communication** from the Commission to the Council and the European Parliament on “Integrated Coastal Zone Management: A Strategy for Europe” (COM/00/547 of 17 Sept. 2000)
- A **European Parliament and Council Recommendation** concerning the implementation of Integrated Coastal

Zone Management in Europe. This Recommendation was adopted by Council and Parliament on 30 May 2002.

The EU-member states and accessing countries were recommended to deliver their national strategies by end February 2006. Of the 20 coastal EU Member States, 14 submitted official reports to the Commission. This represents 65% of coastal EU Member States and over 70% of the European coastline.

During 2006 and the beginning of 2007 the Commission reviewed the experience with the implementation of the EU ICZM Recommendation. The Commission Communication of 7 June 2007, COM(2007)308 final presents the conclusions of this evaluation exercise and sets out the main policy directions for further promotion on ICZM in Europe.

The Member States national reports, the European Environment Agency’s state-of-the coast assessment and the external evaluation report were the main sources for this Commission Communication.

In order to further guide the member states, the Commission has assigned an external party to execute an exchange of experience and comparative analysis ICZM. The contract started in December 2008, for a period of 38 months.

At a meeting of the ICZM expert group in November 2008, it was decided to set up a working group regarding the follow-up to the ICZM Recommendation. The type of new ICZM instrument has not yet been decided. The working group, which started their work in spring 2009, is working on a scoping document in preparation of the Impact Assessment (an Impact Assessment is needed for any kind of new EU legislation). It is suggested that the following 4 options are considered and compared in the Impact Assessment:

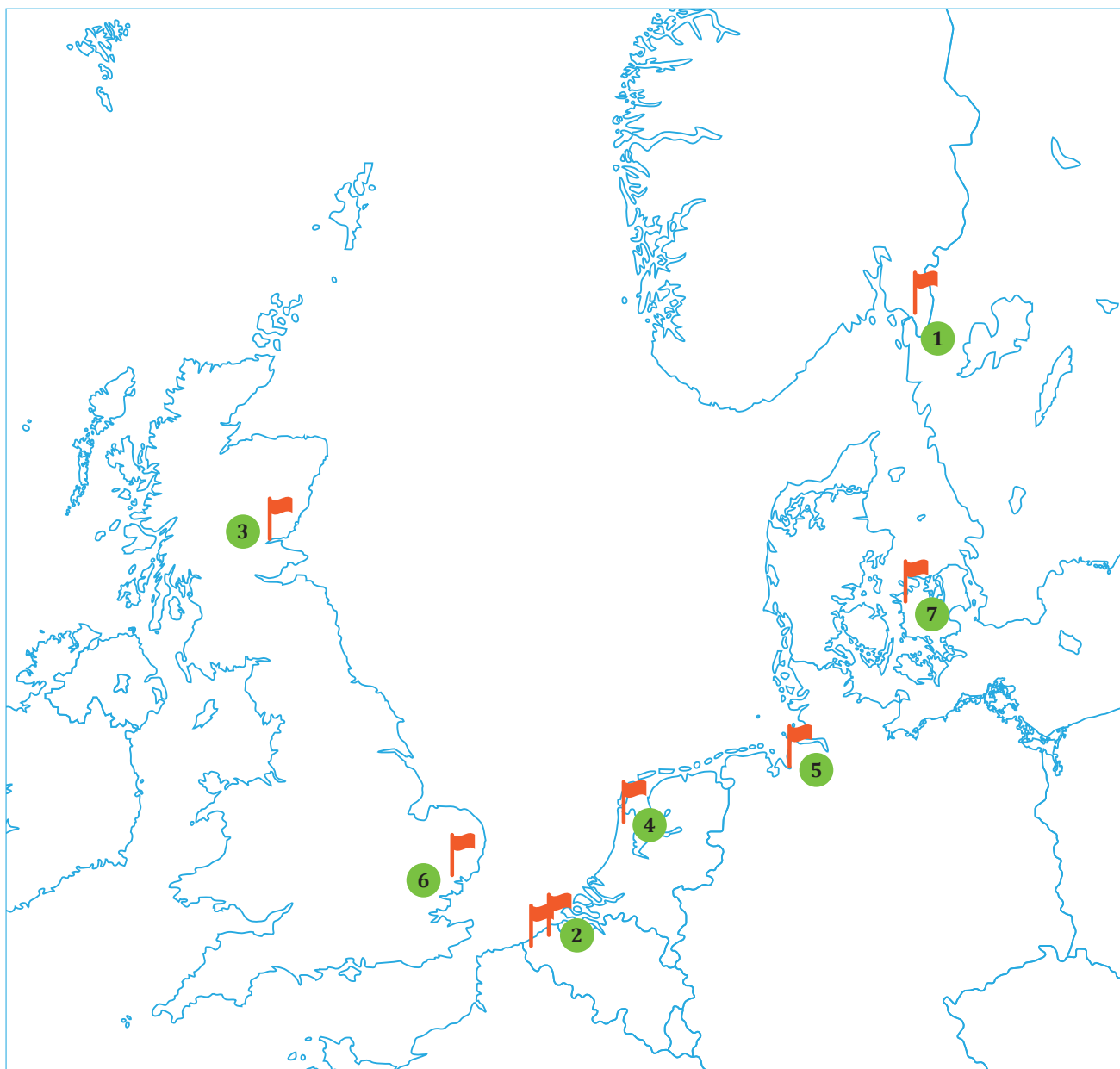
- **No-change** (keep the current Recommendation). This option is obligatory;
- **Revised Recommendation** with more concrete guidance;
- **Framework Directive** (binding). Cf. Water Framework Directive
- **Programme Decision**, i.e. a European programme could be designed specifically for coastal zones, defining objectives and priority coastal issues. A programme is not a binding instrument, but would help to highlight the importance of coastal zones.

## 2.3 ICZM cases in the SUSCOD project

In the SUSCOD project, all partners are implementing concrete projects in their coastal zone. Below, a description of the cases for each of the partners is given.

The input to the questionnaire was coordinated by the following persons:

Region, Country	Partner	Contact
1 Bohuslän, Sweden	Municipality of Strömstad	Lena Boman, boman.ark@gmail.com
2 Flanders, Belgium	Agentschap voor Maritieme Dienstverlening en Kust (MDK) – Afdeling Kust	Tina Mertens, tina.mertens@mow.vlaanderen.be
3 Fife, Scotland, UK	Fife Coast and Countryside Trust	Julian Inglis, julian.inglis@fifecountryside.co.uk
4 North-Holland, the Netherlands	Province of North-Holland	Kim Uittenbosch, uittenboschk@nood-holland.nl
5 Nordenham, Germany	City of Nordenham	Peter Kania, kania@nordenham.de
6 Essex, England, UK	Essex County Council	Hilary Rowlands, Hilary.Rowlands@essex.gov.uk
7 Sjælland, Denmark	Region Sjælland	Mikkel Østergård, mo@regionsjaelland.dk





#### **a. Bohuslän, SWEDEN**

The five municipalities of the North of Bohuslän have been working together for more than three years dealing with questions of sustainable coastal development. Contacts have been established and a network has been formed across the borders of the municipalities. One essential part has been to spread the knowledge and develop and deepen skills in the various municipalities and agencies. There is also a need for exchange of experiences and knowledge between state, regional and municipalities, and to break down existing projects and research results to operational levels.

One of the milestones for the SUSCOD project is to promote the common strategy document for a sustainable coastal development. The common strategy document of the five municipalities represents the overall conclusions of the coastal zone and rural project in northern Bohuslän, which after three years will end first half of 2010. The City Council of each municipality has endorsed the strategy in autumn 2009.

The basis for the future work with SUSCOD's showcase in the Bohuslän Municipalities are two agreements made by the five municipalities in northern Bohuslän. These are "the coastal and rural development strategy" and "the strategy plan for development of the hospitality industry/ tourism in Northern Bohuslän", adopted by the council of each municipality in 2006.

The chairmen of the municipalities, who together form the steering group for "Growth of Bohuslän" (Tillväxt Bohuslän), produced the above agreements in autumn 2009.

The SUSCOD project will focus on developing an action plan based on the two agreements. In practice, the SUSCOD case will be a resource in the implementation of the strategy plan and in the field of sustainable growth for the north of Bohuslän.

The vision for the coming three and a half year is to focus on the development of sustainable and lasting strategies for the five municipalities. Strategies that can be used and support the everyday life and decision making within the municipalities. The vision is also to focus on good communication with stakeholders and the public, to spread the knowledge. The goal is to create a climate across the municipality, that lives beyond the project.

Good communication between the municipalities and the stakeholders/public is essential. The ongoing development of the action plan as a tool for municipalities to drive the decision making in a sustainable coastal development direction is needed to create long lasting networks beyond any project. The action plan will be developed and updated during the process. One functions for the action plan is to keep track of the projects and their purpose: do they meet the aims stated within the strategy plan? The strategy plan will not be updated in the coming four years, but instead the action plan will develop. The development of the action plan will be dealt with within the Work Package 7 (plans and measures). Within the action plan developed, one project is defined to meet the stakeholders and spread knowledge and awareness concerning a sustainable coastal development. This has so far been done by a fair, focusing on a living Bohuslän. This project is done within the work package 8 (stakeholder involvement)

#### **b. Flanders, Belgium**

*Belgium has a limited coast length of 67 km and each kilometre is intensively used.*

The existing sea defence structures in several coastal towns in Flanders have to be strengthened. One third of the coastline is insufficiently protected against erosion and storm impacts. Low-lying sea dikes and quay walls are mainly responsible for the low protection level at the weak links of the sea defence. A master plan has been prepared which proposes general solutions to improve the coastal safety against flooding, with a time horizon to 2050, and detailed plans with full application of the ICZM principles are being prepared. The execution of the master plan is planned in the period 2010-2015.

To balance the needs of different interest group during the design of protection measures, mutual cooperation is needed. Since tourism at the Flemish coastline is a key player in the visual appearance of the coast, this stakeholder is chosen as communication partner in the Flemish SUSCOD pilot cases. Therefore, two coastal towns will be selected which form important touristic landmarks. 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. Since no clear choice for these pilot cases has been made yet, two general weak links will be used for filling in the questionnaire: the coastal towns of Middelkerke and De Haan-Wenduine. Middelkerke complains of a narrow sea dike which lies in the shadow of the buildings along the sea dike. De Haan-Wenduine is a small town with a roundabout seawards of the dike which is a popular place for fishermen. These two communities were chosen because they have specific coastal protection problems. Middelkerke has a lowlying sea dike and beach to protect the coastal town. During a storm event erosion and combined overtopping of the sea dike can cause local coastal flooding of the hinterland. At De Haan-Wenduine the sea dike is low lying (one of the lowest at the entire coastline) combined with a partial seaward extension of the sea dike causing overtopping even during smaller storm events. During a storm, event erosion and combined overtopping of the sea dike can cause major coastal flooding of the hinterland.

### c. Fife, Scotland

The pilot project deals with the implementation of ICZM principles in coastal development projects in the North-east of Fife, focussed on the coastal zone which bounds the Firth of Tay-Eden Estuary Natura 2000 site (SAC/SPA), and RAMSAR site.

Sustainable development, particularly around the Eden Estuary and the adjacent West Sands beach and sand dune complex, poses many challenges. The Eden Estuary is a “pocket” estuary and 62% of the shoreline has been protected for the past two hundred years by hard defences. These defences now contribute to coastal squeeze and serious shoreline erosion. At threat is the high value land and resources on which the economy of the region heavily depends.

Of particular concern is the erosion of the West Sands beach and dunes, which borders a closed municipal landfill site. Erosion is linked to heavy recreational use, climate change, and from golf-related development pressure. New visitor facilities and an upgraded access road will be constructed in the period 2010 -2012. Past efforts to stabilise the dunes and control public use have met with limited success and there are no plans in place to ensure the long term conservation and sustainable use of the sand dunes.

Despite the implementation of management actions and agreements for the pilot area, coastal erosion remains a continuing and serious threat to both the natural heritage and to the local and Scottish economy. All stakeholders in the area, including Scottish Natural Heritage, the statutory authority, have called for a fully integrated approach to coastal management based on the principles and implementation of ICZM.

The pilot project will apply, and further develop, best-practice techniques and experience from around the North Sea Region through a “hands-on” transnational team approach, and in particular contribute to the development and testing of the **SUSCOD Tool**.

The six outputs from the pilot project address the specific needs of the project area:

- the development and implementation of a long term management plan for the sustainable development of the West Sands beach and dunes
- the evaluation of options and recommendations for the protection and management of the closed landfill site and golf course at Out Head, using hard and soft engineering options and applying the model developed in the Interreg IIIC project SUFALNET
- best practice for the design of a managed realignment in the Eden Estuary to increase intertidal habitat, meet local planning objectives and bring added economic benefits to local landowners through improved public access, recreation and interpretation facilities
- options for the innovative redevelopment of a major industrial site on the estuary to optimise economic benefits to the local area while maintaining the integrity of the Natura 2000 site
- detailed designs for “Gateway” visitor facilities at Guardbridge and Tayport to bring economic benefits to declining communities around the area
- a public information and education programme, and exhibits, to achieve responsible use of the dune area

### d. North-Holland, the Netherlands

*Three projects are looked at within the SUSCOD project.*

The **Identity of Coastal Towns** project is an initiative of the Province North-Holland which aims at strengthening the identity and spatial quality of coastal towns along the North Sea coast of North Holland. The project consists of two pilots with separate coastal towns and a broad cultural and communicative process in which all coastal towns are invited to participate. It is this broad cultural process that we want to share with SUSCOD, seeing the direct link to stakeholder involvement. The cultural track consists of two



phases: (1) the identification and articulation of the identities of coastal towns and (2) assistance in developing profiles, strategies and identification of key spatial projects (still to be identified) within specific coastal towns by setting up an expert group. The goal of the project is two-fold. First of all, the Province wants to stimulate awareness of identity and the issue of climate change and secondly, it wants to stimulate the translation of this awareness into actual plans and strategies. In both these phases - and for both these goals - the involvement of stakeholders is crucial, for the project is dependent on the participation and input of other parties.

