National Belgian report
on the implementation of Recommendation 2002/413/EC

Integrated Coastal Zone Management

Contents

Chapter 1: ICZM in Belgium: Note for the reader

On 30 May 2002, the Recommendation concerning the implementation of an integrated management of coastal zones in Europe[1] was approved by the European Parliament and the Council. In this recommendation, the Member States were requested to report back to the Commission 45 months after the official approval, i.e. on 30 February 2006, about the experience gained with its implementation. The report before you outlines the implementation of the European Recommendation concerning integrated management of coastal zones in Belgium.

By whom?
This report was prepared by the North Sea and Oceans Steering Committee, in corporation the Coordination Point for the Integrated Coastal Zone Management. Both coordinating-systems are described in more detail further in the present document.

For whom?
Although the request of the European Commission to report on the implementation of the recommendation was the direct reason for the creation of this document, it is also intended to be a source of inspiration for the government to optimise its integrated policy for the coast. Furthermore, it is a useful document for all actors involved who wish to acquire better insight into the efforts made so far on the coast and current lines of thinking for the future.

In order to assist the Member States in drawing up their implementation reports, a structure was set up by the European Commission. However, when this became available, work on writing the first texts had already begun in Belgium. Although its structure does not completely match the one proposed by the European Commission, all the required elements can be found in this report. To enhance readability of the rest of the report, this first chapter briefly explains the content of the following chapters, after which a link is made with the structure proposed by the Commission.

Chapter 2 gives an introduction to and a history of integrated coastal zone management from a Flemish and federal perspective. What were the first steps, and how did they shape today's coastal policy? This chapter clearly sketches the initial impetus for implementation of ICZM in Belgium.

Chapter 3 deals with the Coordination Point for Integrated Coastal Zone Management, a coordinating structure for integrated coastal zone management, which was started in 2001 and underwent restructuring three years later. What are the role and the added value of such a Coordination Point? How does this all fit into the European picture and what is the link with cooperation with the municipalities? This chapter shows concretely how ICZM is addressed and gives examples of actions on a large and small scale.

Chapter 4 is completely devoted to sustainability indicators, which are highly promising policy-supporting instruments and also have much to offer from a communications perspective. There is first a brief description of the development of these indicators. In the first phase, this involved the establishment of a vision for the coast, an exercise that is part of the national stocktaking that was performed in the context of ICZM implementation. Much attention is also paid to the participative approach employed in the selection of the indicators, where Belgium was a true trendsetter. Finally, the results and trends of a few indicators are presented in this chapter.

Chapter 5 treats a central component of the Recommendation, which can be found in Chapter I of the Recommendation: *"Member States … take a strategic approach to the management of their coastal zones, based on: … (h) improved coordination of the actions taken by all authorities concerned both at sea and on land, in managing the sea-land interaction."*

In order to comply with this, a pragmatic approach was developed to identify the sea-land and land-sea interactions. For the Belgian situation, a number of interactions of each type were identified. Subsequently, an index card with information (on sectors, existing legislation, procedures and consultative structures and the need for additional integration) was drawn up for every interaction. What elements are to be considered for integration? In what way and at what level should integration take place? Lastly, this chapter discusses what resources are needed to optimise integrated sustainable coastal management.

The last chapter, Chapter 6, is the most important. It address what lessons should be drawn from the past four years, what trends are to be expected for the future and how the governments concerned can continue to work on implementation of integrated coastal zone management.

As mentioned above, the structure of this report does not correspond to that proposed by the European Commission. To enhance readability, the box below indicates in which chapters the topics proposed by the European Commission can be found.

Theme as proposed by the EC	**Chapter number**
Results of the national stocktaking exercise	*2, 3, 4, 5.*
Description of the condition of the coast	*4, 5*
Summary of the actions taken for implementation of the national strategy	*2 and 3*
Strategy proposed at national level for implementation of ICZM	*5 and 6*
Summary of the future actions that must be taken for implementation of the strategy or strategies	*6*
Anticipated impact of the actions to be taken on the condition of the coast	*Partly in Chapter 6*
Evaluation of the implementation and application of legislation and policy that have an impact on coastal zones.	*Partly included in Chapter 5 + 6*

This report will be made available to the general public in French, Dutch and English, on paper as well as on the website of the Federal Government Department, DG Environment (http://www.health.fgov.be/).

1 Recommendation 2002/413/EC

Chapter 2: Focus on the coast in Belgium: history

1. Developments at European level

The development of a European strategy for an integrated coastal zone management occurred in different phases. The most important key moments are mentioned in brief below. This process resulted in the approval of a European Recommendation, which was based on a number of important definitions and principles. Since these elements are central to the Belgian development of a successful coastal zone management they are also addressed briefly below.

1994: In the **Council Resolution** of **6 May 1994** on a Community strategy for integrated coastal zone management (94/C 135/02), the European Union requested the Member States to increase the protection of coastal zones throughout the Community.

1996: The European Commission started a **demonstration programme** around sustainable coastal management. Thirty-five projects were approved and six thematic studies developed. A project was also elaborated by the Flemish Region (TERRA-CZM).

2000: In the **Communication of the Commission** to the Council and the European Parliament concerning integrated management of coastal zones (COM (2000) 547 definitive), a strategy was proposed to promote a joint approach to coastal zone planning and management at the European level. In this, the European Union provides leadership and guidance to support implementation of Integrated Coastal Zone Management by the Member States at local, regional and national level.

2001: Most elements had already been discussed and a joint position in the European Council concerning the draft recommendation was achieved under the Belgian presidency. Under the Belgian presidency, most elements could already be discussed.

2002: On **30 May 2002** the concerning the implementation of an Integrated Coastal Zone Management (ICZM) in Europe was approved by the European Parliament and the European Council (2002/413/E C, published on 6.6.2002). This Recommendation was based on article 175 of the Treaty of Nice (the European Treaty). This article provided the European Council with the possibility of elaborating measures for protection of the environment. In this Recommendation, the European Member States were requested to develop one or more national strategies for their coastal policies, taking account of the strategy for sustainable development. Drawing up a national stocktaking of the major players, laws and institutions which influence coastal zone management was part of this.

For developing an integrated coastal zone management, use is made of the following definitions:

Integrated Coastal Zone Management: *a continuous process with the overall objective of the implementation of sustainable development in the coastal zone by means of optimal management of human activities in this zone, in order to improve the condition of the coastal environment and to maintain its diversity (European Commission, 1999).*

Coastal zone: *strip of land and sea of varying width which consists of that terrestrial component that is influenced by its proximity to the sea and that marine component that its influenced by its proximity to the land, and comprises the natural coastal systems and the areas where human activities involve the use of coastal resources;*

Specifically, coastal zone management is based on the following principles:

- *"a broad overall perspective (thematic and geographic) which will take into account the interdependence and disparity of natural systems and human activities with impact on coastal areas;*
- *a long-term perspective which will take into account the precautionary and the needs of present and future generations;*
- *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;*
- *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;*
- *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;*
- *involving all the parties involved (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;*
- *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. Partnerships with and between regional and local authorities should apply when appropriate;*
- *use of a combination of instruments designed to facilitate coherence between sectoral policy objectives and coherence between planning and management."*

2. Developments on the Belgian level

This section goes into more detail on the way in which a concrete form is given to integrated coastal zone management in Belgium, by the creation of new (or the adaptation of existing) management and cooperation structures on the one hand, and by the development of projects and other initiatives on the other. However, in order to avoid confusion, it is important to begin with a brief sketch of the often complex division of jurisdictions between the various governments in Belgium.

2.1 The division of competencies in a nutshell.

The management of the coastal area is a matter in which the national (federal), regional (Flemish), Provincial and local (municipal) governments have jurisdictions and responsibilities. This necessitates close cooperation between federal state and region in determining coastal policy and management.

Coastal zone management on land falls under federal and Regional jurisdiction, whereas the federal government (barring a few exceptions) is competent for taking management measures at sea. The dividing line between land and sea is formed by the provincial frontier of West Flanders, which is bounded on the seaward side by the baseline or the mean low-water line along the coast.
However, divergent laws can assign jurisdictions at sea to the Flemish Region. For example, the Law of 8 August 1988 (B.S. 13 August 1988) provides explicitly for the execution of activities and works in the Belgian part of the North Sea that are necessary for the exercise of regional powers (waterways, harbours, coastal defence, pilot services, rescue and towing services at sea). Jurisdiction for fisheries was also transferred in 2001 from the federal state to the regions.

2.2 Evolution in management and cooperation structures

A number of management and cooperation structures that play or have played a part in the implementation of sustainable and integrated coastal zone management in Belgium are outlined here. It is important to point out that the success of a cooperation formula must be seen in relation to a spirit of good cooperation between the members within these structures.

1990: Establishment of the North Sea Technical Commission
Preparing and executing actions that are part of international management conducted for the protection of the marine environment necessitates consultation between federal and regional bodies. The Interministerial Conference on the Environment (ICE) of 12 November 1990 set up the North Sea Technical Commission (MNZ) on an ad-hoc basis, which served as a consultative structure for preparing and executing the decisions taken in the context of international treaties on the marine environment. It was placed under the presidency of the Management Unit of the Mathematical Model of the North Sea (MUMM). This consultative structure is still operating today, now under the coordination of FPS Environment (see below).

1994: Informal inter-cabinet Steering Committee for Integrated Coastal Zone Management was set up
Also under the impulse of NGOs, an informal inter-cabinet steering committee for integrated coastal zone management was set up in 1994 by the then Flemish minister for the environment. This was a first attempt at coordination of and consultation for cross-sector

activities with respect to the coastal area. The inter-cabinet steering committee was composed of political and official representatives from the main federal and Flemish departments concerned, and the province of West Flanders. This steering committee met three times up to the end of 2000.

1995: Establishment of the Coordinating Committee for International Environmental Policy (CCIEP)
This structure was called into life in the Cooperation Agreement of 5 April 1995 between the Federal State, the Flemish Region, the Walloon Region and the Brussels Capital City Region. The North Sea Technical Commission established in 1991 was renamed the North Sea and Oceans Steering Committee, but continues to prepare the national positions on marine environmental policy. From then on, the meeting was part of the CCIEP structure, which has a permanent character. Since early 2005, the presidency of the North Sea and Oceans Steering Committee has been taken over by the new Marine Environment UNITF of FPS Environment.

2001: Establishment of the Coordination Point for IFntegrated Coastal Zone Management (ICZM)
As a continuation of the TERRA Coastal Zone Management project (see below), in 2001, in the context of the Objective-2 Coast Programme (European Fund for Regional Development), an application was submitted for the "establishment and development of a Coordination Point for Integrated Coastal Zone Management". Resources were allocated for three years. The partners in this project were the province of West Flanders (project leader) and Department of Nature (department of the Environment and Infrastructure) of the Ministry for the Flemish Community.

For the period 2004-2007, in addition to the province of West Flanders and the Department of Nature, the Department (Waterways) of the Coast signed a new agreement for the continuation of the Coordination Point. Both departments have a key role in the management of the coastal zone. In view of the fact that the European Recommendation mainly emphasises the environmental aspects of Coastal Zone Management with the objective of pursuing an integrated national implementation, whereby not only regional but also Provincial and municipal levels are highly involved, the FPS Environment decided at the end of 2004 to take part in the activities and to help finance the operation of the Coordination Point for Coastal Zone Management.

2002: The EU Recommendation 2002/413/EC was approved by the EU Council Environment.
The legal basis of this Recommendation (Article 175 of the Treaty) stipulates that this subject falls under the Cooperation Agreement between the Federal and Regional governments of 05/04/95.

This Cooperation agreement establishes the way in which the preparation, coordination of the implementation and reporting in the context of the international environmental policy take place. In order to fulfil these tasks, there is a broad coordinating structure: the Coordinating Committee for International Environmental Policy (CCIEP). At the national level, European Recommendation Coastal Zone Management is followed up by a specialised working group, "the North Sea and Oceans Steering Committee", of the CCIEP. This Steering Committee is also responsible for the development of national positions, reporting and coordination of the implementation of other marine-related international forums (OSPAR, the system of North Sea Conferences, European Marine strategy, etc). In addition, it fulfils an important role, not only as an expertise platform but also as regards the pursuit of coherence in the Belgian position at international marine forums.

2003: Belgium given a Minister for the North Sea
This minister assumes the political coordination between the actors involved in the management of Belgian Marine areas (see further below in this report).

2003: Establishment of the Coastguard
With a view to improved coordination of the actions of the Belgian State at sea, a national coastguard was set up in 2003, under the Minister of Internal Affairs (Royal Decree of 13 May 2003). The "coastguard" structure consists of a policy body, a permanent secretariat and a consultative platform. Decisions are taken by consensus.
In the exercise of State jurisdictions in Belgian marine areas (the coastguard only operates at sea), the following federal government departments (FPSs), programming government departments (PPSs) and ministries concerned:
- FPS Public Health, Safety of the Food Chain and the Environment;
- FPS Internal Affairs;
- FPS Mobility and Transport;
- FPS Finances;
- FPS Foreign Affairs;
- FPS Economy, SMEs, Self-employed Persons and Energy;
- Ministry of National Defence.
- PPS Scientific Policy;
- PPS Sustainable Development.

In this system, Flanders was an observer. Representatives of the Flemish government attended the meetings.

In order to achieve efficient exercise of powers, it is important that these departments can work together and operate in a coordinated way, can call on each other's expertise as well as on the information that each of these departments have at their disposal.

2004: Cooperation Agreement on Maritime Heritage was concluded
A Cooperation agreement was concluded between the federal government and the Flemish region with respect to maritime heritage. This Cooperation agreement had the aim of contributing to public awareness and a more efficient management of the maritime archaeological heritage in the part of the North Sea bordering Belgium.

2004: Establishment of the Marine Environment Department within FPS Environment
FPS Environment established a new Marine Environment Department to follow up *inter alia* the above recent developments in a coherent and centralised manner. This department subsequently also became a partner of the ICZM Coordination Point and in addition contributed to the financing of this structure.

2005: Cooperation agreement between the federal state and the Flemish Region as regards the coastguard
Although in 2003 the Flemish government was already a very active observer in the context of a Royal Decree (*B.S.* 17 June 2003), it was thought necessary to widen cooperation through a Cooperation agreement. The basic principles of this agreement are: equivalence between the parties, respect by each party for the jurisdictions of the other party, and avoidance of duplicated capital outlay by the optimal use of infrastructure and resources. Defining the way in which activities will be organised and the role of the departments concerned which will take part constitutes future challenges for this "new" Coastguard.

2.3. Other relevant projects, initiatives and institutes

Innovation in coastal zone management is realised on the one hand by setting up of new management or cooperation structures (see 2.2). However, on the other hand, certain projects and initiatives also make a considerable contribution. The number of projects that have as their main objective strengthening integration of coastal zone policy has increased steadily in recent years.

The projects respond to priorities which emerge in the process of European or federal scientific policy-making. In view of fact that priorities are defined by this process, the results of the projects must be able to support the developed policy orientations directly. In addition, although projects are always of a limited duration, their results often remain visible in the long term. It is striking that in recent years the main orientations regarding subsidy programmes are no longer formulated on a sectoral basis, but in stead sustainability and cross-sector thinking are put centre stage. This creates a fertile climate for integrated projects.

In recent years, various network projects have also been set up, such as ENCORA and CoPraNet. These developments are meticulously followed up in Belgium.

1976: Establishment of the Management Unit of the North Sea Mathematical Models (MUMM).
One of the tasks of the MUMM is to systematically study the quality-status of the sea trough monitoring. Furthermore, the MUMM develops mathematical simulation models for the North Sea. These models make predictions about storms, tides, waves and the spread of oil slicks. Computer models are even developed for the study of biological phenomena, such as the formation of foam on the sea caused by the *Phaeocystis* alga. The MUMM likewise makes an important contribution to sustainable management of the North Sea. The MUMM gives the government advice about certain activities at sea, provides assessments of environmental impact reports and advises the competent minister.

Since 1997 the MUMM has been a department of the Royal Belgian Institute for Natural Sciences (RBINS), a scientific institute under the Federal Science Policy (formerly DWTC). The domains in which the MUMM operates fall under the competencies of the Minister of the Environment, the Minister of Science Policy and the Minister for the North Sea.

1997: An integrated nature project for the coast: the LIFE-Integral Coastal Conservation Initiative
In 1997, the first integral nature project for the coast started for a period of four years. Under this integral approach, the federal authorities competent for the sea and the Flemish environmental administrations developed a policy for the protection of the coastal ecosystem that comprises the marine as well as the terrestrial component.

1998: Pilot project on Integrated Coastal Zone Management
The TERRA-Coastal Zone Management project started in the context of the European ICZM Demonstration Programme, with 1998-2000 as foreseen implementation date. The Department (Waterways) Coast (of the administration for Waterways and Marine Affairs) acted as project leader, and the province of West Flanders assumed responsibility for execution as regards to content.
In the framework of this project, in addition to a few area-specific studies, the following reports were produced. They constituted the basis for further elaboration of ICZM:
- Recommendations for integrated management of the coastal zone in Belgium, June 2001
- Juridical stocktaking of the coastal zone in Belgium, January 2000
- Proposal for administrative and juridical anchoring for integrated management of the Belgian coastal zone, May 2003.
- Communication plan for integrated coastal zone management, December 1999.
- Defining and follow-up of the sustainability of the coast, September 2001.

1999: Interreg project SAIL (Schéma d'Aménagement Intégré du Littoral) [Integrated Coastal Development Plan]
The main theme of this project was "Integrated Coastal Zone Management". In addition to general strategic actions, specific projects were proposed to illustrate integrated working in Zeeland (The Netherlands), the North of France, Kent and Essex in England, and West Flanders. The project grew into a partnership around the Southern North Sea, which still convenes.

1999: Establishment of the Flanders Marine Institute (FMI)
FMI aims to support and enhance the visibility of scientific research of the coast and the marine environment, *inter alia* by issuing an information magazine "De Grote Rede", aimed at a wide public. The founding members are the Flemish government, the province of West Flanders and the Fund for Scientific Research

2000-2006: SPSD II "Scientific Support Plan for a Sustainable Development Policy"
The campaigns of the vessel "the Belgica", executed in the context of fundamental scientific research, refer on the one hand to the "Second Scientific Support Plan for a Sustainable Development Policy - SPSD II (2000-2006)", principally the thematic programme "Global Change, Ecosystems and Biodiversity", and other research programmes of the Programming Federal Government Department of Science Policy.

As its name implies, the second Scientific Support Plan for a Sustainable Development Policy constitutes the follow up of the first plan for scientific support, which was concluded in 2001.

SPSD II maintains the general objectives of SPSD I, namely:
- to clarify in more detail the extremely complex issue of sustainable development;
- to collect and interpret basic scientific information that could give direction to the preparation of an Sustainable Development Policy and its implementation;
- to formulate proposals and develop instruments in order to set up, evaluate and direct an Sustainable Development policy.

  Two complementary parts constitute the main outline of the plan:
- "Sustainable production and consumption patterns"
- "Global change, ecosystems and biodiversity"

Part I, "Sustainable production and consumption patterns", deals with the themes "production" and "consumption" in a context of sustainable development, their impact on society (social and economic aspects) and the environment and the various actors involved, in order to arrive at a global approach to the issue. Part I focuses on four themes:
- General issues related to production and consumption patterns: e.g. an integrated product policy, fair trade, producer and consumer behaviour, etc.
- Energy: issues concerning climate change, modelling of greenhouse emissions, rational energy use (REU), alternative and renewable energy sources, policy instruments to promote sustainable production and use of energy etc.
- Transport: mobility behaviour (activity chains, modal choice, cultural aspects), urban transport, transport of goods (intermodal), road safety, policy instruments for transport, sustainability impacts at global and local level etc.
- Agri-food: tracing and authenticity of GMOs, predictive microbiology, control of residues, evaluation of the sustainability level in agrarian systems, labels, consumer expectations, etc.