The **sand nourishment project** is directed at looking into initiating sand nourishments for other user functions than coastal defence. These other user functions are, e.g., recreation, tourism and nature preservation. These user functions have been taken into account in the initial nourishment goals set by the national government. However, the province wishes to see further accommodations made to these user functions. As such, the province sees it beneficial to be more oriented towards the practical implementation of measures to accommodate instead of mere input into the process. This is because, in practice, the goals set at the start are not sufficiently met in the end result. As such, we wish to examine innovative methods of financing and contracting and societal cost-benefits. Furthermore, we wish to make use of the expertise and experience of SUSCOD-partners. The goal of the project is to explore other concepts and strategies for applying sand nourishments.

The last project focuses on **spatial restrictions** (due to legal frameworks, interests, etc. – incl. informal and formal aspects) that play a role in the ‘weak links’ project of the Province of North Holland (a coastal reinforcement program). Within the weak links project there is a multitude of institutional stakeholders which results in institutional boundaries. As such, in order to ensure an integrated approach to coastal management, these boundaries need to be taken into account. The PNH will therefore start a research project which will look into these ‘spatial restrictions’ and develop strategies and concepts to deal with them more effectively.

#### e. Nordenham, Germany

There is a growing tendency in the North Sea Region for people and enterprises to move closer and closer to the coastal zone, and within the coastal zone they prefer the area directly at the Mean High Water Mark (MHW). The reasons are:

- The growing regional and global demand for shipping needs more and bigger ports with fast and easy access.
- The up-coming maritime industries in offshore areas need corresponding undertakings, administrations, offices on land as close as possible at the MTHM: for maintenance, for pre-fabrication or final manufacturing, for transport, for other services etc.
- There is a growing attractiveness of the sea coast for tourists but as well for more people getting employment in new industries.

The City of Nordenham shows all these phenomena:

- The demand for port extensions due to new and bigger vessels, due to the shift of port functions from the old Bremen Ports and probably later from the old Hamburg Ports to the coastal front at the North Sea: to Bremerhaven and Wilhelmshaven and similarly to Brake and Nordenham.
- The EADS airplane factories should be mentioned here as well because they need their location at the MHW for the sea transport of huge pre-fabricated airplane parts to further manufacturing at Hamburg.
- The expanding sea cable industries, special installations for the repair of big vessels, and factories producing Wind Energy installations - they are all looking for locations direct at the waterfront.
- Sandy beaches which are not suitable for port facilities or manufacturing industries have to be kept with special care in order to keep or to get attractive recreational areas for the local population and for tourists. The attractiveness will be increased by replacing the muddy sand with high quality sand. The beach in this area is important mainly for the local inhabitants.

All these tasks demand a new evaluation and an innovative approach to the Fore-dike Zone and to the Di-ke Zone. The traditional understanding has been to keep out every other use of these zones; they were purely devoted to the task of coastal defence. Every law and administrative rule tries to prevent these zones from any other use. Apart from a few exceptions - ports, ferry piers, jetties, wharves - there are no houses or roads at the dike or in the Fore-dike zone. Even restaurant buildings have normally no chance to be built in a location at the MHW.

Presently Nordenham is in a phase of change: the Di-ke Zone and the Fore-dike Zone will become much more important in the future as locations for further uses than just coastal safety. The aim of the activities of Nordenham in the SUSCOD project is to find new and sustainable solutions for the multiple uses of the Di-ke Zone and the Fore-dike Zone into the land use system, taking into account coastal safety in the frame of an anticipated global climate change with a rising sea level and an increased number of extreme weather events, and always following the rules of ICZM.

#### f. Essex, England

There are three main areas of delivery – Harwich, Walton-on-the-Naze and the development of an Essex Coastal Partnership.

Work in Harwich, an international port located in the District of Tendring, will support and enable agreement for a zoning strategy in the town. Harwich is a busy coastal town and international port located on the estuary of the rivers Stour and Orwell. The old town of Harwich is a conservation area, due to the numerous historic buildings located there. The town became a naval base in 1657 and a number of the fortifications are still present in the town. SUSCOD will enable the delivery of a masterplan for Harwich and a waterfront zoning strategy, to ascertain the most appropriate location for a marina.

In Walton-on-the-Naze, the second case study area, SUSCOD funding will support the production of detailed design drawings for a visitor centre on the coastline. The Naze derives from the Old English 'naes', meaning nose and stretches 3 miles northwards from the main coastal town of Walton-on-the-Naze. The visitor centre will provide space for interpretation of the coastline which is a designated site of special scientific interest and will explain more of integrated coastal zone management on that section of cliff frontage. This is of utmost importance as a new rock revetment is being built to protect a section of the cliff which fronts a housing estate. A few metres along however, the cliff is being left to natural processes and is eroding at approximately 2m per year. The 70 foot high cliffs are rich in fossils and unique to the Essex coastline. The base of the cliff is London Clay (54 million years old) which is overlaid with a 2 million year old sandy deposit of red crag. It is within the sandy deposit that fossils are located. The clay base is also considered one of the best sites for pyritised fossils.

The final area of SUSCOD delivery in Essex is the development of the Essex Coastal Partnership. This group will draw together all stakeholders who are involved in delivery on the coast in Essex and the group will produce an ICZM strategy for the county's coast. An ICZM will assist officer and member decision making with regard to coastal activities and/ or developments. The prompt will be based upon promoting understanding and integration of all sectoral policies concerning flood defence, erosion protection, conservation, heritage and fisheries, to name but a few.

#### **g. Zealand, Denmark**

Three case studies will be carried out within three municipalities in the region focusing on three different aspects, namely

- a) sea level rise and infrastructure development
- b) socio-economic aspects of sea level rise in selected tourism areas
- c) sea level rise and inner city development

Also, a regional analysis of ICZM in the region of Zealand will be executed.



# 03



# Analysis of the SUSCOD cases

## 3.1 Aim en methodology

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**Aim:** the ICZM inventory and its analysis is part of work package 3 of the SUSCOD project, in which the present situation concerning the state of art of ICZM is analysed in the participating partner regions with a concrete focus on the implementation of ICZM principles in coastal development projects. The results will be used as essential input for the **SUSCOD Tool** (Work package 4) and for work packages 5-8 on climate impact and risk awareness, ICZM concepts and strategies, stakeholders involvement and dissemination.

**Methodology:** at the start-up meeting of SUSCOD in Ostend, the important issues to be analysed were discussed with all partners. Based on this discussion a questionnaire was drafted and agreed upon by all partners. Each partner was asked to complete an elaborate questionnaire (see template in attachment), which focuses on the 8 ICZM principles as stated in the EU ICZM recommendation. For each principle, in depth questions were asked.

The questionnaire allows a detailed inventory of each partners pilot cases and an analysis of their current status in implementing ICZM for their specific case in SUSCOD. The answers were analysed in detail by the Coordination Centre on ICZM in Belgium, and discussed at the partnership meetings in Nordenham, Germany (March 2010) and in Zandvoort, the Netherlands (November 2010). Additional to the partnership meetings, bilateral meetings were held with each of the partners, in order to clarify the answer or further discuss ICZM issues where needed.

The results from the analysis and the main conclusions for each of the partners are presented in individual analysis reports (see 3.2). The conclusions for each analysis were peer reviewed and confirmed by the partners.

## Eight Principles of Good ICZM

**Principle 1: A broad overall perspective** (thematic and geographic) which will take into account the interdependence and disparity of natural systems and human activities with an impact on coastal areas.

**Principle 2: A long-term perspective** which will take into account the precautionary principle and the needs of present and future generations.

**Principle 3: Adaptive management** during a gradual process which will facilitate adjustment as problems and knowledge develop. This implies the need for a sound scientific basis concerning the evolution of the coastal zone.

**Principle 4: Local specificity** and the great diversity of European coastal zones, which will make it possible to respond to their practical needs with specific solutions and flexible measures.

**Principle 5: Working with natural processes** and respecting the carrying capacity of ecosystems, which will make human activities more environmentally friendly, socially responsible and economically sound in the long run.

**Principle 6: Involving all the parties** concerned (economic and social partners, the organisations representing coastal zone residents, non-governmental organisations and the business sector) in the management process, for example by means of agreements and based on shared responsibility.

**Principle 7: Support and involvement of relevant administrative bodies** at national, regional and local level between which appropriate links should be established or maintained with the aim of improved coordination of the various existing policies. Partnership with and between regional and local authorities should apply when appropriate.

**Principle 8: Use of a combination of instruments** designed to facilitate coherence between sectoral policy objectives and coherence between planning and management.

## 3.2 Partner ICZM analysis reports.

### a. Analysis Bohuslän, SWEDEN

#### Positive aspects in the approach taken in the SUSCOD project:

##### **Principle 1: Overall perspective**

- The aim of the Swedish SUSCOD case is to develop an INTEGRATED vision, linked to a concrete action plan. With this vision Bohuslän wants to move away from a sectoral approach towards an integrated approach. Spatial planning is used as one of the main instruments.
- All important departments are involved, and extra efforts are now made to involve also the department of care and education and the department of infrastructure and traffic planning, because they are important for this specific case.

##### **Principle 2: Long-term perspective**

- The strategy is accompanied by a yearly action plan. The goals of the strategy are set out in signed agreements with the municipalities. The action plan gives mandates and sets the priorities. An evaluation of the actions is foreseen.
- Small municipalities are stimulated to collaborate at a strategic level; the regional authority supports them in this.

##### **Principle 4: Local specificity**

- The questionnaire is directed towards “part time” residents (2nd home owners), which are a specific target group in the study area.

##### **Principle 5: Working with natural processes**

- The starting point/philosophy of the project is “sustainable development”, which implies an integrated approach, and not a sectoral one.

##### **Principle 7: Involvement of relevant administrative bodies**

- The politicians are actively involved.
- The municipalities are actively engaged in the project.
- The decisions are embedded in the organisations at all levels.

##### **Principle 8: Combination of instruments**

- Existing (legal) frameworks are used for implementation of the ICZM project, as well on a local as on a European level.
- A previous ICZM-project delivered a development plan specific for the coast. It is recognised that the coast needs a specific approach, compared to the hinterland.

#### **Room for improvement:**

##### **1) Suggestions by the project partner:**

- Build on the knowledge acquired in other projects and to make the link with the pilot area studied in SUSCOD. The different projects have to be looked at jointly to see and fine-tune the different perspectives and questions/aim/goals in common (principle 1).



- Give special attention to the connection between the sea – the coast line - and the hinterland and to the link with the neighbouring areas (principle 1).
- More need for long-term planning by the decision-makers, taking into account the impact of today's actions on the future generations. At present there still is the tendency to work with ad hoc solutions: what is best now, and how can we stimulate the economic interests now, focusing on the present and not the future effects (principle 2).
- Goals and targets need to be more clearly defined, and the project work has to be embedded even more at all levels within the municipalities. The goals are set by the agreement signed by all the municipalities, but the targets and the priorities are set only in the action plan.

## 2) Suggestions by Coordination centre on ICZM:

- The strategy is a good instrument for engaging the municipalities. Linking it to **legislative instruments and existing policies** could make it stronger (principle 2).
- The statistics and measurements within the project can be used as a basis to develop **sustainability indicators** specific for the coast. At present, no indicators are used, but it seems the data is available to develop them (principle 3).
- The SUSCOD partner in Bohuslän is very aware where the ICZM approach can be improved and mentions the shortcomings in the questionnaire. This could be used to set up a **risk register**, in which the obstacles or possible failings factors are recognised. The risk register is a good tool to improve, evaluate and monitor the progress of the ICZM process (principle 3).
- It is stated that the philosophy of the project in Bohuslän is "sustainable development", and the structure plan for the coast and the country side development plan are used as a basis. It would be useful to specify how sustainable development is dealt with in these two documents: how are they linked to sustainable development and is there

an evaluation framework (principle 4)? The main focus seems to be on "economic sustainability" and in some cases environmental issues, but **social aspects** are only dealt with marginally.

- The partner mentions the importance of mapping conflicts and the need for balancing development and preservation/conservation => it is advised to conduct a **conflict analysis** and develop a framework for **decision making** (principle 5).
- The participation is mainly directed towards inhabitants. It is advised to also consult other stakeholders in the area such as NGO's, touristic actors, economic actors. A **stakeholder analysis** will help to define the main stakeholders and their importance (principle 6).
- The county level works very actively with the municipalities (lower authorities) but **the link and involvement of the higher authorities** should not be forgotten (national, European framework) (principle 7).

## b. Analysis Flanders, BELGIUM

### Positive aspects in the approach taken in the SUSCOD project:

#### Principle 1: Overall perspective

- **All sectors** are **involved** from the beginning of the process for developing a master plan.
- **Active communication and participation** process, through steering committee and advisory board, and also directed towards the wide public.
- Strategic approach through the development of **strategic vision** for the entire coastal zone (incl. **strategic Environmental Impact Assessment**)
- Risk for **flooding of the hinterland** is included in the case, hence there is not only a coastal focus, but a clear link to the wider effects in the hinterland.



### Principle 2: Long-term perspective

- **Social cost benefit analysis** is included in the process. Covering the period 2010-2100.
- **Monitoring** of the implementation is foreseen. A **specific indicator** has been developed to monitor achievement of goals.
- **Risk analysis** for the implementation of the plan is foreseen.

### Principle 3: Sound scientific basis

- Continued **monitoring, evaluation and adaptation** of plans, based on scientific grounds. However, focus remains mostly on coastal defence measures.
- Relevant mechanisms have been established to implement community policies and legislations to a certain degree. Formal legislation on safety level is not available, but a decree on coastal safety is in preparation. The Master Plan is the first attempt to consider coastal safety in a much more integrated way than before.
- An accompanying programme has been set up to collect relevant ecological, economic and social information to assist the further evaluation of the project, using the SEA and **social cost-benefit analysis** (SCBA).
- The 2 case studies are based on sound scientific studies, which are all openly communicated and presented to the stakeholders.

### Principle 4: Local specificity

- Attention is paid to **the visual impact and multifunctional use** of the coastal defence measures, taking into account the specificity of the locations.

### Principle 5: Working with natural processes

- **Social, economic and ecologic goals** have been set, which is positive.

### Principle 6: Involving all parties

- Active communication towards wider public, using a **combination of communication instruments**.
- Several **options for shared responsibility** have been

**considered**, in terms of shared costs with local authorities and shared action in implementing the contingency planning.

### Principle 7: Involvement of relevant administrative bodies

- A **Coordination centre specifically for ICZM** has been established (formal protocol signed in 2007), in which the federal, regional and provincial authorities participate. The centre stimulates the implementation of the ICZM principles by other sectors, and offers support for all coastal stakeholders on request.
- There are several consultation meetings with a focus on the coast for several topics: tourism, sports, etc.

### Principle 8: Combination of instruments

- **State of the coast** is measured regularly (yearly where possible) using a set of **sustainability indicators** specifically for the coast.
- No official guidelines have been produced for appropriate use of the coastal zone, but the Coordination centre on ICZM can support authorities and coastal stakeholders in applying ICZM. The centre also rewards good ICZM practice through the Award scheme for sustainable projects and provides a set of criteria which can be used to test the sustainability of projects/initiatives.
- A link is made with provincial **emergency plans** for flooding and rescue.

### Room for improvement:

#### 1) Suggestions by the project partner:

- The stakeholders, administrations and local communities are involved in the study phase of the master plan Federal and regional authorities, but they take a rather passive role instead of a proactive one. Instead of thinking along with the engineers and designers they wait for the proposals. One reason for this is possibly that local politicians expect that all measures will be paid for by the Flemish government thus giving them no right for expressing their wishes. Ways for **stimulating active participation** need to be considered (principle 4).
- The discussion on safety measures often means a discussion about budgets. Local communities wait for the proposal of safety measures by the Coastal Division before they communicate their wishes and their possible contribution to the budgets. They wait because they know the Coastal Division will finance their own proposal. Coastal communities will try to incorporate their wishes in a second step. The safety measures of the Coastal Division are designed as 'boring, grey' solutions to guarantee a minimum safety standard without an architectural consideration of the design. It would be better to start with **integrated solutions**, supported by all parties for which a **budget plan is discussed directly** (principle 6).

#### 2) Suggestions by the Coordination centre on ICZM:

- The link coast (beach-dune strip)-hinterland is foreseen, but the **marine and seaward effects** of the strategic plan

is considered to a lesser degree. However, the Plan will also impact activities in the marine environment. An **integral approach** is needed (principle 1).

- **Budget costs for implementation** and foresee budget from an early phase (not enough budget available for implementation of the plan). Pressure from outside helped in pointing out to the Minister that budget was needed (Principle 2).
- Time Horizon for the Plan is rather short (2050) – need for **longer term perspective** cf. The Netherlands consider 200 year perspective and more (Principle 2).
- Monitoring and evaluation is mainly considered from a **coastal defence point of view**. It is recommended to also consider other effects such as natural effects, social etc. (principle 3)
- The goals are mainly set only from a coastal defence point of view (safety level).
- Social, economic and ecologic goals have been set, which is positive, however the coastal defence goals still dominate strongly (safety level). The ecological goals could be more ambitious, the plan has potential for an improvement of the natural habitat. **Setting goals together with other sectors** would improve the integrated character of the plan (principle 3 and 5).
- **Natural processes** have been taken into account mainly in terms of erosion, but this aspect could be worked out in an integrated way e.g. also looking at natural processes in dune areas, natural developments of beaches (principle 5).
- The process for the coastal defence Master plan is not imbedded in the **spatial planning** system, although spatial planning is important for instance in relation to the present and future living areas. It is advised to link the process to the spatial planning procedure in Flanders, the province of West-Flanders and at municipality (local) level (principle 8).

### c. Analysis Fife, Scotland.

#### Positive aspects in the approach taken in the SUSCOD project:

##### **Principle 1: Overall perspective**

- The pilot fits within the **spatial development plan** for Fife, in which the ecological values and the social and economic context is taken into account.
- The Fife case study is a good example of an ICZM case and approach with many actors. The neighbouring areas and themes are considered, as well as the link with the hinterland. The approach is mainly described theoretically at present, and implementation will need to prove the effectiveness of the good intentions for the holistic approach.
- A new instrument for the marine environment is available through the **marine bill**. A new body “Marine Scotland” has been established as an integrated directorate of the Scottish government.
- The marine bill seems promising for ICZM in many ways. Eg the Marine Bill has the intention to **simplify and streamline existing legislation for marine activities** (E.g. single consent for renewable energy projects). Also furthermore **enforcement** of the marine bill is foreseen.
- Although the link between land and sea has not been made at the moment, the intention is to ensure that marine and terrestrial plans are compatible. It is unclear if and how the UK Marine and Coastal Access Bill will impact on Scotland as it has its own legislation (the **Marine Bill**) as a devolved government. It is not clear yet how strong the links between Scotland and the rest of the UK will be.
- ICZM is mentioned as an approach in the **Policy memorandum** accompanying the Marine Bill “Where



required, Scottish Ministers may also use their power of direction in the Bill to ensure ICZM is delivered by those carrying out regional marine planning functions”

- the **Shoreline Management Plan (SMP)** is potentially a good instrument for ICZM. Whereas its main aim is to set policies to address the risk of coastal erosion and flooding, this non-statutory plan considers the broad range of interests relevant to the coastline. The plan identifies preferred defence options along the coast taking into account natural coastal processes, the need for coastal defence, environmental considerations, planning issues and the current and future use of the land.
- The SMP is not a static document, but a policy cycle is linked to it. For instance a **reviewing** and **consultation** mechanism is foreseen. The review considers the predicted effects of climate change over the next 100 years, with the aim of securing sustainable management of the coastal zone.

#### Principle 2: Long-term perspective

- The main goals of the pilot project is the development of **long term strategies**.
- The **steps** for the process are **clearly defined**, which leads to a **transparent process** for the stakeholders.
- A **reviewing and updating** process for the long term strategies is foreseen. Review cycles are formally expected every 5 years.

#### Principle 3: Sound scientific basis

- An accompanying programme has been set up to collect relevant **ecological, economic and social information** to assist the further evaluation of ICZM
- Scientific **monitoring** is foreseen by different actors (academic community, local authority and its consultants).
- **Technical workshops** are planned at intervals throughout the project to assess progress. These workshops involve all statutory agencies, landowners, land managers and the scientific community. The results are reported



back through the SUSCOD management system. **Public meetings** are also held to communicate progress and get feedback.

- **Specific outputs** were established for the pilot project and these are measurable.

#### Principle 4: Local specificity

- The **specific challenges for different segments** of the coastal zone have been identified.
- Protection of coastal settlements and their **cultural heritage** is part of the ICZM approach.

#### Principle 5: Working with natural processes

- The **spatial planning system is used for conflict analysis and resolution** => use of spatial planning as integrating tool.
- The principles of the project are articulated in the draft West Sands Management Plan and explicitly state the **intention** to adopt an **ecosystem approach**. This has been **endorsed** by the West Sands Partnership. The ecosystem approach is the basis for all project outputs.

#### Principle 6: Involving all parties

- Attention is paid to create a better understanding by a wide group, by providing public information through the Visitor facilities “Gateway”, education programmes and exhibitions
- The **partnership approach** is planned from the very beginning of the process.
- There is an **iterative process for participation**, where the public and other consulted parties receive feedback on the main discussion points. This is also used to monitor if the people are happy with the outcome.
- Besides links with the local actors and partnerships, also **links** have been established with **Marine Scotland** and its policy advisory body, the Scottish Coastal Forum.

#### Principle 7: Involvement of relevant administrative bodies

- Involvement of the **estuary fora** proves useful for cooperation, networking and involving a wide range of players in coastal management. Coastal and estuary fora are a typical phenomenon for the UK, and they could play a very valuable role in ICZM.
- Management actions are defined and agreements are in place. This is very positive for **confirming engagement of involved parties**.

#### Principle 8: Combination of instruments

- The starting point is the development plan. This gives opportunities for the ICZM approach to be imbedded in an **existing framework of land use planning**. This however is only dealing with the land side of the coast, and formal links between ICZM and land use planning yet have to be establish. As for the marine environment, the marine bill is promising for an integrated approach.
- ICZM is mentioned as an approach in the **Policy memorandum accompanying the Marine Bill**.

## Room for improvement:

### 1) Suggestions by project partner:

ICZM is practised with respect to coastal development projects in the project area. On the other hand, coastal development projects are generally handled through a sectoral planning approach. "The statutory framework for coastal management in the UK is primarily implemented through central government and the devolved administrations of Wales, Scotland and Northern Ireland. There is no overarching legislation that covers ICZM in the UK. Instead, the approach is currently sectoral." There is need for overall ICZM approach. However, the sectoral plans could also integrate the ICZM principles voluntarily (principle 1).

- In the pilot project Fife Coast and Countryside Trust is engaging with all of the stakeholders. At the Local Authority and National levels there is a need to engage with policy and development planning staff in both marine and land use planning sectors to better understand, and potentially influence, how coastal development can follow ICZM principles (principle 1).
- The link between land and sea will require considerable work on the part of land and marine planning agencies, and this will be the acid test of how well ICZM will be taken forward in the future (principle 1).
- It is not known at this stage how the partnerships now in place will have the intended impact. Transnational cooperation will be invaluable as it will reinforce the need for long term perspectives and the need for a precautionary approach, particularly at a time of severe resource constraints. Once the Shoreline Management Plan is finalised, and the West Sands Plan reviewed by the Local Authority and statutory agencies, it will be necessary to modify and improve the project. Planning is a process, so continuous modification and improvement is crucial (principle 2).
- The need is felt to establish a common platform for data sharing and the integration of the results from the many scientific and technical studies carried out in the area (principle 3).
- Need for engaging with policy and development planning staff to better understand how coastal development can follow ICZM principles (principle 7).
- Fife is looking at the future development of coastal partnerships. It is a pity they didn't pick up on developing an ICZM policy. Through spatial planning, ICZM can be used as an instrument to link up with the marine environment (principle 7).
- Need to use the ICZM approach to reach the objectives for the Natura 2000 sites in the project area. The project should contribute to the development of a management scheme or strategy (principle 8).

### 2) Suggestions by Coordination centre:

- The Shoreline Management Plan (SMP) is potentially a good instrument for supporting ICZM. The focus on coastal defence could be widened, and other aspects of coastal management could be drawn into the process. This could also lead to a more active involvement by the other parties.

For the moment, the consulted parties just "come along" to the meetings, without real engagement (principle 1).

- The different strategies which will be an outcome of the ICZM process have a different time frame. The West Sand management Plan: 2010-2025; The Shoreline management Plan is looking at 25, 50, 100 year scenarios; other project activities would be based on a minimum of 50-100 years time frames. It is advised to streamline the time frames as much as possible to make an actually integrated strategy possible (principle 2)
- After Scottish Enterprise withdrew its funding due to "other priorities", the protection of ecological sensitive sand dunes is jeopardised. Look for long-term engagement for financing ICZM (principle 2).
- At present there are no communications links established for improved horizontal (between sectors) and vertical (between authority levels) coordination. The links are foreseen through official procedures only. An additional (in)formal coordination mechanism could benefit the ICZM process. It can be considered what role coastal partnership or the coastal fora can play here (principle 7).
- At present no formal links are made between spatial planning and ICZM. The links have yet to be established. There is no formal recognition of ICZM in any planning, legislation, policy or procedure. The Coastal Fora are voluntary partnerships e.g. the Tay and Forth Estuary Fora. It is likely that these will change as they will likely report to the Marine Agency through the umbrella group, the Scottish Coastal Forum, which advises the Marine Agencies policy directorate. New Coastal Partnerships will emerge together with the preparation of Regional Marine Plans. The boundaries for the marine regions have not been established and may not correspond with those of the current coastal fora (principle 7).
- In the questionnaire it was mentioned that "UK-level analyses and guidance on ICZM and related matters can influence the direction that the Scottish Government takes e.g. on marine planning legislation". So additional to working closely with the coastal partnerships (bottom-up-approach), also a close working relationship with the Scottish and UK government is needed (principle 7).
- The Local Coastal Partnership (LCP) is valued as an important networking and ICZM supporting structure. However, their structures, role funding mechanisms and working success vary. It is advisable to evaluate the LCP in Fife (and ultimately in Scotland and UK), in the light of their role in ICZM but also considering recent developments (e.g. Marine Bill and Marine Spatial Planning), and to look for a more streamlines approach for the LCP to give them a clear role and secure funding.
- The national planning framework takes forward spatial aspects and sets out a strategy for long-term development. At present certain coastal sites are singled out for their development potential and are subject to all environmental legislation. It would support sustainable development at the coast if coasts are recognised as particular areas, deserving special attention not only for development, but also for natural and social potentials at the coast (principle 8).