The research performed in this field contributes to an analysis of the situation (e.g. development of instruments for analysis, collection of information, development of indicators) and to the development and evaluation of instruments that support decision-making. The various research projects are presented in detail at: http://www.belspo.be/belspo/fedra/

3. Visions and planning at coastal level

Although there is no one single integrated policy document for the coast, in recent years policy documents for various sectors have been drawn up which refer to the entire coastal zone or a subzone of it. The most important are mentioned below. Naturally, many more documents have been produced about (aspects of) the coast, but a clear vision of the future development of the coast cannot always be found.

1989: North Sea Disaster Plan
The Belgian coast borders the English Channel, one of the world's busiest sea areas. Two large major transit routes are situated in the Belgian maritime zone (North Hinder TSS and West Hinder TSS). In addition, many vessels traverse the Belgian territorial sea en route to or from the ports of Antwerp, Zeebruges or Ostend. Such intensive traffic in the narrow shipping lanes entails serious risks of environmental pollution, especially in the event of a collision. Of course disasters cannot be excluded, as was clearly shown by the accident with the "Herald of Free Enterprise". It was this event that gave rise to the development of the first "North Sea Disaster Plan". In the meantime, this plan has already been updated a number of times.

At national level, the Minister of Internal Affairs is legally responsible for coordinating the necessary interventions in the event of a disaster. This is also the case if a serious pollution occurs on Belgian territory or in the territorial sea. However, in the event of such an accident, by the activation of the North Sea Disaster Plan, the Minister of Internal Affairs can transfer his powers to the Governor of the province of West Flanders.

1993: Dunes Decree approved

The approval of the "dunes decree" of 14 July 1993 was a very important step in the protection of natural resources on the Belgian coast. This protective measure was the basis for a dune purchase policy by the Flemish government. The decree imposed a building ban within two types of areas:

- 'agricultural land important for the dune area', situated in zones with an agrarian use, which can be continued subject to restrictions on business expansion.
- 'protected dune area', located in zones with other regional planning uses, where a building ban applies, except for activities benefiting nature conservation or coastal defence.

Protection status was granted on the basis of four criteria: surface area, environmental planning context, current biological value and geomorphology.

1996: Ecosystem vision for the Flemish coast[2]

This Ecosystem vision was the policy basis for protection and restoration of the coastal ecosystem. Inter alia, the dune area purchasing policy was grafted onto this vision.

1997: Federal Sustainable Development Plan

The Belgian federal government had already been active in the field of sustainable development for more than a decade, and had made solid progress in this field in past years. Since 1997 there has been a federal law concerning sustainable development, which stipulates the drawing up of a Federal Sustainable Development Plan. In addition, the law also provides for the production of a Federal Sustainable Development Report. The Federal Planning Bureau was assigned the tasks of drawing up this Federal Sustainable Development Report and taking care of the preparation of the Federal Sustainable Development Plan.

Since 1999, political responsibility for sustainable development has been explicitly assigned in the federal government. The federal law for sustainable development also led to the setting up of the Interdepartmental Commission on Sustainable Development (ICSD). The most important task of this Interdepartmental Commission is the preparation and monitoring of the four-yearly Federal Sustainable Development Plan. The commission bears the final responsibility for drawing up a draft plan, which is the basis for broad consultation.

The first edition of the Federal Sustainable Development Plan covered the period 2000-2004. The federal coalition agreement of July 2003 supported the drawing up of the second Federal Sustainable Development Plan for the next four years, in which the European sustainability strategy and the closing statement of the Johannesburg World Summit are interpreted. The second Federal Sustainable Development Plan focuses on the themes of the European strategy for sustainable development, and elaborates on actions to achieve the objectives within these themes. Both plans focus *inter alia* on the pressures that can be identified in coastal zones.

1999: The law "MMM" (law of *20 January 1999 on the protection of the marine environment in sea areas under Belgian jurisdiction*)

This is a very important step for the protection of natural resources on the side seawards of the baseline. This law established the legal basis for the protection of the Belgian part of the North Sea against marine pollution and for the conservation, restoration and development of nature.

This important act summarises the general principles of environmental law:

- The prevention principle: prevention is better than cure
- The precautionary principle: preventive measures must be taken if there are grounds for concern regarding pollution
- The principle of sustainable management: human activities must be managed in such a way that the marine ecosystem remains in a condition that ensures the continued use of the sea
- The polluter-pays principle: the costs of the measures to prevent and fight pollution are to be borne by the polluter
- The principle of restoration: if the environment is damaged or disrupted, the marine environment must be restored to its original condition as far as possible

The principle of objective liability is also established: in the event of any damage to or disruption of the environment in marine areas occurs as the result of an accident or infringement of the law, the party having caused the damage to or disruption of the environment is obliged to remedy the latter, even if they are not at fault.

Furthermore, the basis was established for the creation of marine reserves and the protection of fauna and flora. A general obligation was established to subject activities for which a permit is required to an environmental impact report (on the applicant's initiative) and to an environmental impact assessment, before and during these activities (by the government).

2002: The Flanders Environmental Structure Plan (FESP)[3] and the Provincial Environmental Structure Plan West Flanders[4].

At the Flemish level, the "coast" is designated in the FESP as an urban network. The coastal space is regarded as the belt of seaside resorts along the 'Koninklijke Baan', situated between the sea and the polder. In the Provincial Environmental Structure Plan,

2 HOFMANN, M. and PROVOOST, S. (1996) *Ecosysteemvisie voor de Vlaamse kust* [Ecosytem vision for the Flemish coast], AMINAL, Nature Department, University of Ghent and Institute for Natur Conservation, Brussels, part I. Ecosysteembeschrijving [Ecosystem description], 375 p. and partl II. Natuurontwikkeling [Nature Development] 130 p

3 An. Ruimtelijk Structuurplan Vlaanderen (1997) [Flemish Environmental structure Plan]. D/1998/3241/024. 594 p.

4 An. Provinciaal Ruimtelijk Structuurplan West-Vlaanderen (2002), [Provincial Environmental Structure Plan West Flanders] approved by Ministerial Decree of 6 March 2002.

the coast is also designated as a separate subspace, with its own desired environmental structure. These environmental structure plans are crucial for the future environmental development of the coast (on the landward side) and should consequently also impact management of the coastal space.

2002: Strategic policy plan for Tourism and Recreation at the coast[5].
For the first time, in this document, a long-term plan regarding tourism was created specifically for the coast. Although the plan starts out from a vision on tourism, links are also made to other sectors.

2003: The North Sea Master Plan
This represents a vision of a viable future, with sustainable management as the keyword. In this vision, the attempt is made to reconcile the different economic activities with the preservation of natural resources. Sustainable management is interpreted differently for sand extraction, maritime transport, fisheries, tourism, wind turbines, nature and real estate. It is all about keeping an eye on the specific without losing sight of the global picture
In 2003, the Minister for the North Sea formulated the objective of developing a sustainable management plan for the North Sea. It was then stated that the spatial planning of the North Sea would take place in phases and that there would be ongoing consultation with all actors concerned, taking into account the results of existing scientific studies.
In the first phase, new rules were established for sand extraction and electricity production, by *inter alia* delineating zones in which these activities are permitted and incorporating a sustainable approach in the approval procedure. In the second phase, protected marine areas were delineated and the necessary management measures defined. Both phases were successfully concluded and we now have a "land register" for the North Sea at our disposal.

Meanwhile, compared with the situation at European and even world level, Belgium is in the vanguard regarding spatial planning at sea. For most countries, spatial planning at sea remains restricted to their coastal waters, but is problematic beyond that. It appears that not the size but the approach and methodology are the key to success.

2005: Quality-of-life study for the coast[6].
The coast features very characteristic social problems, all of which were carefully mapped in the context of this study. This can be used as the basis for social policy for the coast.

2005: Memorandum[7] on the vision and primary elements for an integrated Coastal Safety Plan.
In 2004, the Coast Department of the Flemish Region commissioned an integrated memorandum for a future Coastal Safety Plan, based on a survey of key factors on the coast. This memorandum's starting point is also one main function, namely coastal defence, but the document refers to other coast-related interests as well, such as biodiversity, nature conservation and tourism.

2006: National biodiversity strategy
When elaborating a national strategy on biodiversity, the FPS Environment works closely within all competent regional and federal departments. The strategy will establish specific objectives to contribute to achieving the European objective of curbing the loss of biodiversity in coastal zones as well before 2010.

5 An. Strategisch beleidsplan voor Toerisme en Recreatie aan de kust (2002) [Strategic Policy Plan for Tourism and Recreation at the coast]. Westtoer. 355 p.

6 MEIRE, M. & BRACKE, P. (2005) Leefbaarheidsonderzoek voor de kust [Quality of live study for the coast]. Commissioned the provincial administration West Flanders. 152 p.

7 Visie- en krachtlijnennota. Naar een geïntegreerd Kustveiligheidsplan [Vision and lines-of-force memorandum. Towards an integrated Coastal Safety Plan] Ecoconsult, commissioned by Coast Department (AWMA). Ministry of the Flemish Community. 29 p.

Chapter 3:
Coordination Point for Integrated Coastal Zone Management and stocktaking.

Towards a coordinating structure for coastal management as part of the implementation strategy.

1. The Coordination Point

1.1. Partnership for coordination

The coastal zone is an area that is predominantly characterised by an intensive use by humans, and its natural ecosystem is therefore under great pressure. This ecosystem is important not only from an ecological perspective but also offers human activities and residential areas necessary protection. Nature in this zone has suffered from an explosive growth in human activities: real estate development, port development and industry, tourism and recreation, and all the related framework and infrastructure. Strengthening and restoration of nature in the coastal area and coastal defence are pre-eminent issues that emerge in coastal management. In the process, the economic and social interests of the coast are not being lost out of sight of either.