#### d. Analysis North-Holland, The Netherlands

##### Positive aspects in the approach taken in the SUSCOD project:

###### Principle 1: Overall perspective

- Opportunities for **nature and coastal tourism** are considered. The approach is hence wider than purely one sector, but considers a **holistic** position, also **geographical**. The coastal towns are not considered as an isolated entity and the three project elements are linked to each other.
- Vertical integration (= between authority levels) is foreseen (except for the link with the national level).
- There is an **overall vision** for the area (gebiedsvisie). Local authorities are given guidelines based on this vision.
- The wider context with **surroundings** and **big cities** is taken into account.
- The municipality functions as a “**one-stop-shop**” for all questions concerning water and coastal policy. The municipality will dispatch to the authorised departments. This makes it easier for the stakeholders to address their questions.

###### Principle 2: Long-term perspective

- Coastal protection is considered in the **spatial structure plans**.

###### Principle 6: Involving all parties

- **Informal** as well as formal consultation is used.
- There is close collaboration with stakeholders. All relevant stakeholders are involved (coastal zone residents, local,

regional, national governments, NGO, Private business sectors)

- There is a feedback mechanism for bringing the main discussions points back to the public.
- Bottom-up initiatives are linked to concrete projects, but not actively stimulated.
- **NGO's** are involved as full partners in the process and help with the monitoring.

###### Principle 7: involvement of relevant administrative bodies

- Involvement of local and regional governments, but not the national level.
- Communication links for improved horizontal and vertical coordination have been established; but the effectiveness is not known.
- Establishment of the **POK** (*Provinciaal Overlegorgaan Kust*/ provincial coastal deliberative body) in which the province, Waterboards, nature trusts, coastal municipalities all have a say.

##### Room for improvement:

###### 1) Suggestions by the project partner:

- The province wishes to have a **more integral and holistic approach** which crosses different sectors (nature, recreation, tourism, urban development, spatial planning, water management, etc. ). This is an area that can be developed further and improved. More insight and a comprehensive overview is needed in all aspects influencing coastal management. Currently, the processes



are very slow and advance with difficulties.

- Main obstacles that need to be tackled to apply ICZM:
  - Complex structure of authority/jurisdiction. Relationship between local (Waterboards, municipalities), regional (Province) and national bodies.
  - Sectoral flow of funds (from national government), no possibilities for funding integrated initiatives. Different Ministries fund different aspects.
  - General lack of funds for certain aspects of ICZM (recreation tourism and spatial quality)
  - Contradicting interests of different stakeholders
  - EU works top down, ICZM has not gotten to the real work floor yet.
- Unconsciously ICZM is practiced relatively well. However, this is more a by-product of the variety in stakeholders and intensive consultation process. It is important that ICZM becomes a conscious and aware decision.

## 2) Suggestions by the Coordination centre on ICZM:

- The focus in the ICZM approach is mainly on the land side of the coast, and the **marine environment is not taken into account**. The land-sea (untill -20 m NAP-Nieuw Amsterdams Peil) interface is considered by the National bodies (Dienst Noordzee, Rijkswaterstaat). As Marine Spatial Planning is becoming more and more important, MSP should be considered as an integral part of the ICZM approach, and hence the marine environment needs to be part of the vision for ICZM (principle 1).
- The goals are set only from a coastal defence point of view (safety level) , but also for social, ecological and economical goals need to be considered as well (principle 1). **Setting goals together with other sectors** such as nature, tourism would improve the integrated character of the plan (principle 3).
- The coastal protection matters are well described and monitored, but **social, ecological and economical aspects** are studied to a much lesser extent and not monitored. The monitoring should also take a holistic approach (principle 3).
- Natural processes have been taken into account mainly in terms of erosion, but this aspect could be worked out in a more integrated way e.g. also looking at **natural processes** in dune areas, natural developments of beaches (principle 5).
- **Measuring the effectiveness** of the informal and formal consultation and coordination mechanisms could lead to an optimisation of the consultation process (principle 7).
- Several **coordination structures** exist, but none of them have ICZM as a key task. The ICZM Recommendation is not “in the hart” of the administrations. (principle 7)
- There are good sectoral reports, but **no integration mechanism** or harmonisation between them.
- The national level does not support the provincial level in their ICZM work, although the provinces make good efforts to apply the ICZM principles. There is no contact or involvement at all between the national Dutch ICZM representative and the provinces who are actually implementing ICZM. An **ICZM platform** between the provinces and the national level could be a good starting point to start the dialogue.

## e. Analysis Nordenham, Germany

### Positive aspects in the approach taken in the SUSCOD project:

#### Principle 6: Involving all parties

- In the spatial planning procedure, the participation of the so-called “representatives of public concern” (in German: Träger öffentlicher Belange) has to be organised. This offers opportunities for the public to voice their concerns.

#### Principle 7: involvement of relevant administrative bodies

- Although there is no formal link between spatial planning and ICZM, as ICZM is no formal instrument in Germany, the Lower Saxony State Regional Planning Programme (this is a legal instrument) includes the official advice to apply ICZM. This advice is binding all regional and local self-governing entities, i.e. the counties (in German: Kreise) and the municipalities (in German: Gemeinden).

### Room for improvement:

#### 1) Problems mentioned by the project partner:

- Lack of face-to-face relations to other decision makers, e.g. in neighbouring municipalities or related authorities
- The fear of the participation of other authorities or of the general public in a premature planning process.
- The general problem of all the legally forced participation at present is that this participation takes place at the end of a planning procedure and not at the beginning.
- The additional work by following the rules of ICZM, i.e. beyond the legally defined procedure without knowing whether there will be advantages at the end.
- In general, the uncertainty whether the application of ICZM will bring better results.
- Many decision makers are educated to work sectorally and do not think and work holistically.
- The lack of proper instructions in ICZM by higher administrative levels.

#### 2) Suggestions by the Coordination centre on ICZM:

- The economic activities, further development to tackle social deprivation in Nordenham and improvement of the quality of live are the main driver for the pilot projects in Nordenham. The economic aspects have been studied very well. In the light of an integrated approach, it is advisable to take into account the social and ecological impacts right from the start of the development process, also through informal consultations and not only to consider them in the formal (legally binding) procedure. As starting point an inventory of potential conflicts and expected impacts -positive as well as negative- could guide the discussions (principle 1 & 2).
- ICZM should focus on the land side of the coast, the land-sea interface and on the marine area. The pilot projects can have an impact on all these areas. It is therefore advised that the “Regional Planning Programme” (only considering the land side of the coast, ending at the high water mark)

and the “Federal State Planning Programme” (considering the marine environment up to the national boundary = outer boundary of the Territorial sea) would be looked at jointly. The authorities should consult each other for their future plans. (principle 1)

At present already several important relations between sea and land and vice-versa are already regulated by sectoral laws, e.g. the direct discharge of waste water into the sea, the pumping of surface water from the land into the sea, the disturbance of the land by the noise of boats and vessels. Also for National park and Biosphere Reserves the rules look at impacts both on land and at sea.

- The precautionary principle will need to be taken into account, as some of the project areas are part of the Nature 2000 network. But even without the legal obligation, a voluntary ICZM approach would look at ecological effects from the very start of the planning phase. An Environmental Impact Assessment (EIA) is a good tool to look at environmental damage (cf. Belgian case).
- To verify the theoretical assumptions within the pilot projects (e.g. on the increased attractiveness of Nordenham and the settling of new knowledge-based services), it is advised to follow an active and participatory approach with the involved parties (inhabitants, tourists, services,...). A stakeholder analysis at the beginning of the project is recommended (principle 2).
- The scientific monitoring is only foreseen within the SUSCOD project, but no longer term monitoring mechanism is in place. In order to guarantee an efficient follow-up of the effects, monitoring should be a part of the ICZM process, starting before the developments take place and continuing after the works have been finished. The monitoring should be approached as holistic as possible, looking at economical aspects (e.g. employment, number of new companies and services, number of beach visitors, number of tourists), social aspects (e.g. number of inhabitants, quality of the housing and public infrastructure, appreciation of the public environment) and ecological aspects (e.g. area of protected land, number of protected species). Sustainability indicators or coastal atlases can support a holistic state-of-the-coast reporting and monitoring process (principle 3).
- The process of the project is not based on an eco-system approach. In order to protect the new developments, coastal defence constructions will have to be put in place. It is recommended to look at the carrying capacity of the coastal system in Nordenham. There is a big pressure for further development on the coastal zone. How will this ecosystem and the people living here cope with the plans for extra development? These are very difficult choices, which need to be carefully considered from an integrated perspective. This need to make human activities more environmentally friendly, socially responsible and economically sound in the long run (principle 5).
- In order to overcome conflicts, it is recommended to start an open participation process with the (main) stakeholders in an early phase, and not to wait until the legal/formal

procedures. Solutions could be looked at together and lead to a potentially bigger (public) support for the project. Hence, informal consultation can complement the formal consultation procedure. (principle 6).

- The decision-making responsibilities are clear in the Nordenham pilot projects, and the different departments and authority levels consult each other based on formal planning and development procedures. Informal consultation would be useful to increase the integrated character of the development and to give an insight in the interrelation between sector related initiatives (principle 7).
- The official advice to apply ICZM as stated in the Lower Saxony State Regional Planning Programme (legal instrument) is interesting as this advice is binding to all regional and local self-governing entities, i.e. the counties (in German: Kreise) and the municipalities (in German: Gemeinden). However, guidance on how to apply ICZM is lacking. Therefore “regions” could have an important role in supporting the counties and the municipalities (Principle 7).
- Because of the specificity of the coastal zone, and in order to stimulate a sustainable approach, this zone could be considered as a distinct and separate entity in the spatial development plans, looking at opportunities in an integrated way (good practice in the Netherlands => “Structuurvisie”) (principle 7).
- The regional and local authorities in Nordenham are just starting with their ICZM approach, so this field is quite new for them. It is necessary to support and involve all relevant administrative bodies at national, regional and local level. Between them appropriate links should be established or maintained, to improve coordination of the various existing policies. Partnership with and between regional and local authorities should be applied when appropriate (principle 7).
- The approach in Nordenham is mainly driven by spatial planning instruments. A combination of formal and informal instruments such as participation, consultation and monitoring can support the ICZM process.
- If allowing new buildings in the fore-dike zone, which is not protected by coastal defence measures and is hence a flood risk zone, is a sustainable choice. Building in these zones is economically interesting for companies (lower price for purchase of ground, etc.), but the risk economically, socially and ecologically is much higher because of flood risk. These development choices are surprising, considering the increased flood risk due to climate change and sea level rise. From a flood risk perspective and an integrated approach these zones are more and more designed as buffer zones, allowing managed retreat and creating new chances for nature development as side effect.
- The new developments in the fore-dike zone and building activities in the dike zone will have an important visual impact, for the inhabitants and for tourism. It is advisable to inform and involve the inhabitants, in order to take into account their concerns.
- If the approach for the sandy beach of Nordenham is evaluated positively, other beach zones with similar structures will be managed accordingly. This will not be limited to the present Beach Zone of Nordenham but as



well to zones south of Nordenham and also to the opposite side of the Weser Estuary. There is however no formal agreement on the financing of the other beach zones. The federal state has not been involved so far. However the municipalities count on financial support by the federal state if the pilot project proves to be successful. The pilot project is only possible due to the 50% European co-financing, but there is no engagement for financing the solution on other beaches if the approach is evaluated positively. The finance aspect needs to be part of a long term vision.

- The ecological effects of the sandy beaches pilot project have not been studied so far. The argument of the experts in the City of Nordenham in this preparatory time has been that the intended exchange of silt and sand will bring back the original situation, so that at least at present no detailed pre-analysis has been done. In an ICZM approach it is advised to monitor the ecological effects at different stages: before, during and after the works.

#### f. Analysis Essex, England

*Preliminary note: the pilot projects described for Essex have not been implemented at the time of this analysis. The analysis is done based on the intentions for the approach, and using the information available, recognising it is sometimes difficult as more details on the implementation are not present. However, the implementation phase will have to prove if the ICZM approach is accepted by all and if it works. A follow-up analysis after implementation is advised.*

#### Positive aspects in the approach taken in the SUSCOD project:

##### **Principle 1: Overall perspective:**

- One outcome of the project is the development of a **coherent integrated strategy** for the coast, building on sectoral input. This will promote the understanding of the importance of integration.
- The importance of all sectors and actors is clearly

recognised in the approach.

- **Local pilot projects** will be linked to the overall integrated strategy, which makes it tangible and real for the stakeholders and wider public.
- The link between land and sea (land-sea interface) is recognised.

##### **Principle 2: Long-term perspective**

- The developments in Harwich will most likely be through private investment. Many of the elements of the waterfront offer (including the Marina) will be possible through a recent planning application and the studies to be undertaken using the SUSCOD finance will show the viability of such developments.

##### **Principle 6: Involving all parties**

- The integrated coastal strategy will be **developed by the stakeholders**. This means they will have an important and active role in the process, and that they will feel ownership for the final strategy.
- The visitor centre in Walton on the Naze will be used as an education and communication centre, **communicating** the wider message of the **need for integrated management** to the **tourist** and explaining the important choices which have to be made in term of coastal defence.
- The definition of “coastal zone” will be decided through the Essex Coastal Forum and will be **formally adopted** by all partners. This is an important step, because discussions regarding ICZM often strand with the discussion on the determination of “coastal zone”.

##### **Principle 7: Involvement of relevant administrative bodies**

- The learning from the SUSCOD project will be **shared** both regionally and nationally.

##### **Principle 8: Combination of instruments**

- **Different strategies** are used to support coastal zone management: shoreline management plans, estuary and catchment plans, district planning documents, harbour strategies, strategic country plans.

#### **Room for improvement:**

##### **1) Suggestions by Coordination centre:**

- As mentioned above, the definition of “coastal zone” will be decided through the Essex Coastal Forum. Although it is very important to have a common understanding of the “coastal zone” and to agree upon a definition, the discussion should not dominate or slow down the ICZM process (there are examples of projects where 3 years of discussion on “coastal zone” lead to no conclusion or progress at all). The partnership can build on existing definition e.g. by the European Commission. Also, it is advisable to work with a flexible definition, according to the theme/topic dealt with. For some themes the area considered will be different then for others (e.g. agriculture in the coastal zone versus recreational fisheries) (principle 1 & 7).
- The goals and targets for the project elements have not yet been defined. This should be done in an early phase, in



order to have clarity about the process and the role of all actors (principle 2).

- Monitoring programmes should be set up, for the different phases of the process: start-up, during the implementation phase and after implementation (eg marina). “Monitoring” should be interpreted in the broad sense, going from monitoring the process, monitoring conflicts, scientific monitoring for impacts on wildlife when developing the visitor centre or marina, monitoring success etc. (principle 2).
- In terms of long-term planning, funds for the marina and for building the visitor centre need to be guaranteed. For the visitor centre, some funds have already been raised and further fundraising is underway. Some interest from national funding bodies has been expressed, but they are reliant upon the plans being drawn up and options considered. More rigorous funding opportunities will therefore need to be pursued (principle 2).
- The Essex Coastal Partnership will be established through the SUSCOD project. Important preparatory steps are: stakeholder analysis, description of role and responsibilities (now and within the partnership later) and competencies (principle 6) .
- To gain an insight in the different aspects related to the development of the marina in Harwich and to take an integrated approach, several tools are available which have been used by other SUSCOD partners such as a social-cost-benefit analysis and a strategic environmental impact assessment. Another tool in the light of the development of a wind port on the East coast of England is a Seascape assessment, such as applied in Dorset within the C-Scope project ([www.cscope.eu](http://www.cscope.eu)). (principle 8)

## g. Analysis Zealand, Denmark

### Positive aspects in the approach taken in the SUSCOD project:

#### Principle 1: Overall perspective

- As a starting point within the SUSCOD project, the **background document** was produced by experts. It provides an insight in the situation for coastal zone management, describes the legislation and planning frameworks and highlights the important coastal issues and challenges for the future.
- Zealand will conduct a **regional analysis** for the coast, which will form the basis for the SUSCOD pilot projects<sup>2</sup>
- In the **regional analysis**, the link with the hinterland will be considered. This is also a specific point of attention in the case study of Lolland.
- The **Planning Act** is an important framework for planning in the coastal zone. The regulatory system that governs land areas and land-based activities is characterized by powers vested in the local authorities and by a comprehensive planning system embedded in the **Planning Act**. The most important laws for protection of the coastal land areas are the Planning Act and the Nature Protection Act. Planning for new recreational facilities, urban areas etc. requires a specific planning-related or functional justification.

#### Principle 6: Involving all parties

- **Public participation** is a central element of the Danish Planning Act, but not a characteristic of other parts of environmental legislation or of other regulatory systems, e.g. at sea. In the planning system coastal issues have a fairly high degree of public attention and involved parties and citizens normally participate actively in environmental impact assessment and nature management projects.

<sup>2</sup> The regional analysis will highlight regional ICZM challenges in relation to geography Zealand 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 seawater increases. It will also look at how ICZM prospectively can be incorporated in planning (municipal, waste water, emergency plans, etc..)

## Room for improvement:

### 1) Suggestions by project partner:

- Principle 1: within existing urban areas the visual interference with coastal areas should be given particular attention. The Planning Act does not, however, require separate coastal zone planning. Coastal protection considerations should be integrated into regional, municipal and local planning.
- Principle 4: 5 challenges for ICZM have been identified. The ICZM challenge (I) is to better understand the different coastal environments in the region. Classification of the coastal areas/shorelines needs to incorporate mapping of the morphologies and process parameters derived from waves and surge levels (tides are not an item in the Region Sjælland). Adaptation to climatic change is a step further.
  - Firstly, the question arises how well we can estimate our risks. There are a lot of uncertainties involved (estimating the sea level rise, estimating the flooding frequency, estimating the amount of extreme events, etc.) and the prediction of risks has large error-bars.
  - Secondly, we can ask ourselves what kind of risk we will accept before we take some interventions/measures. This acceptance level can be different along the shores, depending on for example the economic importance of the area under consideration. In the Netherlands it is for example common praxis to differentiate in flooding risks: high population density and a lot of economic valuable investments urge a higher acceptance level and a lower risk.
  - Thirdly, we can even differentiate in management strategy for a specific coastal area, even if we hardly face a spatial variability in the risk for erosion and coastal flooding. Especially the low-lying areas (Figure 6.3) at the exposed shorelines will be vulnerable and will have significant increase in coastal erosion rates (Figure 6.2) and poldered areas, like those along the southern shores of Lolland and Falster will become hot spots (Figure 8.1). These latter areas do already have a lot of urban housing, summer cottages (on Falster) and infrastructure that needs to be protected. Strategies based on a withdrawal of activities near the present shoreline are not a realistic option. However, the measures to protect the coastal areas against flooding can differ in the region. The double coast in the southern part of Sjælland (Figure 5.6) is also a low-lying area, but differs from the south coast of Lolland and Falster because there is hardly any infrastructure along the outer shores (Figure 8.2). A dynamic evolution of this area as presented in Figure 5.7 will probably intensify and move the outer area further inshore. Strategies based on withdrawal or a fully autonomous dynamic will be acceptable. This differentiation in management strategy is also implemented in the coastal law of the Netherlands.
  - Finally, we can ask ourselves if we need to shift our management strategy in the future if for instance the sea level continues to rise. It could be possible to use traditional measures in the first period, but how long and when do we need to change (economic and technical question)?

The ICZM challenge (II) is to estimate the risk for flooding in the Region during an increasing sea-level rise. This can be done by using extreme water level statistics for the area and increasing the extreme water level curve by a predefined sea-level rate.

The ICZM challenge (III) is to map the population density and activities in and around the areas with a high flooding risk. This can be done in a GIS type of approach along the shores of Region Sjælland where activities or population densities are summarized (see examples in Figures 8.1 and 8.2). This leads to spatial presentation of valuable areas. The ICZM challenge (IV) could be to choose the measure to cope with increased risks for flooding and erosion. Existing measures or management strategies might probably be inadequate if the risks are rapidly increasing.

The ICZM challenge (V) is the discussion on who is paying the bill. Coastal protection bills in Region Sjælland are now paid by private land owners and municipalities. This principle is valid if you protect the coast against erosion. However, protection against flooding may involve a larger amount of people. Coastal protection in other countries with large risks for flooding, like the Netherlands, is paid directly by the national government.

- Principle 5: Integrated coastal zone management has recently undergone a couple of changes in Denmark and Region Sjælland:
  1. The strategic planning was traditionally executed at the regional level ('amter' with their regional plans) and this shifted towards the national level in 2007. This means that the strategy for ICZM is now coming from a limited amount of Environmental Centers and the Ministry of Environment. The municipalities, creating action plans, and the strategic planners on national level needs to adapt to this new situation;
  2. Some new EU directives are active at the moment (water directive and flooding directive) and these directives need to be implemented in Danish ICZM. The flooding directive urges Denmark to come with an estimation and assessment of the risks for flooding. Their potential risk areas must be defined in 2011 and the quantification of the flooding potential in terms of nature- and economic losses and people involved starts in 2013. This means that the municipalities in the Region Sjælland have to define action plans (see Planning Act) and that they have to consider the impact of climate change on coastal erosion and coastal flooding in their area. It is necessary to have a good idea of the present day coastal environments with its dominating coastal processes before the impact on climate change on the rate of coastal erosion and the risk for flooding can be estimated, and before appropriated measures can be taken.

The different coastal environments will not uniformly respond and will show different risks for erosion and coastal flooding, even under the same rate of sea level change. This can be due to the difference in substrate (different geomorphology), but also to spatial variability

in present day processes. A constant number for the rate of sea-level change in the region might for instance cause a differentiation in the extreme water level statistics. Besides, the sediment budgets and morphologic evolution of the coastal areas in embayments close to coastal cliffs of glaciated origin strongly depend on the availability of sediments by cliff erosion. Stabilization of the toe of the cliffs using hard constructions may have disastrous effects on these shores, leading to sediment starvation and the disappearance of beaches, spits and barrier islands.

- Principle 6: Today the overall picture is that the State works out strategies and the municipalities implement these strategies. Perhaps a more "bottom up" approach would be appropriate. There is need to understand and work in harmony with natural and cultural processes operating at the coast. Lengthy research projects are not always needed to provide the understanding necessary to address every management issue.
- Principle 8: There are currently no formally trained coastal managers with the local authority. This needs to be addressed in the future.

## 2) Suggestions by Coordination centre

- Sea-based activities are mainly regulated by sectoral laws, e.g. the Marine Environment Protection Act, the Raw Materials Act, the Harbour Act and the Fishery Act. The Marine Management organisation in UK could serve as an example for integration.

## 3.3 Overview and summary of positive aspects in the partner's ICZM approach.

The overview alongside specifically mentions areas where partners take an **innovative approach**, for which exchange of experience with the other partners is **most relevant**. This DOES NOT mean that the partners are not performing well on the other ICZM principles. More details on (also other) good practice are provided in the partner reports (see 3.2).

ICZM Principle/ Partner	Flanders (Belgium)	Nordenham (Germany)	
1. Overall perspective (thematic & geographic)	Strategic EIA conducted. Thorough communication & participation process towards different target groups.		
2. Long-term perspective	Risk analysis for process set up. New indicator developed to monitor goals.		
3. Sound scientific basis	Social-cost benefit analysis conducted.		
4. Local specificity	Visual impact and multifunctional use of coastal defence considered per location.		
5. Working with natural processes			
6. Involving all parties	Combination of communication tools used. Options for shared responsibility considered.		
7. Involvement of relevant administrative bodies	ICZM Coordination centre established to support coastal stakeholders with ICZM.	The Lower Saxony State Regional Planning Programme (legal and binding instrument) includes the official advice to apply ICZM.	
8. Combination of instruments	(sustainability) indicators used to assess state of the coast.		

	Bohuslän (Sweden)	North-Holland (Nederland)	Fife (Scotland, UK)	Essex (England, UK)	Sealand (Denmark)
	Spatial planning approach used.	Approach exceeds local interest of coastal towns and makes link to hinterland and big cities.	The pilot fits within the spatial development plan. Linking planning on land and at sea will be issued through Marine Bill and the land use plans.	A coherent integrated strategy will be developed. Tangible local projects will be linked to the overall strategy.	Risk and value mapping in urban communities will form the basis for future planning response plans for coastal protection and preparedness. Overview of the region's overall planning.
	Strategy developed with goals, signed agreements and concrete action plan present.	Coastal protection is part of the spatial structure plans.	Long term strategies will be developed for all aspects of the pilot.		Method Development. Case results for future planning and action priorities. Coastal Plan prepared by a 50 year horizon.
			Specific outputs established for the pilot project which are measurable.		Value Mapping Method developed.
	Second home owners considered as specific target group.		The specific challenges for different segments of the coastal zone have been identified.		Risk and value identified for a number of specific coastal areas
			The intention to use the ecosystem approach has been officially endorsed by the West Sands Partnership.		
		NGO's are involved as full partners in the process and help with the monitoring	Combination of communication tools used. Iterative process for participation present.	Integrated strategy to be developed by stakeholders, giving them a responsibility and active role.	
	Active involvement of politicians & municipalities in the process.	POK (Provinciaal Overlegorgaan Kust/ provincial coastal deliberative body) established.	Involvement of the estuary fora proves useful for cooperation, networking and involving a wide range of players in coastal management.		Intra-municipal cooperation initiated. ICZM group. Holistic planning
	Development (spatial) plan published, with specific focus on the coast.	The municipality functions as a "one-stop-shop" for all questions concerning water and coastal policy.	Management actions defined and agreements are in place: confirmed engagement of involved parties. New instruments (such as marine bill) are used. The Marine Bill has the intention to simplify and streamline existing legislation for marine activities. Enforcement possible through marine bill. Shoreline management plan (SMP) used as instrument for ICZM. Spatial planning is used for conflict analysis and resolution. ICZM is mentioned as an approach in the Policy memorandum.		Existing models analyzed together. Intra municipal ICZM group established. Integrated planning, municipal plan, coastal plan and climate plan. holistic planning

# 04



# Conclusions of the ICZM analysis

## 4.1 Conclusions per principle

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From the overview table in 3.3 and the partner analysis reports following can be concluded for the SUSCOD project:

### **a. Overall perspective: integrated versus sectoral starting position.**

For some partners, the focus of their case was on one sector (eg coastal defence), but other sectors were involved one way or the other. This is the more traditional way of working, where one sector takes an initiative and invites other sectors to be involved.