The Coordination Point for Integrated Coastal Zone Management was established in 2001 because there was a requirement for:

- structural consultation in the field of coastal management;
- objective communication to the wider public;
- central monitoring of developments in the coastal zone;

An additional important point for attention that emerged clearly during the development of a strategy for the coastal zone was the sectoral division of jurisdictions (see also Chapters 2 and 5).

It is part and parcel of integrated working that an intersectoral way of thinking predominates. Because administrations are classified according to sector (nature, economy, infrastructure, etc.), it was no easy task to work out which had to take the lead in integrated coastal zone management. Another issue was at what governmental level the lead could be taken.

In this context, lower levels of government also expressed the wish to be closely involved in the activities. In Belgium this was made possible by the conclusion of a partnership between the Flemish government and the province of West Flanders, the only province that adjoins the coastal zone. The province was able to assume this task, relying on its strong tradition of zone-directed working. This way of working starts out from the proper specificity and needs of the area when developing policy and management.

Because strong links exist between the province and municipalities, this local and important level of government is also involved in coastal zone management.

In 2001, a three-year agreement was signed between the province and the Flemish Region (the Flemish Minister for Environment and Infrastructure) on the creation and development of a Coordination Point for Integrated Coastal Zone Management.

In October 2004, after evaluation and fine-tuning of task, a new agreement started for a period of 3 years (until the end of September 2007). In addition to the partners of the first phase (2001-2004), the province of West Flanders (as project leader), Department of Nature, the European Commission (European Fund for Regional Development) and the Flanders Marine Institute for the Sea, two new partners joined in 2004: FPS Environment and AWMA – Department of the Coast. This resulted in a widening of the "sectoral" representation.

1.2. Multi-partner organisational structure

The structure of the Coordination Point, which still has to be submitted for approval to the political decision makers of the Coordination Point partners, was thought out very carefully to ensure good cooperation between the various actors. Consequently, because bridges needed to be built between all governments and partners, many other administrations and partners on the coast were also included in the organisational structure of the Coordination Point. In other words, in total more partners participate in the activities than there are financing partners.
The Coordination Point for Integrated Coastal Zone Management consists of the following bodies:

Steering committee (still to be established)
This high-level official committee should give direction to sustainable coastal policy and constitutes the direct link with cabinets involved. The municipalities, the province of West Flanders, the relevant departments as well as the institutions of the Flemish government and DG Environment of the federal government should be represented in the steering committee.

The steering committee should have the following terms of reference:

- open discussion of cross-sectoral themes (e.g. projects, policy proposals, policy plans) with all administrations concerned, relevant consultation and exchange of information. In this way, conflicts are avoided and a more sustainable coastal management is pursued.
- proposal of solutions to conflicts and preparation of strategic steering of sustainable coastal management. The steering committee's proposals are always submitted to the competent ministers for approval.
- organisation of a coastal forum – see below
- ad hoc working groups (if considered necessary).

Task force
This official group is not only responsible for following up the assignments that it receives from the steering committee and for the preparation of steering committee activities. It is also charged with the practical and concrete follow-up of integrated coastal zone management.

The task force is made up of representatives from the relevant departments of the provincial, Flemish and federal government.

Day-to-day management
Day-to-day management is responsible for the daily follow-up, directs the operation of the secretariat, fixes the Coordination Point's annual work programme and ensures the financial follow-up.

It is composed of one representative from each of the Coordination Point partners:
- The Federal Government Department of Public Health, Safety of the Food Chain and the Environment, DG Environment
- AWMA, Department of the Coast, Ministry of the Flemish Community
- AMINAL, Department of Nature, Ministry of the Flemish Community
- Provincial Government of West Flanders
- Flanders Marine Institute

Ad hoc working groups
The steering committee or task force can decide to set up an ad hoc working group to monitor a specific theme or issue.

Coastal forum
The existence of a coastal forum should facilitate the flow of information to general population and offer all involved stakeholders the possibility to push for new themes concerning sustainable coastal management.
It is not yet clearly defined how exactly this sounding board will be organised, and the steering committee will be responsible for its concrete implementation.

1.3. Objective and tasks of the Coordination Point

The objectives of the Coordination Point were defined in more detail on 1 December 2004 at a strategic planning meeting with the partners.
The Coordination Point was given the following **mission**:
"to stimulate sustainable management of the coastal zone in Belgium. The Coordination Point is also a contact point for all parties dealing with cross-sectoral themes in the coastal zone."
The strategic **objectives** of the ICZM Coordination Point are defined as follows:
- to communicate on and create a carrying capacity for integrated coastal zone management
- to act as contact point for integrated management
- to cooperate on the Recommendation of the European Parliament and of the Council of 30 May 2002 concerning the implementation of Integrated Coastal Zone Management in Europe
- to monitor coastal zone sustainability indicators (see below)
- to promote planning and policy integration in the coastal zone

In so doing, the Coordination Point offers a platform for consultation concerning and integration of coastal policy-making, but it cannot act in the place of the competent administrations.
To meet the strategic objectives, the ICZM Coordination Point develops the **activities** below. A work programme is drawn up on an annual basis for further development of these tasks.

a. Communication and public awareness campaigns:
- a.1. Specific actions in the context of integrated coastal management in order to create a carrying capacity;
- a.2. Developing publications (brochures, folders, posters, articles, website) on specific, coast-related, cross-sectoral themes, or contributing to other publications in this respect;
- a.3. Open days, study days, workshops and symposia;
- a.4. Single-handed or shared organisation of study days, workshops and symposia;

b. Contact point
- b.1. An information desk, supplying information in an objective way to policy makers, teachers, students, private individuals, etc. in Belgium and beyond;
- b.2. Information dissemination to similar actors in the international community;
- b.3. Participation in European and international projects and networks relevant for integrated coastal zone management;

c. Implementation of the European Recommendation
- c.1. All Coordination Point activities must fall within the framework of sustainable coastal management. Support will be given to the submission of reports to the European Commission in the context of the recommendation, within the set deadlines;
- c.2. Participation in the ICZM Expert Group of the European Commission at the request of the administrations concerned;

d. Sustainability barometer
- d.1. Keeping and updating the information collected on the basis of the indicators that are included in the sustainability barometer for the coast;
- d.2. Stimulating the use of coastal indicators as a policy-supporting instrument;

e. Planning of integration and coastal policy
- e.1. Organizing the secretariat of specific integrated consultative structures;
- e.2. Participation in relevant steering committees and consultative committees, in order to obtain a clear picture of new policy developments and plans for the future. The purpose of this is to assist the various interest groups of the coast to improve their mutual policy adjustment.

2. Implementation of the European Recommendation: where do we stand now?

With regard to the implementation of the European Recommendation concerning integrated coastal zone management, the Member States were requested in the first place to draw up a national stocktaking of all important actors, laws and institutions that impact coastal zone management. Subsequently, a strategy should be developed on the basis of the results of this stocktaking in order to further shape integrated coastal zone management.

2.1. National stocktaking

A first **thorough and complete analysis** of the status of coastal management in Belgium was drawn up under the "TERRA – Coastal Zone Management" project (Recommendations for integrated coastal zone management in Belgium, June 2001). This report was submitted for approval to the administrations concerned but not to the general public (stakeholders). An – admittedly more limited – update of the report was drawn up by the Maritime Institute (University of Ghent) in the context of the "COREPOINT Coastal Research Policy – Integration" project. These reports were therefore created in the context of European projects.

A description of **functions** of **and activities** on the coast was published in 2004 in the form of De Kustatlas Vlaanderen /België (The Coast Atlas Flanders/Belgium, K. Belpaeme and P. Konings, 2004, 100p.). The Coast Atlas was designed as an attractive book of scientifically accurate photographs but which was also accessible to the general public. The book attracted much interest, not only with policymakers but also with coastal residents and interested people, who were able to buy it in bookshops. Since November 2005, the Coast Atlas is also available on-line in four languages (www.kustbeheer.be).

A presentation of the **condition** of the coast was available for the first time in 2003 in the form of coastal sustainability indicators. A description of the process and the results is included in Chapter 4.
A first overview of the **legislation** with regard to the coast was drawn up in 2000. Since 2002, an overview is updated annually with new and amended laws, and a real **Coast Codex** appeared in 2004, which contains the texts of all laws concerning the coast.

On the national level, the **Federal Planning Bureau (FPB)**, a public body, is actively engaged in commissioning studies and making forecasts on economic, socio-economic and ecological policy issues. To this end, the FPB collects and analyses information, explores possible developments, identifies alternatives, evaluates the consequences of policy measures and makes proposals. Its scientific expertise is at the disposal of government, parliament, social partners and national and international institutions. The FPB ensures a broad spread of its activities. The results of studies are disseminated to the community and contribute to democratic debate. One of the FPB's activities is the preparation of the Federal Sustainable Development Plan. Action 20 of the 2nd **Federal Sustainable Development Plan** concerns the sea and coastal zones and makes specific references to Recommendation 2002/413/EC.

This Federal Sustainable Development Plan was established pursuant to the law of 5 May 1997 concerning the coordination of the federal policy concerning sustainable development. As stipulated in this law, the Federal Plan establishes "the measures that have to be taken at federal level to achieve the objectives of sustainable development". The Federal Plan features normative as well as indicative planning. Although the Plan is established by means of a royal decree, it is not imperative and has no direct consequences for citizens. The plan therefore has no statutory power but describes the lines of policy that the government intends to implement. The measures that it contains are to be elaborated further and implemented by means of the customary decision-making procedures and submitted to parliament for approval where required.

Sustainable development management involves numerous challenges, viz. restoration of economic growth, creation of new jobs, meeting the costs of an increasingly ageing population, strengthening social security, increasingly accessible healthcare, effective public administration, environmental protection and sustainable mobility. The government wishes to address these challenges with this plan. This is necessary to protect future generations. In so doing, the federal government is associating itself with a broad international movement.

In addition to the activities of the Federal Planning Bureau, an overview of sea-related **legislation** was also drawn up in the context of the **Belgian Coastguard**.