Some partners (Fife, North-Holland, Bohuslän) took or plan to take an integrated approach from the start, mainly by using a spatial planning approach.

It is difficult to evaluate whether or not one approach leads to a better result than the other. It would be interesting to evaluate this aspect at the end of the SUSCOD project, after all partners have implemented their case studies.

It is useful to show the economic impact and benefits of an ICZM approach. An economic impact study (as used in Fife) is a useful instrument to show the added value of ICZM.

The overview shows that the SUSCOD partners are using several instruments to gain an overall perspective in ICZM, such as: strategic EIA, spatial planning, economic benefit study.

### **b. Long-term perspective: no hard guarantees**

Not all partners have guarantees for long-term prospects for ICZM. It is an important point of attention for the SUSCOD partners to find ways for long-term planning.

### **c. Sound-scientific basis: combine research with bottom-up initiatives.**

Most partners have got reliable studies and reports supporting their pilots. Some are purely based on scientific research, others are driven by stakeholder involvement and bottom-up initiatives. Both approaches are useful in support of ICZM, and preferably both should be combined.

#### **d. Local specificity: a natural thing to do.**

As the SUSCOD partners started from a concrete pilot project, local specificity is obviously present. During the analysis, it proved useful to have the pilot project in mind when evaluating the “ICZM-score”. This works better than evaluating ICZM in a country in general.

#### **e. Working with natural processes: need to step out of the box.**

From the analysis it was clear that this principle is very differently interpreted by different people, according to their background. An engineer will think about waves and currents, a geomorphologist will want to consider sedimentation and sand transport, a biologist will look at dune formation and changes for colonisation by plants and animals. None of the partners looked at this principle from different angles.

*Need identified for SUSCOD Tool: how to deal with natural processes?*

#### **f. Involving all parties: from “have to” towards “come and join” approach.**

All SUSCOD partners involve other parties in their process. However, some only do so in a traditional way, “because they have to” due to existing regulations. This is not an advisable option. Others have taken voluntary initiatives to set up informal consultation bodies, to communicate to a wide range of stakeholders and to even actively involve the stakeholders in monitoring and taking responsibility. Within ICZM, stakeholders should be involved from an early phase, and in a transparent way. Giving stakeholders insight in and ownership of the process, will benefit the integrated approach.

The tradition of the different countries plays an important role. For instance in the United Kingdom, coastal partnerships have been active since beginning of the 1990-ies. These type of partnerships do not exist in the other SUSCOD regions, but other types of structures have been established.

#### **g. Involvement of relevant administrative bodies: different ways of involvement tested.**

All SUSCOD partners have involved other administrations in their pilot project. Sometimes through formal procedures (eg EIA, permissions), but as with the involvement of stakeholders, new and voluntary ways of involvement have been mentioned, ranging from involving partnerships and fora, to politicians and local authorities.

#### **h. A combination of instruments: naturally applied.**

For the implementation of the cases, existing instruments fit for the purpose of the partner’s case (eg strengthening the coastal defence) are used. In an ICZM approach, a combination of instruments is preferred. Most of the partners have applied more than one instrument, sometime without realising it, but because it was logical in terms of good governance.

## **4.2 General conclusions on ICZM**

From the questionnaires and partner analysis reports general conclusions on ICZM could be drawn:

#### **a. Awareness on ICZM: ICZM is often applied, without necessarily recognising it.**

For some of the SUSCOD partners ICZM is a well known concept, and they have been working with the 8 ICZM principles before. For others, ICZM is a new way of working, although some partners are applying the principles already without knowing they are considered as an ICZM approach. The questionnaire hence proved useful for them to learn more about the concept and implementation of ICZM.

In essence, ICZM is a continues process that should lead to a sustainable development of the coast (see definition in 2.1).

At the SUSCOD project management meetings, the principles were discussed with all partners together, as well as during bilateral meeting to zoom in on specific needs and questions.

Working with the 8 ICZM principles was considered to be a useful guidance tool and showed the partners in a more practical way what ICZM is about.

The same conclusion about the usefulness of the principles was drawn by the European Commission as a result of the evaluation of the implementation of ICZM in Europe (Report to the European Commission and the council: an Evaluation of ICZM in Europe. COM (2007) 308 final).

The European Commission concluded that a key achievement of the EU ICZM Recommendation has been to codify a common set of principles that should underlie sound coastal

planning and management. While the evaluation confirms the relevance of these ICZM principles, the implementation of the EU ICZM Recommendation also reveals varying interpretations and understanding of ICZM across Europe. Therefore, it was considered really helpful to discuss the principles together with all SUSCOD partners.

To foster a more coherent and effective implementation of ICZM, the principles need to be made more operational and better communicated. The SUSCOD project is very helpful in this respect, as the ICZM analysis is preformed on concrete cases of each of the partners.

The analysis shows that because of the diversity of partners areas, the different nature of the cases, along with the different administrative systems between and within Member States, they are no readily available one-size-fits-all solutions.

Rather there is a need for a more systematic comparative analysis and increased exchange of experiences in Europe. The SUSCOD Tool developed within SUSCOD should contribute to this.

#### **b. Spatial planning and ICZM: a useful link, not often made.**

Spatial Planning is not commonly used as a framework for implementing ICZM, although it is a good concept where integration and balancing uses are the fundamental principles. Cf. one of the earliest definitions from the European Regional/*Spatial Planning* Charter (often called the "Torremolinos Charter"), adopted in 1983 by the European Conference of Ministers responsible for Regional Planning (CEMAT): "Regional/*spatial planning* gives geographical expression to the economic, social, cultural and ecological policies of society. It is at the same time a scientific discipline, an administrative technique and a policy developed as an interdisciplinary and comprehensive approach directed towards a balanced regional development and the physical organisation of space according to an overall strategy."

Only in Sweden and Germany, a formal link between spatial planning and ICZM has been mentioned. However, the Swedish partner points out that the link needs to be renewed and modified for implementation in this project. In Lower Saxony the State Regional Planning Programme (which is a legal instrument) includes the official advice to apply ICZM. This advice is binding all regional and local self-governing entities, i.e. the counties (in German: Kreise) and the municipalities (in German: Gemeinden). In Flanders there are attempts to engage the Flemish spatial planning department in ICZM, but the latter has not been actively involved.

Besides spatial planning also development and application procedures should be able to stimulate integration between functions and sectors. The major question is if the current framework allows an integrated approach. Besides integration between sectors, also integration across the land-

sea interface is a real challenge.

#### **c. Guidelines to advise planning authorities on appropriate uses of the coastal zone: no formal but rather informal arrangements in place.**

In none of the partner regions, there is formal ICZM guidance advising the planning authorities on appropriate use of the coastal zone.

However, some partners mention informal guidance documents or instruments to stimulate ICZM. In Sweden, an informal guide has been produced within an ICZM project. In Flanders, a Coordination Centre on ICZM has been established. One of its tasks is to promote and stimulate ICZM. For this, several initiatives have been set up, amongst others an award scheme for sustainable coastal projects.

#### **d. The sea side of ICZM and Marine Spatial Planning (MSP): a new, but promising link to include the "wet" part in ICZM.**

As activities on the land side of the coast potentially have an effect on the sea side, and vice versa, ICZM should also include the sea, with a focus on the land-sea interface. The pilot projects of all of the partners focus mainly on the land side of the coast. Most of the partners do recognise the fact that the sea should be taken into consideration, and links will be made indirectly eg by linking up with other projects and initiatives.

Marine Spatial Planning (MSP) is still in an early phase in most partner regions, and hence so are the links to ICZM. In Scotland the Marine Bill is promising for ICZM and linking land planning to planning in the marine environment.

#### **e. ICZM and the link with the hinterland: a more established and recognised link.**

The link between the immediate coastal town and the hinterland within an ICZM approach, is much more considered or recognised by the partners than the link with the sea. Probably one of the main reasons for this is that the same authorities are responsible for that geographical area, whereas the management of the marine environment is mostly a federal responsibility.

#### **f. Training in and for sustainability**

The question was raised whether planners and other experts involved in coastal planning have got sufficient training in "integrated" working and making sustainable choices. Sustainability and how to make the best decisions should be part of the training curriculum.

#### **g. Use the existing legal frameworks**

Existing (European) legislation can help to implement the ICZM objectives. The Water framework Directive, the Flood Directive, the Marine Strategy Framework Directive and the Maritime Policy should be linked to ICZM. The strategies under these Directives should be developed and implemented in coherence with ICZM strategies and instruments.

# 05



# Towards a SUSCOD

## 5.1 Opportunities for sharing experience between partners

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The table in 3.3. gives an overview of areas where specific SUSCOD partners take an **innovative approach**, for which exchange of experience with the other partners is **most relevant**.

### a. Overall perspective

When the starting position is sectoral, a **strategic EIA** (Flanders) is a good **existing instrument** to analyse the interdependence of issues and to study the impact of the project on other aspects such as environment, nature, landscape, social living environment, etc.

Another well know instrument in support of taking an overall perspective is **spatial planning** (Fife, North-Holland, Bohuslän), although ICZM is still often not mentioned in that context.

### b. Long-term perspective

Guarantees for a long-term prospects for ICZM can take different forms: signed agreements, action plans (Bohuslän), a follow-up through risk analysis or indicators (Flanders).

### c. Sound-scientific basis

It is important to take into account the social effects of a project, an aspect often forgotten and not easy to grab. A **social-cost benefit analysis** (Flanders) is a useful tool, and can help making the right choices.

### d. Local specificity.

Although the cases are already specifically linked to a certain location, even within the case further specific characteristic such as target audience, visual impact and opportunities for multifunctional use can be identified. This will deliver targeted solutions for local problems on a small scale.

### e. Working with natural processes

There is obviously a need for further clarification on this principle, as the natural processes are all considered from a sectoral viewpoint.

### f. Involving all parties

To reach a successful involvement of all parties, it is advisable to use a **combination of communication instruments**

(e.g. brochures, information and consultations meetings, exhibitions, press) in order to reach the different target groups. For a long-term involvement, parties could be given a **specific role** (eg in monitoring, communicating) and **responsibility** in the process.

#### g. Involvement of relevant administrative bodies

Involvement of relevant administrative bodies can take different forms, and it will often depend on the culture in a country or region how this is structured.

In Scotland where stakeholder participation is strong, coastal & estuary partnerships are useful structures. In the Netherlands and Flanders a collaboration between administrations has been established (Provincial coastal deliberative body and the Coordination centre on ICZM, respectively). In Nordenham involvement is stimulated through an official advice to implement ICZM.

Besides involving administrations and stakeholders, politicians are an important group to have on-board. This was recognised in the Swedish case.

#### h. A combination of instruments

Where some instruments are rather obvious or compulsory for the activity envisaged (eg permits, public consultation, EIA), some instruments are specific for the coast and can help monitoring and support ICZM.

Examples applied by some partners are: sustainability indicators for the coast (Flanders), the marine spatial plan and shoreline management plans (Fife).

Coastal policies can become very complicated, the initiative of North-Holland to establish a one-stop-shop for all questions concerning water and coastal policy is a good example in supporting the stakeholders to find their way in the complexity of coastal management.

## 5.2 Instruments for ICZM

### a. Inventory of instruments used by the partners:

The following instruments, not necessarily linked to ICZM, have been mentioned and used by the SUSCOD partners:

- Communication strategy and a variety of communication tools (consultation meetings, leaflets, exhibitions, etc.)
- (Strategic) Environmental Impact Assessment
- Social Cost-benefit analysis
- Coastal sustainability indicators
- Stakeholder analysis
- Marine Bill
- Spatial Planning
- Shoreline management plans
- Award scheme for sustainable projects
- Coordinating bodies/structures for ICZM
- Signed agreements
- Risk register
- Risk Analysis (looking at different risks: flood, environmental, social,...)

### b. Instruments which could be of help to the partners

Below is a list non-limitative list of potential useful instruments for the partners which are not used at present (have not been mentioned in questionnaires):

- Conflict analysis
- Scenario building
- Common platform for data sharing
- Seascape assessment

Other instruments will be looked at when developing the SUSCOD.



### 5.3 Advise for the development and design of the SUSCOD (WP 4):

The 8 ICZM principles have obviously proved useful to learn about the ICZM process. During the discussion at the project management meeting, the partners expressed the need for an easy to understand and simple to use assistant, focussed on providing guidance for implementing ICZM, as well on a strategic level, as in concrete project. A “checklist” or “quality standard” was considered a useful way ahead.

The 8 principles could potentially be used to build and structure the assistant, with practical guidance per principle.

This report gives examples of innovative ways to implement the principles which have been used by the SUSCOD partners (see overview table in 3.2.) and points out the needs for the partners in support of their ICZM process (chapter 3). For the latter, it became clear that all partners need more guidance on how to achieve the long-term perspective for ICZM and how to interpret the natural processes in their cases. For the other principles, the SUSCOD partnership is an ideal platform for learning and exchange of experience. These experiences and good practices should be captured in the SUSCOD for sharing with other regions and coastal partners outside the SUSCOD group.

The following **keywords** have been mentioned by the SUSCOD partners, when asked to identify priorities for the project area:

- (Beach) tourism
- (coastal) action plan
- (coastal) strategy
- (sand) dune
- beach management
- Blue Flag beaches
- climate change
- coastal erosion
- coastal zone (development)
- communication (tools)
- estuary
- ICZM
- information
- infrastructure
- integrated approach
- Involved/engagement
- Natura 2000
- practical
- protection (measures)
- relevant- as resources are scarce so we all need to focus on the main priorities and issues within the field
- sea level rise
  - shoreline management (plans)
- spatial quality
- stakeholder (participation)
- sustainable development

These keywords are useful to keep in mind while developing the SUSCOD.