There is therefore no complete analysis in which conflicts between operating structures or between actors and gaps in the legislation are identified. However, an analysis is made on an ad hoc basis when specific actions are undertaken. A bottleneck analysis was performed in the context of the European Recommendation concerning integrated coastal zone management. This analysis took the form of a brainstorming exercise on sea-land interactions (see Chapter 5).

2.2. Strategy for ICZM implementation

The consultation with the administrative coastal actors showed that there exists *little preference for developing a new strategy* for the coast, but rather for making use of existing policy plans and instruments. Many different actions can be integrated in the context of the approach elaborated to give shape to integrated coastal zone management. An important aspect of this exercise is environmental planning, which takes place at sea as well as on land. Other elements, e.g. sustainable cleaning of beaches, the activities of the Federal Sustainable Development Plan and communication to the general public and the parties involved, are part of the approach developed for integrated coastal zone management.

The points below discuss the actions on land and at sea that have been organised in the context of the approach for integrated coastal zone management. The European Recommendation also refers to actions that are undertaken at sea as well as on land in the management of the sea-land interface. This interface is seen as being very important in Belgium, and is therefore also discussed separately in this document, viz. in Chapter 5.

2.2.1 Actions on land: Environmental Planning on Land

Environmental planning is an important instrument in the elaboration of an integrated strategy. As far as the landward side is concerned, the coast is designated as an urban network in the Flanders Environmental Structure Plan. In the Provincial Environmental Structure Plan, this zone was included as a separate subzone. Subsequently, policy priorities were fixed during drawing up of future detailed development. These priorities were laid down by decree and underwent a procedure of public scrutiny.
During formulation of the policy priorities, an attempt was made to optimise the use of space while at the same time giving enough space for diversity.

The environmental policy priorities are:
- integrating tourism and nature;
- concentrating activities in existing centres;
- safeguarding open space;
- utilizing airport and seaports as economic gateways;
- integrating economic developments with tourism and recreation;
- the coastal road connects the different seaside resorts;
- optimisation of accessibility and mobility;

A few examples are given below to illustrate in which way environmental planning can serve as an instrument for developing an integrated strategy.
The initiatives can fall within or outside planning procedures laid down by decree.

a) *Environmental plans for beach and dyke management*
The coast and especially beaches, dunes and the dyke are the main tourist attractions of West Flanders. The demands for new activities and construction on beaches and dyke increase each year: terraces, water-sport clubs, sports infrastructure, playgrounds – the list goes on and on. And each of them looks for their own special spot on the beach and dyke. Until

today, the highly specific use of the beach (principally as a nature reserve) often leads to discussion, since in such zones in principle little is possible. For a number of years, not only the licensing authorities (coastal municipalities as well as the Flemish Region) but also the owners and operators of these facilities have been asking for the creation of a clear legal framework to remove the existing uncertainties.
A start was made in 2002 with the drawing up of a number of new zoning plans, so-called **'environmental implementing plans' (EIPs)** for beaches and dykes at seaside resorts. Starting from an environmental policy framework based on sustainable coastal development, the various tourism and recreational functions and the related constructions are compared. The tourism (economic) benefits are weighed against the natural (ecological) costs. This led to the creation of a number of zones where, depending on the area, tourism sometimes has priority over nature and visa versa. Of course, the basic sea-defence function of beaches and dykes was always given priority.
The ICZM Coordination Point was responsible for organising the consultation between the different interested partners (coastal municipalities, Flemish administrations, water-sport clubs, nature associations, fishermen, hotel & catering, etc). A deliberate choice was made to conduct intense consultation, even before the start of the subsequent decree procedure. This with the aim of closely involving the actors in the rationale behind the choices made and of looking together for solutions to any possible problems.

b) *Integrated organisational plans for sea-defence dunes*
For people on holiday, dunes mainly constitute a shortcut to the beach and a place to sunbathe. But the dunes also have a major function regarding coastal-defence. Damage to the dunes can increase the risk of flooding. The Department of the Coast of the Flemish Community closely monitors the condition of the dunes to be able to conduct proper management based on conservation and to repair the dunes to fully ensure their function as natural coastal defence structures. Spatial plans are established for all dunes that provide coastal-defence. The Department of the Coast tackles a number of areas annually in order to eventually achieve complete coastal coverage. The creation of each of these plans for the future of these dunes involves extensive consultation with all parties involved, including local authorities and users of the area. In the process, the attempt is made to gear the different uses to each other as far as possible. The spatial plans are subsequently integrated into specific organisational plans.
In addition to consultation between the parties concerned, attention is also paid to communication with local residents and users, with a clear explanation of why certain choices are made.

c) *Strengthening nature as part of Integrated Management*
In the coastal areas nature has suffered a great deal from human activities. In Belgium, the impact is even greater due to the high population density in this area(an average of 672 inhabitants/km^2 in 2004), the large number of day-trippers (18.4 million in 2004) and the limited length of the Belgian coastline (65 km). The idea seems to have been growing for a few years that nature on the coast is the equivalent of the goose that laid the golden eggs, *inter alia* in the form of a high-quality product for tourists.
Since the mid-1990s, the Flemish government has made special efforts to purchase dunes, establish Flemish Nature Reserves and draw up management plans. While these management plans are being developed, the users of the area and the relevant municipalities are also involved, and there is active communication with local residents during the planning

process. The organisation and management of the areas fit into a legal framework (Flemish Nature Conservation Decree), which also provides for a public inquiry.
However, governments are not alone in committing themselves to nature conservation on the coast. Non-governmental organisations (NGOs) also contribute by acting as custodians or playing a role in communication and public-awareness campaigns.

2.2.2 *Actions at sea*: "Master Plan for the North Sea"

In 2003, the Minister for the North Sea formulated the objective of developing a sustainable management plan for the North Sea. It was stated then that the spatial planning for the North Sea would take place in phases and that there would be systematic consultation with all actors concerned, while taking account of the results of existing scientific studies.
In the first phase, new rules were laid down for sand extraction and electricity production, by *inter alia* delineating zones in which these activities are permitted and incorporating a sustainable approach in the approval procedure. In the second phase, protected marine areas were delineated and the necessary management measures defined. Both phases were successfully concluded and we now have a "land register" for the North Sea at our disposal.
Meanwhile, compared with the situation at European and even world level, Belgium is in the vanguard as regards spatial planning at sea. For most countries, spatial planning at sea remains restricted to their coastal waters, but is problematic beyond that. It appears that not the size but the approach and methodology are the key to success.

2.3. Communication and awareness-raising initiatives

2.3.1 In 2002, the Coordination Point initiated a large-scale **communication campaign** called **"De Kust, kwestie van evenwicht"** [The Coast, a question of balance]. The aim was to make a broader public aware of the need to manage the coast in a more sustainable manner. The campaign consisted *inter alia* of a series of postcards that shed light on various aspects of the coast, a holiday treasure hunt and a brochure and a poster, which enjoyed wide distribution. The campaign logo was such a great success that it even became the logo for the ICZM Coordination Point.

2.3.2 The **Week van de Zee** [The Week of the Sea] is already in its tenth edition and is a great success year by year. It was originally aimed at children in primary school, with the general objective of telling them about the coast and the sea and getting them involved. New target groups have also been addressed since 2004: holidaymakers, tourists and the general public in 2004-2005;

from 2006 the fishery sector was also put in the spotlight (with the theme "De zee smaakt naar meer" [The sea tastes of more]).

2.3.3 In order to support communication and strengthen awareness of the subject, the Flanders Marine Institute publishes a magazine, the 'Grote Rede', since 2001. The magazine aims to provide information and give a voice to opinions about topical themes that *inter alia* connect with the concept of "integrated coastal zone management". Interest in this magazine is increasing, especially among coastal inhabitants and local concerned parties. In addition, it is an ideal forum for reaching a wide public with well-founded articles on unusual coastal themes.

2.3.4 Cooperation between the Coordination Point and municipalities: working towards clean beaches in a sustainable manner. When specific projects are set up, it is shown what added value sustainable coastal management can bring and how municipalities can contribute. In 2002, the Coordination Point launched an initiative around "sustainable beach management", aimed specifically at local authorities. The objective of this project was to develop, together with the municipalities, a more natural way of cleaning beaches. Beaches constitute the first line of defence against incoming waves, while the high-water line fulfils an important function as a food source for animals, as a sand-retaining structure and as a growing place for primary colonisers. In Belgium, virtually all beaches are intensively cleaned with beach-cleaning machines, with negative consequences for the beach ecosystem. In fact, the machine removes the natural high-water line in addition to real litter and disrupts the beach structure. In order to highlight the importance of the high-water line and the beach, a workshop was first organised for the technical services of the coastal municipalities, who are responsible for keeping the beaches clean. Since 2003, a manual clean-up campaign has been organised annually with volunteers, under the name "Lenteprik" [Spring-clean]. In conjunction with this awareness campaign, the municipalities were encouraged to set up pilot projects around manual cleaning. Such projects can be incorporated in social employment programmes.

2.3.5 Awareness campaign **"De noordzee, onze elfde provincie"** [The North Sea, our eleventh province]
Fortunately, the time of 'anything goes', when everything was permitted at sea (right up to waste incineration!) is a thing of the past. With the master plan for sustainable management of the North Sea, the federal government assumes responsibility for our eleventh province. Good communication is crucial for the implementation of this master plan. Under the slogan "onbekend is onbemind" [unknown is unloved], the DG Environment of the Federal Government Department of Public Health, Safety of the Food Chain and the Environment developed a communication campaign to make people enthusiastic about our eleventh province.

This campaign consists of:
- a folder featuring interesting facts about users of the North Sea and a few words of explanation about the master plan;
- a map of the North Sea with an overview of the many activities there;
- a website with a sea of details; www.de-noordzee.be
- and an eye-catching mobile exhibition with which we will comb the coast in the months to come and make residents and holidaymakers enthusiastic about this forgotten piece of paradise

2.3.6 Zee in Zicht exhibition
This exhibition about the North Sea entitled "Zee in Zicht" [Sea in Sight] took place during the summer of 2003 in the Museum for Natural Sciences in Brussels. The exhibition then went on tour to other venues.
This exhibition aimed to show visitors life in the sea as well as the human activities performed there. The main motive of the exhibition was a journey, a stroll in the Belgian part of the North Sea. At each step, visitors discovered not only the fauna and flora but also the human activities (fishing, sand extraction, dredging, shipping, pollution, wind turbines, nature reserves, aquaculture etc.) that are most characteristic for this zone.
It was the intention to give a complete inventory of everything that lives and happens in the Belgian part of the North Sea, on the seaward side of the coastal zone.