## Annex: template of questionnaire.

### Aim of the inventory

In this WP the present situation is analysed concerning the state of art of ICZM in the participating partner regions with a concrete focus on the implementation of ICZM principles in coastal development projects. This WP will be led by the Coastal Division of the Flemish Ministry of Transport and Public Works. The results will be discussed in a broader setting and will serve as essential input for WP's 4 to 8.

Activities: identification of issues to be analysed, inventory and analysis.

Results: state of the art report with the identification of issues, techniques, indicators etc. that could contribute to developing and designing the ICZM assistant (WP4).

The state of the art report will be produced with the input of the different partners. The analysis will be made with the information delivered by the partners.

If you feel that you can't answer the question from out the project but more from a region or country please indicate that in the question. For Example: (Country scale) In Belgian there is a spatial plan for the whole coast, (project scale) for the project there is no clear spatial plan for the area...

### Part 1: Setting the scene:

Describe your project within SUSCOD (the purpose of this question is to have a better view on what the vision and the goal of your project is about)

*This should be written in no more than 1000 words*

Define and describe what area you will use for filling in this questionnaire? This is for us very important to make a correct analyse. From which point of view will you fill in this questionnaire.

*This should be written in no more than 500 words*

List some specific properties of the project area under consideration. This could be useful for consistent implementation of the project in the ICZM-assistant:

*Can you describe your project in some key words?*

*Is it possible to dispose a map or shape file of the project area? Can you give the coordinates of your project area?*

*What is the current land use of your project? Do you have a map or shape file available of the current use?*

*Is there a future different land use foreseen? Do you have a map or shape file available of the future situation?*

*What is the geographical scale of your area?*

### Part 2: Eight Principles of Good ICZM

#### Principle 1:

A broad overall perspective (thematic and geographic) which will take into account the interdependence and disparity of natural systems and human activities with an impact on coastal areas.

*Basic question: Is there a holistic thematic and geographic perspective in the process or project?*

- 1) Description of the site (location, ecological values, social and economic context etc)

Included following sectors if relevant: fisheries and aquaculture, transport, energy, resource management, species and habitat protection, cultural heritage, employment, rural and urban development, tourism, recreation, industry, mining, waste management, agriculture education. Prioritise or explain which are the most important players.

*This should be written in no more than 600 words*

- 2) Is it possible to illustrate which sectors are involved by means of pie chart or other data? Do you have multiple spatial use maps available of the area?

*Pie chart:*

*Multiple spatial use (layers- maps):*

- 3) Define and describe which sectors have an influence or are influenced by your case study

*This should be written in no more than 600 words*

- 4) Questions

1. What is the geographical scale for implementation (International, National, Regional or Local) ?

*This should be written in no more than 300 words*

2. Is there a link with the Hinterland? If so, explain, What are the effects on the hinterland and have hinterland effects been taken into account? Describe briefly.

*This should be written in no more than 300 words*

3. Are processes that have a land-sea interface (from hinterland through coastal zone to the open sea) been considered? Describe these.

*This should be written in no more than 300 words*

**These questions above are asked, because we want to analyze:**

- Are neighbouring areas and themes considered?
- Are all important sectors been considered?

**Describe what you think that can be modified or improved in your project regarding this principle?**

*This should be written in no more than 500 words*

Do you want to add extra information?

### Principle 2:

A long-term perspective which will take into account the precautionary principle and the needs of present and future generations.

Basic question: Is there a long-term perspective envisaged?

#### 1) Questions

1. What is the time frame for the project/case-study?

*This should be written in no more than 300 words*

2. What is the budget of the project?

*This should be written in no more than 300 words*

3. What are the maintenance or development costs?

*This should be written in no more than 300 words*

4. Are the future directions (beyond the project) considered? Explain?

*This should be written in no more than 300 words*

5. Are there steppingstones determined in the project? What are these?

*This should be written in no more than 300 words*

6. Are the needs of current and future generations defined and considered?

*This should be written in no more than 300 words*

**These questions above are asked, because we want to analyze:**

- Are long term changes such as climate change, sea level rise considered?
- Are measures based on a precautionary approach?

Do you want to add extra information?

**Describe what you think that can be modified or improved in your project regarding this principle?**

*This should be written in no more than 500 words*

### Principle 3:

Adaptive management during a gradual process which will facilitate adjustment as problems and knowledge develop. This implies the need for a sound scientific basis concerning the evolution of the coastal zone.

Basic question: Is an adaptive management approach applied during the process?

#### 1) Questions

1. Are there goals, targets and action plans defined? If so, describe them briefly

*This should be written in no more than 300 words*

2. Is the project being monitored on a scientific base? How is this done?

*This should be written in no more than 300 words*

3. Is there an evaluation about achieving your main goals planned? When and how?

*This should be written in no more than 400 words*

4. Are there measurements incorporated to measure progress? Which measurements?

*This should be written in no more than 300 words*

5. Are indicators used to measure the development of the area or the project?

*This should be written in no more than 300 words*

6. Is there a risk characterisation to define obstacles or failing factors in your project? If so, describe

*This should be written in no more than 300 words*

7. What is the data availability policy? Are there any restrictions to the access of the collected data?

*This should be written in no more than 300 words*

8. Is the case study based on scientific studies. If so, give references and brief summary

Project name:

Goal:

Executed by:

**These questions above are asked because we want to analyze:**

- Have relevant mechanisms been established to implement community policies and legislations? Is the monitoring holistic?
- Has an accompanying programme been set up to collect relevant ecological, economic and social information to assist the further evaluation of ICZM
- Is there a scientific base for the case study? Is there also a scientific monitoring of the project?

Do you want to add extra information?

**Describe what you think that can be modified or improved in your project regarding this principle?**

*This should be written in no more than 500 words*

#### **Principle 4:**

Local specificity and the great diversity of European coastal zones, which will make it possible to respond to their practical needs with specific solutions and flexible measures.

*Basic question: Is the process local-context specific?*

##### **1) Questions**

1. Has the project taken into account different specific aspects of the region such as important for tourism or area with high biodiversity of certain species.... Explain what are the specific aspects of the region and how they are taken into account.

*This should be written in no more than 600 words*

2. How big is the supporting area (is the project entwined with its neighbourhood)?

*This should be written in no more than 300 words*

3. Is there beach nourishment and if yes, for other aims than safety ?

*This should be written in no more than 300 words*

**These questions above are asked, because we want to analyze:**

- Are different segments of the national coastal zone identified with respect to specific challenges and responses?
- Have appropriate coastal protection measures been taken including the protection of coastal settlements and their cultural heritage?

Do you want to add extra information?

**Describe what you think that can be modified or improved in your project regarding this principle?**

*This should be written in no more than 500 words*

#### **Principle 5:**

Working with natural processes and respecting the carrying capacity of ecosystems, which will make human activities more environmentally friendly, socially responsible and economically sound in the long run.

*Basic question: Does the (ICZM) management respect and work with natural processes?*

- 1) Define the natural processes in the area and the main sectors that influence the ecosystem. Describe

*This should be written in no more than 600 words*

##### **2) Questions**

1. Is the process of project based on an ecosystem approach? If so, describe

*This should be written in no more than 600 words*

2. Have you considered the natural processes of your project area? If so, describe the natural processes and how they are incorporated in your project.

*This should be written in no more than 600 words*

3. Are ecological, economic and social goals defined within the strategy of the project

*This should be written in no more than 300 words*

4. To what extent are the three for dimensions for sustainability ( ecologic, economic and social) equally taken aboard in your project?

*This should be written in no more than 300 words*

5. Did the project foreseen conflicts of interests and are there mechanisms foreseen to solve conflicts of interest (for space, water, labour). If so, describe.

*This should be written in no more than 300 words*

6. Are there examples of renaturation measures, e.g. flood retention basins, overflow basins, compensation measures?

*This should be written in no more than 300 words*

Do you want to add extra information?

**Describe what you think that can be modified or improved in your project regarding this principle?**

*This should be written in no more than 500 words*

#### Principle 6:

Involving all the parties concerned (economic and social partners, the organisations representing coastal zone residents, non-governmental organisations and the business sector) in the management process, for example by means of agreements and based on shared responsibility.

*Basic question: Is the process based on participatory planning and management?*

1) Define the main stakeholders (only those businesses or organizations whose livelihood depends on the littoral should be included)

\* Citizens:

*Number:*

*Demographic structure:*

*What are their interests and concerns?*

*What are the main topics within the questions that your departments receive?*

\* NGO's: Describe all relevant NGO's

*Name of Non-Governmental Organization:*

*Objectives and interests:*

*Number of members:*

*Relevant actions carried out: projects, allegations, fieldwork,...*

*Interest in which topics? Link with the case study?*

*Name of Non-Governmental Organization:*

*Objectives and interests:*

*Number of members:*

*Relevant actions carried out: projects, allegations, fieldwork,...*

*Interest in which topics? Link with the case study?*

...

\* Business Sector: Describe briefly all relevant business sectors within the area

*Name:*

*Interests:*

*Budget:*

*Number of employees:*

*Interest in which topics:*

*Link with the case study – type of actions of interest?*

*Name:*

*Interests:*

*Budget:*

*Number of employees:*

*Interest in which topics:*

*Link with the case study – type of actions of interest?*

...

#### 2) Questions

1. Which kind of mechanisms has been implemented to ensure participation and integration of stakeholders? (E.g. workshops, forums, hearings, consultations, interviews, websites, flyers, submission of complaints, public display of plans)?

*This should be written in no more than 300 words*

2. Is there a process where these stakeholders can voice their interests/concerns and are able to file in a complaint?

*This should be written in no more than 500 words*

3. Is there input in training, education and awareness programmes? If so, describe how you contribute

*This should be written in no more than 300 words*

4. How has the management of the coast been communicated to the stakeholders

*This should be written in no more than 300 words*

5. Are local governments involved in the project? Are local governments and coastal communities adequately considered? If so, give some more explanation.

*This should be written in no more than 300 words*

6. Which possibilities are there for shared responsibility?

*This should be written in no more than 300 words*

7. Are there agreements with stakeholders?

*This should be written in no more than 300 words*

These questions above are asked, because we want to analyze:

- Are the relevant stakeholders involved? (Coastal zone residents, local, regional, national governments, NGO, Private business sectors)
- Are main discussions brought back to the public?
- Are measures to promote bottom-up initiatives considered?

Do you want to add extra information?

**Describe what you think that can be modified or improved in your project regarding this principle?**

*This should be written in no more than 500 words*

**Principle 7:**

Support and involvement of relevant administrative bodies at national, regional and local level between which appropriate links should be established or maintained with the aim of improved coordination of the various existing policies. Partnership with and between regional and local authorities should apply when appropriate.

*Basic question: does the process support and involve all relevant administrative bodies?*

**1) Questions:**

- What are the local regional, an national administrative and institutional framework. Describe briefly

*This should be written in no more than 500 words*

- Who is responsible on the government side for regional and/or coastal development?

*Local level:*

*Name:*

*Authority about:*

*Regional level:*

*Name:*

*Authority about:*

...

Make sure you include all aspects of coastal management: (land, sea, and all sectors)

**2) Questions**

1. Are decision-making responsibilities clearly defined for each institutional level? Explain why so or why not.

This should be written in no more than 300 words

2. Are the institutions on the different levels nested within a coherent structure? Describe briefly

This should be written in no more than 300 words

3. Is there consultation on a regularly base of the different institutions?

This should be written in no more than 300 words

4. Has there been a link established between spatial planning and ICZM?

This should be written in no more than 300 words

5. Are there spatial developments plans which include the coastal zone but do not treat it as a distinct and separate

entity? If so can you describe them?

*This should be written in no more than 300 words*

6. Has there been links established with relevant policies? Between which policies?

*This should be written in no more than 300 words*

7. Are there interregional organizations and cooperation structures (such as coastal partnerships and coastal networks)? Are they involved within the coastal management?

*This should be written in no more than 300 words*

8. Are there management structures who work across boundaries

- sectoral boundaries: eg economic and nature
- ecological boundaries: eg air water land
- regional boundaries: eg neighbour country

*This should be written in no more than 300 words*

**These questions above are asked, because we want to analyze:**

- Are local, regional and national governments involved?
- Have communications links been established for improved horizontal and vertical coordination?
- Are relevant inter regional organizations and cooperation's structures present and how are they involved in the coastal management?
- Is there a need for further inter-regional organizations?

Do you want to add extra information?

Describe what you think that can be modified or improved in your project regarding this principle?

*This should be written in no more than 500 words*

**Principle 8:**

Use of a combination of instruments designed to facilitate coherence between sectoral policy objectives and coherence between planning and management.

*Basic question: Is there a combination of instruments in planning and management?*

1) Define the most relevant legislative frames, measures and policies

Legislation:  
Name:  
Type:  
Purpose:  
Initiated from:  
Scale for implementation:  
Effect on which sectors:  
Level of impact:

Legislation:  
Name:  
Type:  
Purpose:  
Initiated from:  
Scale for implementation:  
Effect on which sectors:  
Level of impact:

....

2) Define instruments that have an influence on the management of the coast or your project.

Research projects:  
Name:  
Purpose:  
Budget:  
Outcome:

Economic instruments:  
Name:  
Purpose:  
Method:  
Outcome:

Planning instruments:  
Name:  
Purpose:  
Method:  
Outcome:

Knowledge instruments:  
Name:  
Purpose:  
Method:  
Outcome:

3) Questions

1. Describe if there are links between certain legislations, policies and instruments.

*This should be written in no more than 300 words*

2. Is there adequate funding for undertaking actions on the coast? Who is providing it?

*This should be written in no more than 300 words*

3. Is there a stock take of the coast carried out? (stock take = identifying who does what, where and how, within different governments)

*This should be written in no more than 300 words*

4. Is there an integrated 'State of the Coast' report been written? If so describe the process? Is there an intention to repeating the exercise every five or ten years? (State of the coast = report about the different sectors at the coast and sea)

*This should be written in no more than 300 words*

5. Has there been guidelines produced by national, regional or local governments which advise planning authorities on appropriate uses of the coastal zone. Define which they are?

*This should be written in no more than 300 words*

**These questions above are asked, because we want to analyze:**

- What kind of instruments has been developed so far or are under development (laws and regulations, voluntary agreements, research and education information provision, economic instruments)
- Are these instruments coherent? Are there gaps and where are these?

Do you want to add extra information?

**Describe what you think that can be modified or improved in your project regarding this principle?**

*This should be written in no more than 500 words*

### Part 3: Additional information:

This inventory answered by:

Name:  
Instituut:  
Address:  
Email:  
Telephone:

Following persons are consulted:

Name:  
Instituut:  
...

Do you know other relevant EU- project for SUSCOD?

Past projects:  
Acronym:  
Name:  
Duration:  
Description (briefly -250 words):  
Key-words:  
Partners:  
Website:  
...  
  
Current or new projects  
Acronym:  
Name:  
Duration:  
Description (briefly -250 words):  
Key-words:  
Partners:  
Website:  
...

Do you know educational tools that can help to develop a region sustainable development? Describe:

Name:  
What is it? Website, leaflet, organisation...  
Purpose?  
How does it work?  
Responsible?  
Price? Free or does people have to pay for it?  
...

Who is your EU-ICZM representated?

Name  
Institution:  
Address:  
Email:

Which governmental body is following up the EU-Recommendation on ICZM?

Name  
Institution:  
Address:  
Email:

What do you think are the main obstacles to apply ICZM?

Do you have positive experiences in applying ICZM? Can you describe them? What were the factors that help to reach to a successful project.?

Thank you!

## The SUSCOD partners

### 1. Province of North-Holland (LP, Netherlands)

North-Holland is one of the 12 Dutch provinces. The provinces are situated in between the Netherlands central government and municipalities. North-Holland has app. 2, 5 million inhabitants. It is a region full of diversity, with the less densely populated rural landscapes in the north contrasting with the urban areas in the South. Much of North-Holland is below sea level.

North-Holland borders the North Sea for ca. 100 kms. The province of North-Holland has two main strategic documents containing the coastal policy: the provincial water plan and the provincial structural plan. In both documents climate change and the effect on water management and spatial planning play a key role. North-Holland is protected from flooding by dikes and dunes. Due to sea level rise reinforcement of these flood protections need to take place in the near future. Besides the provincial coastal policy, the second National Delta Committee has given advice to the central government on the sustainable protection against flooding of the Netherlands in the future. One of the main issues of the advice on coastal defence works concerns the spatial planning aspects of future reinforcements.

The largest part of the North-Holland coast is protected by dunes. During storm conditions these need to be wide and high enough to prevent them from being totally eroded, which would result in flooding of the hinterland. Under normal conditions however the dune and beach area facilitates many functions and activities: nature (Natura 2000), recreation and tourism in the dune area, coastal villages, beach pavilions and beach recreation.

The strategic documents contain concrete activities on coastal development: (a) reinforcement of weak links, (b) identity, spatial quality and vitality of coastal villages, (c) upgrade of Zandvoort coastal town, (d) stimulating all year recreational beach facilities, (e) development of inner dune area and (f) management plans Natura 2000 areas. These activities aim at a strong, attractive, vital and dynamic coast (physically, economically, socially and with respect to nature).

The Netherlands Ministry of Transport Public Works and Water Management is also a partner in SOSCOD. The ministry is responsible for the coastal defence system on national level.

### 2. Essex CC (UK)

Essex is a county in the East of England with 1.3 million inhabitants. Essex contains one of the country's most important coastlines. It stretches for over 300 miles and supports an abundance of birds and wild life. It is of international and national importance for nature conservation and it is an open and tranquil rural landscape with numerous historic and archaeological features. It is also an attractive water and land based recreational resource. In

the light of concerns about sea level rise, coastal defences, the quality of bathing waters, and the impact of human activities on the coastal environment etc. Essex County Council and coastal district Councils have recognised the need for the coastal zone to be managed in an integrated and sustainable way.

Essex faces a number of key challenges in relation to coastal defence and managing the risk of flooding. However, these are not simply restricted to the physical threat of climate change, they also relate to the incompatibility between risk management/spatial planning and the difficulty in attributing and measuring "value" in relation to the coastal environment. The estuarine nature of the Essex coast brings further complexity to this challenge, with coastal threats potentially impacting upon a large land area and a diverse stakeholder base. This complexity means that there is no single, overarching solution, but instead action is required on many fronts within a common, strategic framework.

### 3. City of Nordenham (Germany)

Stadt Nordenham is a municipality in the Wesermarsch district, in Lower Saxony, Germany. It is located at the mouth (on the west bank) of the Weser river on the Butiadingen peninsula on the coast of the North Sea. The seaport city of Bremerhaven is located on the other side (east bank) of the river. The Midgard-seaport in Nordenham is the largest private-owned harbour in Germany. Stadt Nordenham has some 27.000 inhabitants.

The anticipated global climate change and the sea level rise will increase the tidal wave in estuaries, and consequently this will endanger the situation of beaches and industrial enterprises in fore-dike areas of Nordenham. Additionally the dike has to be heightened for safety reasons for inhabitant living behind the dikes. The new dikes can become a barrier between the fore-dike area and the dike's hinterland. On-dike and fore-dike areas are very important for the existence and the development of coastal cities like Nordenham.

Due to the climatic threats several security measures have to be done by the respective authorities. By holistic planning approaches and planning procedures based on the principles of ICZM these construction measures, will be used to create a beach area which will be safe against higher tidal waves and, which will become very attractive for the tourism industry. A solution has to be found for the dike in the inner part of industrial enterprises: to keep its security function but to avoid its character as a barrier because extreme heavy industrial products have to be moved between both sides of the dike. The pilot area is exemplary for many other fore-dike tourist and industrial areas because this is a common task of coastal towns at low-lying coasts.

#### 4. Fife Coast and Countryside Trust

##### *About Fife*

Fife is a peninsula on Scotland's North Sea coast, bounded by the Forth and Tay estuaries, and neighbouring the cities of Edinburgh and Dundee.

The name "Kingdom of Fife" dates from the Iron Age when Pictish Kings ruled the north east of Scotland. It is the third largest Local Authority (Council) in Scotland with a population of 355,000, an area of 1,325 km<sup>2</sup> and 170 km of coastline.

Fife has a diverse landscape of highly productive agricultural land, forests, picturesque villages and a scenic coastline with many small harbours, set against a backdrop of rugged hills. Fife is consistently voted as Scotland's No 1 destination for outdoor recreation based on its rich cultural heritage, award winning beaches and countryside made accessible by an extensive network of paths and trails, including the award winning Fife Coastal Path, part of the North Sea Trail.

St. Andrews is the top tourism attraction in the area. It was for centuries a major pilgrimage destination and is the home of golf. It has Scotland's first university - the third oldest in the English-speaking world.

Fife's countryside makes a major contribution to the quality of life of local communities and is a key component of the regions tourism industry.

##### *About Fife Coast and Countryside Trust*

Fife Coast and Countryside Trust is a registered environmental charity which manages, conserves, and enhances the biodiversity and countryside of Fife. The Trust was established in 2001 by Fife Council and is responsible for the management and maintenance of over 50 countryside sites in Fife, including Local Nature Reserves, beaches, the coastal path, and the Lomond Hills Regional Park. The Trust is based at The Harbourmaster's House in Dysart.

The Trust actively participated in the Interreg IIIB Nave Nortrail and Interreg IIIC Destilink projects and, in addition to the SUSCOD project, is lead partner in a major new Heritage Lottery funded "Living Lomonds" partnership project. In Fife, the SUSCOD project focusses on the long term sustainable management of the Firth of Tay-Eden Estuary in the North East of Fife. This coastal area contains a wide range of high-value assets located in a multi-designated environmentally sensitive area. These assets are vulnerable to flooding and coastal erosion associated with frequent storm surges, severe weather and rising sea levels.

For more information:

[www.fifecoastandcountryside.co.uk](http://www.fifecoastandcountryside.co.uk) ; [www.fifecoastalpath.co.uk](http://www.fifecoastalpath.co.uk); [www.tentsmuir.org](http://www.tentsmuir.org)

#### 5. Coastal Division of Flemish Ministry of Transport and Public Works (Belgium)

The Coastal division is responsible for the coastal defence of the whole Belgium coastline including the Flemish harbours and marina's of Nieuwpoort, Oostende, Blankenberge en Zeebrugge.

Presently the coastal division has started with preparing an integrated master plan for the safety of the whole coast. The master plan will identify the weak links in the coastal defence for the whole Flemish coast and propose general solutions to strengthen the sea defences and improve the coastal safety against flooding, with a time horizon to 2050.

Detailed projects of sea defence improvement works are being designed and evaluated for every weak link. The master plan will be ready in 2010 and will outline the investment budget needed to implement these measures in the coming period. 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.

The situation of coastal towns deserves specific attention. The existing sea defence structures (sea dikes, beaches, dunes and sluices + quay walls in harbours) in several have to be strengthened. How the different ICZM principles would be best applied for this case of adaptation of coastal towns to sea level rise and increased storm impact, is to be further explored. Furthermore involvement of the general public and stakeholders is of high importance to design effective and acceptable measures.

The Coordination Centre for Integrated Coastal Zone Management in Belgium is involved in SUSCOD as a subpartner. The coordination centre is a cooperation of: The Provincial Government of West Flanders, The Flemish Government, Flanders Marine Institute and the Federal Public Service for Public Health, Safety of the Foodchain and Environment.

The centre encourages and promotes sustainable and integrated management of the coastal region in Belgium. This aim is supported by a number of strategic and operational objectives, including: (a) Promote the integration of planning and politics in the coastal region; (b) Create a basis for integrated coastal zone management; (c) Communicate and sensitize about integrated coastal zone management; (d) Act as a contact point for integrated coastal zone management; (e) Follow up the sustainability indicators of the coastal region and (f) Cooperate to put the recommendations of the European Parliament, concerning the implementation of integrated coastal zone management in Europe, into practice.

#### 6. Flanders Hydraulics Research (Belgium)

Flanders Hydraulics Research is a hydraulic and hydrological

research centre that provides inland and foreign public or private organisations with consultancy services.

Flanders Hydraulics Research is a division of the Waterways and Marine Affairs Administration of the Environment and Infrastructure Department of the Ministry of the Flemish Community FHR carries out hydraulic and hydrological research and provides inland and foreign public or private organisations with consultancy services.

## **7. Region Zealand (Denmark)**

Region Zealand comprises 17 municipalities and has approximately 0,8 million inhabitants. The region consists of a number of islands surrounded by the Baltic Sea. Considerable areas are situated below sea level. Climate change and sea level can have serious consequences for these areas. The region has a very long coastline and more than half of Denmark's reclaimed land lies in Region Sjælland. Approximately 1,700 km coastline, the total area is approximately 7,273 km<sup>2</sup>, this represents 17% of Denmark

Lolland Municipality, Slagelse municipality and Odsherred municipality will be sub partners of Region Zealand. The coastline of the partners are: Odsherred 160 km coastline, Slagelse 180 km coastline, Lolland 280 km coastline. In these coastal municipalities, actual situations pilot plans will be developed to deal with the effects of climate changes for various aspects of land use functions. Local Government Denmark being the local authority interest organization will provide assistance in the development process.

## **8. Municipality Strömstad (Sweden)**

The project area consists of five municipalities, Strömstad, Tanum, Sotenäs, Munkedal and Lysekil. Most of the cities are concentrated to the coast because of the history of fishing, though new settlements are mainly concentrated along the motorway and the railway. The population within the project area, all the municipalities together is about 55 000, but during the summer period it increases up to 200 000 visitors. The distances from the north to the south within the area are approximately 95 km and from west to east it's about 40 km

The Swedish showcase in SUSCOD aims at developing the potentials within the area. It has to lead to an increase in the all-year living in the area, which is now mainly a tourist region.







# Colofon

State of the art, ICZM analysis SUSCOD  
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Author: Kathy Belpaeme, Coordination centre for ICZM Belgium  
Graphic design: Piraña grafisch ontwerp, Utrecht  
Photography: Hanne E. Schultz, Karin Björk

This State of the art inventory is part of the SUSCOD project. SUSCOD stands for SUSTainable Coastal Development in practice. The aim of SUSCOD is to offer easy access to a collection of practical instruments that contribute to the main objective of the European Union's North Sea Region Programme: to enhance the overall quality of life for this region's residents, by ensuring a strong economy, high environmental qualities and communities that are viable, vibrant and attractive places to live and work. Central in SUSCOD is the development of a practical tool and its introduction to potential users. In this project, different partners from 6 countries work together. The province of North-Holland is lead partner. The project is financed by INTERREG IVB North Sea Region and ends in 2013.

[www.suscod.eu](http://www.suscod.eu)