2.3.7 "Mosselen Natuur" [Mussels naturally] exhibition
The practice of aquaculture in sea has a direct impact on the coast (*inter alia* on water quality). This subject is also the theme of an exhibition (from 4 May 2005 to 30 June 2006):

- Mussels go on a journey. They range over all Europe: all the mussels that we eat in Belgium are imported.
- How healthy are mussels? Day in day out, they filter substances from the water, which sometimes stay in their bodies. So should you still eat mussels at anytime and anywhere?
- The study of the mussel's medical properties suggests very promising future applications.
- Mussel farming receives a great deal of attention.
- Tradition, expertise, trade and sustainable development. Its economic and social significance on the coast should not be underestimated.

Chapter 4: Coast barometers: sustainability indicators for coastal policy

1. Indicators in the starting-blocks in Belgium

An "indicator" has to give an indication of the degree of development of an element or condition in relation to an objective to be reached. However, the term "indicator" is used in a much wider sense in this chapter.

A sustainability barometer is sometimes set up in order to monitor a complex issue like sustainable development. Such a barometer consists of a set of data or indicators, which enable complex phenomena to be described in a simple manner. The "sustainable character" of an area can be monitored by means of regular evaluation of these indicators.

The ICZM Coordination Point developed a sustainability barometer for the coast. This should make it possible to monitor coastal evolution, give advice on taking decisions for future coastal developments (policy support) and ensure good communication about the coast to a wide audience. In addition, working with indicators fits in perfectly with implementation of the European Recommendation concerning ICZM. The recommendation urges the European Member States *inter alia* to make use of indicators to monitor developments, draw up a stocktaking exercise of the coastal actors and subsequently involve the latter in the policy-making process.

The process of the development of indicators for the Belgian coast started in 2000 in the context of the TERRA-CZM project. A study, in which a six-priority strategy for the coast was developed, was the initial impetus for the development of indicators for a sustainability barometer for the coast[8]. This was achieved by means of consultation with 21 key figures at various domain meetings

The six priorities in this strategy are:
- preservation and strengthening of the sociocultural capital
- quality improvement of the residential and social environment
- support for tourism and recreation
- improvement of the environment and nature on the coast
- reinforcement of the economic fabric
- realisation of administrative innovation

These priorities were put forward during the consultation process, but were not as such a part of a policy plan for the coast. However, they were used for grafting on the indicators. After the above priorities had been established, a participative process was started by the ICZM Coordination Point in 2001. This took the form of workshops in which some 70 coastal actors from various points of view participated. This was to lead to the selection of 20 indicators specifically for monitoring sustainable development on the Belgian coast[9].

For the selection of these 20 indicators, the original starting point was an extensive list of 301 possible candidates. Together with end-users – including municipalities, the hotel and catering industry, port authorities, environmental associations, civil servants, and sports clubs – the 50 most relevant indicators were chosen from this extensive list in a first step. Because following up 50 indicators would have required a great deal of time, the list was discussed again and reduced to a workable set of 20 indicators. Finally, data for a number of years were requested for each of these 20 indicators for the entire coast, and where possible for individual coastal municipalities. Since 2003, the background information and the actual indicators can be consulted on the ICZM Coordination Point website: www.kustbeheer.be/indicatoren.

This **website** not only provides access to the data but also to a **technical file** for each indicator. It is accessible for everyone and is dynamic in character. When new information becomes available, it is put on the website as quickly as possible. The ICZM Coordination Point is jointly responsible for the management of the site with the Flanders Marine Institute.

2. Which indicators for our coast?

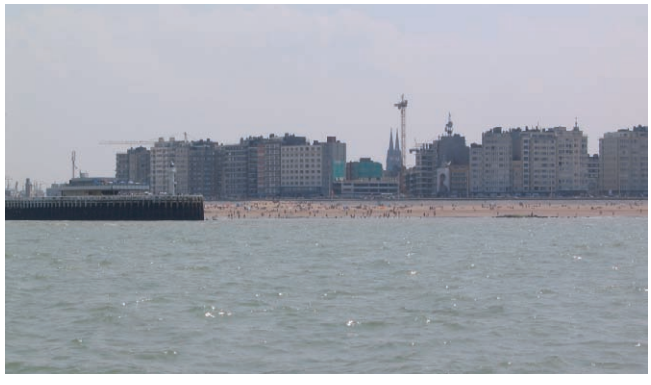
In the selection of indicators for the Belgian coast, various criteria were taken into account: a balanced spread over the administrative domains, information availability and quality, communication value and usefulness for evaluating a coastal trend or target objective.

As already mentioned, in 2002 coastal actors determined by means of a participative process which 20 indicators were the most important for the Belgian situation. The six priorities and the matching indicators are given below. It should be pointed out that some indicators are relevant for more than one priority.

Preservation and strengthening of the sociocultural capital
- Differences in salary
- Protection and stocktaking of real-estate

Realisation of administrative innovation
- Implementation of integrated coastal zone management

Quality improvement of the residential and social environment
- Surface area of protected area
- Ageing rate
- Residential comfort
- Utilisation of public transport in day tourism to the coast
- Surface area of dedicated coastal habitat
- Number of motor vehicles on the roads



8 Paredis, E., Block, T. & J. Van Assche. (2001). Op weg naar duurzaamheidsindicatoren voor het kustgebied [En route to sustainability indicators, University of Ghent, Centre for Sustainable Development, commissiojned by the Ministry of the Flemish Community, Departement of Environment and Infrastructure, AWMA-AWK

9 Anon. (2003). Voorstel voor een duurzaamheidsbarometer voor de kust [Proposal for a sustainability barometer for the coast]. Environmental Consultancy and Assistance (ECOLAS): Antwerp, Belgium. xi, 45 + annexes pp.

Support for tourism and recreation
- Share of public transport in day tourism to the coast
- Share of highly accessible accommodation units
- Amount of tourists that stay-over

Improvement of the environment and nature
- Surface area of protected areas
- Surface area of dedicated coastal habitat
- Quality of beach water
- Residual waste
- Number of motor vehicles on the roads
- Number of observed pollution incidents (oil etc.)/flight hour
- Fish stocks that are not being over-fished

Reinforcement of the economic fabric
- Economic value of ports
- Salary pressure
- Ratio of company start-ups to bankruptcies
- Added value per employee
- Employment in tourism
- Change in employment in fisheries and agricultural sectors
- Fish stocks that are not being over-fished
- Unemployment rate

3. A European set of sustainability indicators

Belgium was clearly a pioneer in drawing attention to sustainability indicators. But also the European ICZM expert group, composed of all 20 coastal member States and two candidate States, recognised the importance of indicators and set up an "indicators and data" working group (WG-ID) in 2003. The latter was instructed to draw up a list of indicators and assist in coordinating the definition of the way in which the member states should calculate the indicators.

After having studied the various possibilities for 12 months, the WG-ID proposed that member States and candidate States employ two sets of indicators:

- An indicator set to measure the progress of implementation of ICZM ("progress indicators")
- A core set of 27 indicators (composed of 44 measures) for sustainable development of the coastal zone ("sustainability indicators").

These two sets are directly interrelated. Therefore, the more an integrated approach permeates all governmental levels and is used in organising activities in the coastal zone, the greater will be the chance of noticeable improvement in the situation on the coast. And the more the situation on the coast improves, the greater the willingness of the actors concerned to introduce additional aspects of ICZM will be. In this way, the indicators can work in synergy and provide a positive contribution to the development of long-term management for the coastal zone.

Because the Belgian sustainability barometer came about by means of a different, participative process, it is evident that the indicators are not identical to those in the WG-ID list of sustainability indicators. About seven indicators appear on both lists. In November 2004, both European indicator sets were approved by the European ICZM expert group.

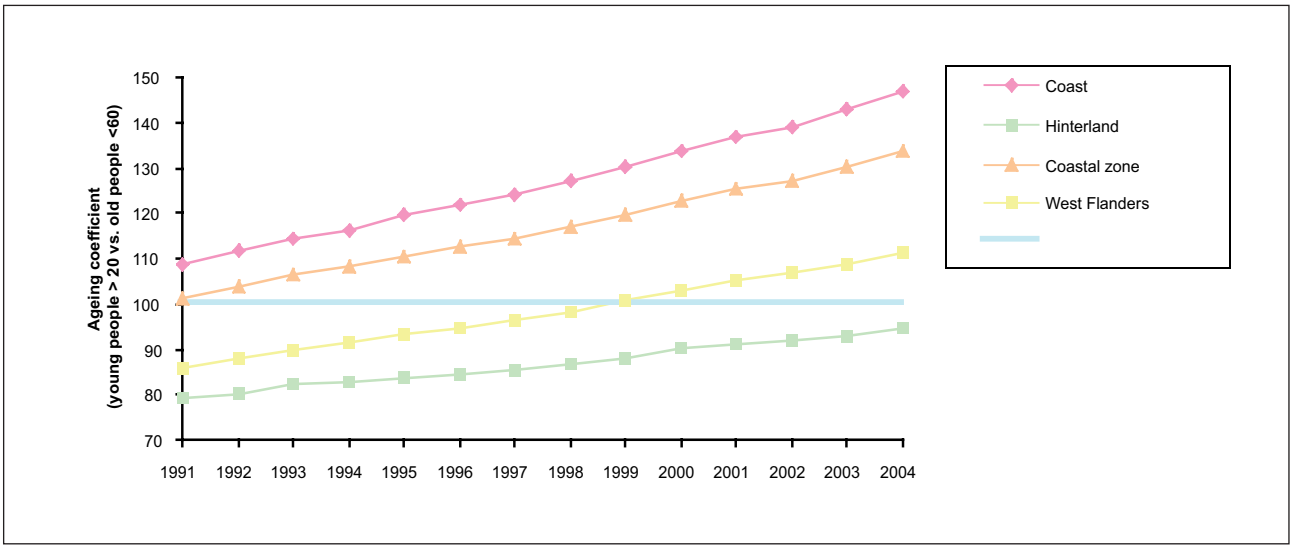
4. What do the indicators teach us?

The indicators are a good set of tools for monitoring coastal zone characteristics. The latter are often very typical for the coastal zone and therefore differ fundamentally from those of their inland counterparts. Analysis of how the coast differs and comparison of the results obtained from the use of indicators at the coast with results from the hinterland, province or Flanders as a region reveals specific problems. These may justify specific management for the coast.

A number of indicators are worked out below by way of illustration. The elaboration of all indicators can be found on the website: www.kustbeheer.be/indicatoren. In order to form a picture of developments in the priorities set, a trend is given on the website for each indicator and it is stated whether the latter is positive, negative or neutral. However, it is certainly not the intention – even if this were possible – to reduce individual trends per indicator to one single figure for the coast. Ecological, social and economic aspects are important and must be looked at together.

a. Priority: Quality improvement of the residential and social environment

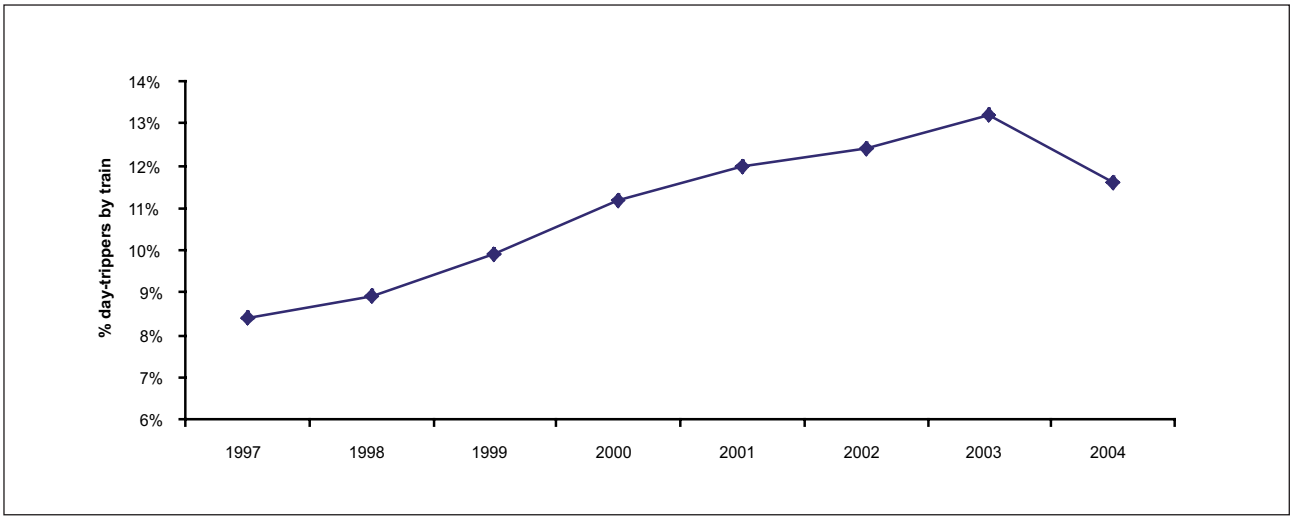
- *A short evaluation of the "Ageing rate" indicator:*
  The coast is characterised by a high rate of ageing. In West Flanders, there is a general decrease in the number of young people. This trend is even stronger on the coast. In 2004, for 100 inhabitants younger than 20 years there were 132 inhabitants older than 60 years. The ageing rate in the 147 coastal municipalities is higher than that in the 94 inland municipalities. This typical age structure of the population on the coast has an impact on various policy domains, including housing, employment, communication, recreation and education.



Graph 1: Evolution of ageing rate 1991-2004

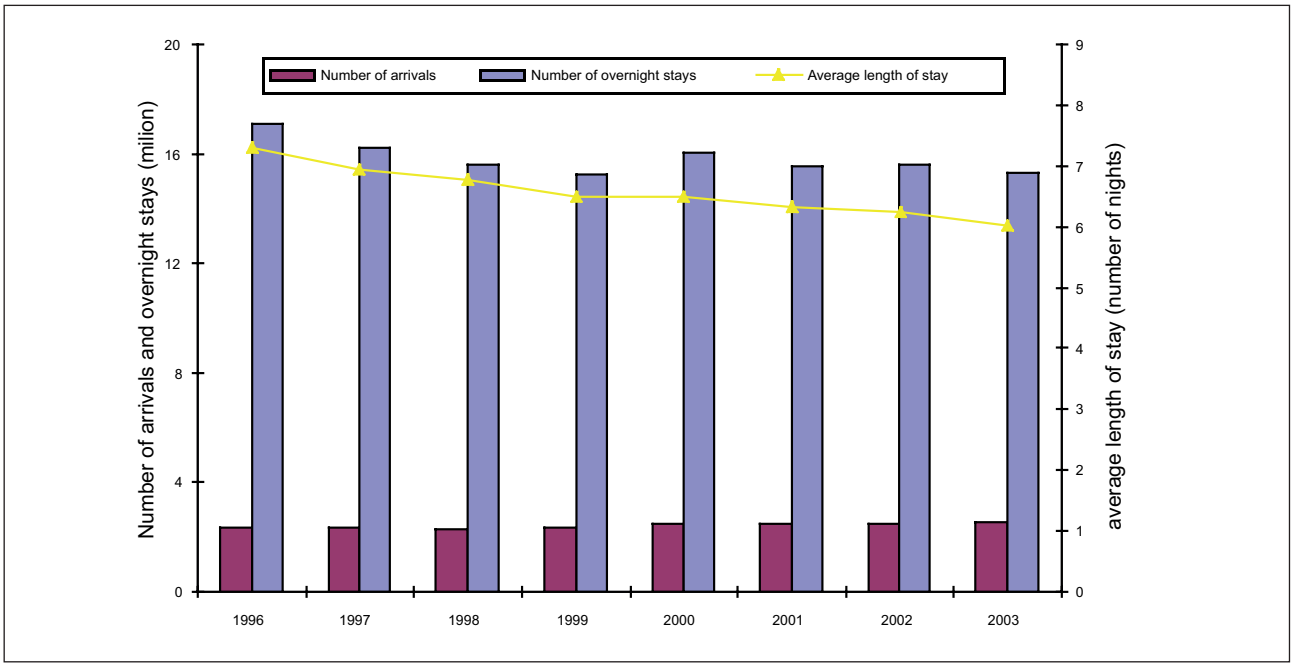
b. Priority: Support for tourism and recreation

- *A short evaluation of the indicator "Share of public transport in day tourism to the coast"*
  Ever year, the sun, sea and sand attract thousands of people to the coast for a day-trip. The traffic problems that this influx of tourists entails can be avoided by more intensive use of public transport. Generally speaking, people have been making more use of public transport in recent years. In 2004, 3.2% more day-trippers used the train to get to the coast than in 1997. However, in 2004 a decrease of 1.6% was seen compared with 2003. This can probably be explained by the disappearance of a number of favourable train fares and a poor summer. In order to reduce the mobility problems on the coast, further expansion of a high-quality public transport system is necessary.



Graph 2: Share of day tourism by train in total day tourism to the coast (in %)
Source: Westtoer

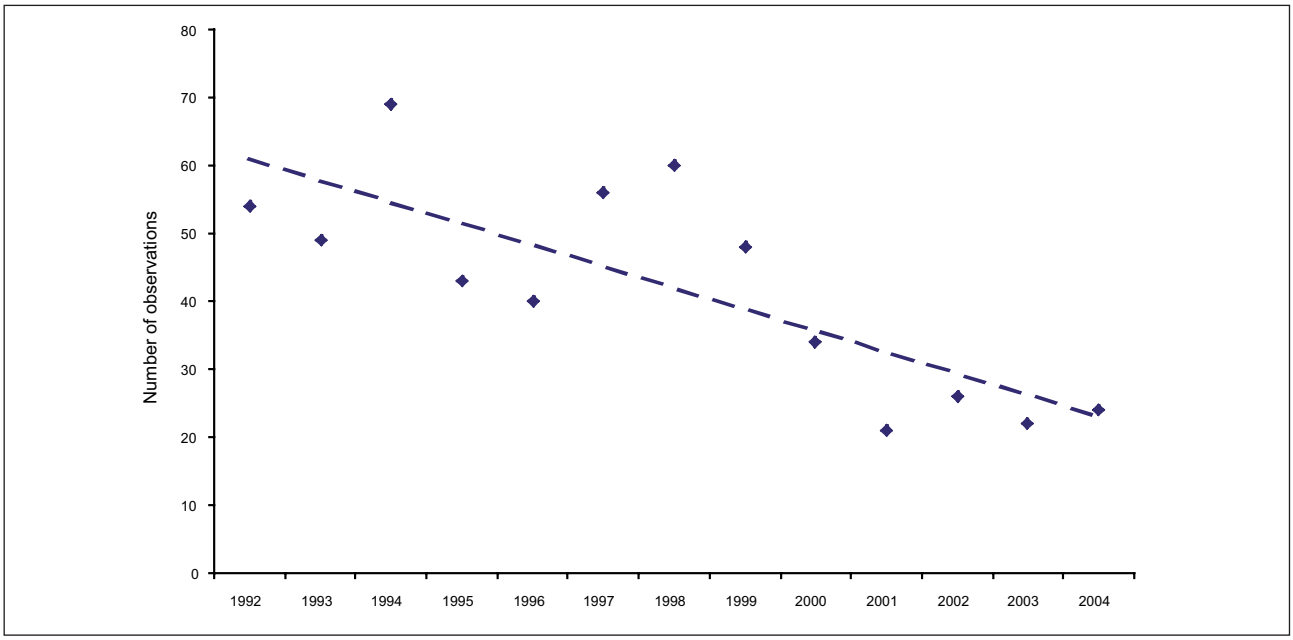
- *A short evaluation of the indicator "Extent of stay-over tourism":*
  Many Belgian and foreign tourists visit the coast, sometimes staying overnight. In 2003, 7.7% more people stayed for a night in commercial accommodation on the coast than in 1996. However, the number of overnight stays in the same period fell by 12%. The increasing number of arrivals and the decreasing of overnight stays show that the coast is more attractive as a short-holiday destination than for a longer holiday.



Graph 3 Evolution of arrivals in commercial accommodation for the coastal zone viz. coast, Bruges and hinterland municipalities, 1996-2003
Source: Westtoer, corrected NIS statistics

c. Priority: Improvement of the environment and nature

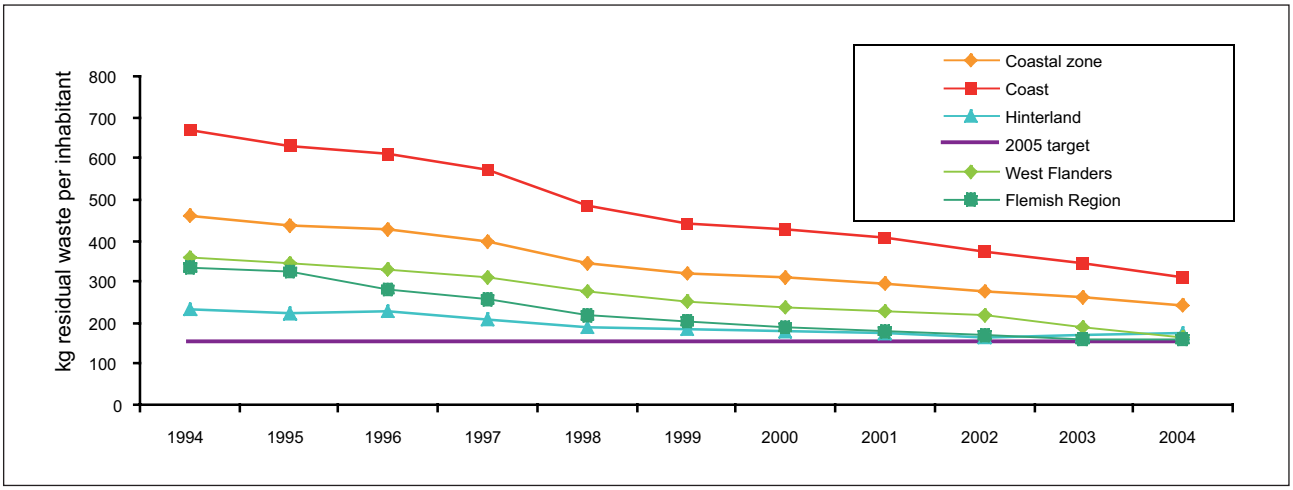
- *A short evaluation of the indicator "Number of observed pollution incidents (oil etc.)/flight hour:*
  The North Sea constitutes a special area in which no visually observable operational oil discharges are permitted (MARPOL 73/78). Nevertheless, 54 oil discharges were observed from the air in 1992. In 2004, the number of oil discharges fell to 24. The annually estimated volume of discharged oil exhibits a decreasing trend. Apparently, stricter regulation and increased surveillance are having a positive effect.



Graph 4: Number of oil discharges observed by Belgian surveillance aircraft from 1992 to 2004
Source: BMM-MUMM

- *A short evaluation of the indicator "Residual waste":*

The municipalities in the coastal zone have already come a long way in regard of the reduction of residual waste. In 2004, the coastal zone produced an average of 244 kg of residual waste per inhabitant, compared with 462 kg in 1994. However, in 2004, the coastal municipalities still produced significantly more waste (viz. an average 311 kg/inhabitant) than the municipalities in the hinterland, where the average was 172 kg of residual waste per inhabitant. In order to take into account the impact of tourism on waste production, use is made of correction factors while calculating the averages for the coastal municipalities. But, even after these correction factors have been taken into account, the set objectives are not achieved.

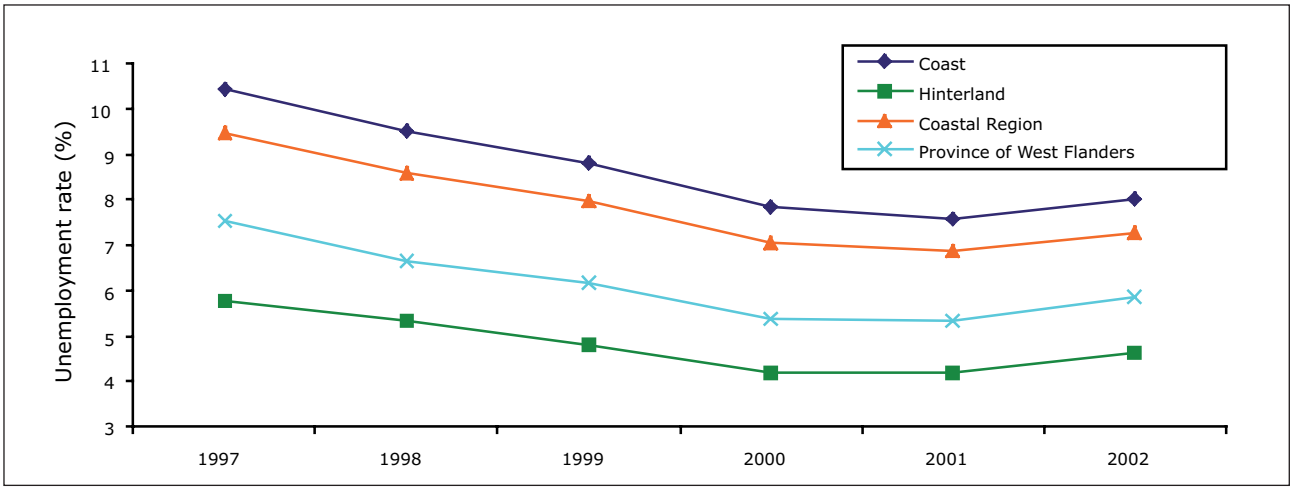


Graph 5: Evolution of residual waste figures (in kg/inhab/year) between 1994 and 2004
Source: OVAM

d. Priority: Reinforcement of the economic fabric

- *A short evaluation of the indicator "Unemployment rate":*

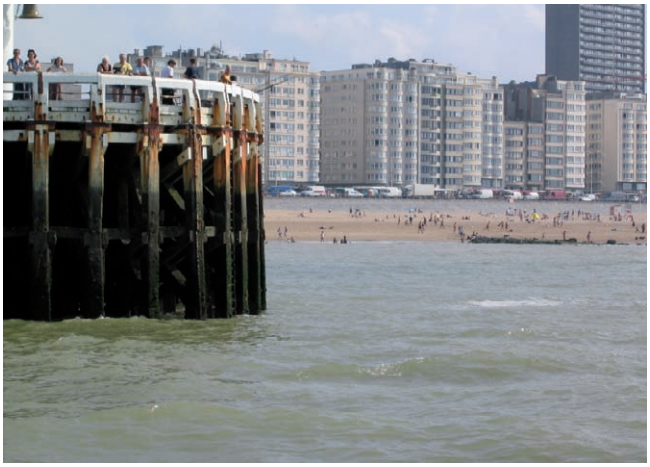
The unemployment rate is the ratio of the number of unemployed job seekers to the total labour force. Unemployment in the coastal zone fell between 1997 and 2002 by 2.2% and shows a similar evolution to that in West Flanders. However, unemployment in the coastal municipalities (8.3% in 2003) still remains higher than in the hinterland (5.3% in 2003) and in West Flanders (6.3% in 2003).



Graph 6: Evolution of the unemployment rate between 1997 and 2002.
Source: Steunpunt Sociale Planning, Data Steunpunt WAV

5. Progress indicators

In addition to the monitoring of specific sustainability indicators, as described above, work was also started with progress indicators in the context of two workshops that took place in the autumn of 2005. Initial tests show that there was a clear evolution in the ICZM process in Belgium in the period between 2000 and 2005. Clear progress was recorded in various areas in the creation of a framework for ICZM. For example, there was a positive score for organising ad hoc actions and projects, setting up cooperative projects, involving interested parties, and the use of indicators and studies about the coast. Although we cannot yet talk of a fully integrated process, clear positive trends can be made out.



6. Continuous attention to and adjustment of the indicators

Making the indicators available via a website is a first step. However, wanting them to be really used also means drawing attention to them in a different way. The first **"Kustkompas"** [Coastal Compass] appeared early in 2006. This publication, which is aimed at policymakers, civil servants and coastal actors, gives a state of affairs of the situation at the coast and provides suggestions for a more sustainable approach. Some 50 scientists are involved in the production of the publication as authors or readers.

The extensive process that was followed in creation of the Kustkompas showed that there is a need for adjusting the indicators. That is why a large-scale evaluation was planned in 2006. This will be preceded by an analysis of strengths, weaknesses, opportunities and threats (SWOT) of the way in which the indicators are currently used.

Chapter 5: Sea-land interactions: specificity of the sea-land interface

1. Rationale and objectives: why a brainstorming exercise about sea-land interactions?

A central element of the recommendation concerning integrated coastal zone management is formulated as follows: *"**improved coordination of the actions** taken by all the authorities concerned both at sea and on land, in managing the sea-land **interaction**"*[10]

Certain functions (economic activities or natural phenomena) of the "sea space" and of the "land space" do not exercise any influence on the other side of the **interface**. However, other functions can have a positive or negative influence (economic, ecological, social) on the other side. In this second case an interaction occurs. The interactions between sea and land are therefore determined by the influence factors of one component (and the activities that take place there) on the other (and the activities that take place there).

In April 2004, at a meeting of the European ICZM Expert Group, it was stressed by the Belgian delegation that clear identification of these influence factors is an important precondition for compliance with the European recommendation. This position was supported by the Dutch delegation. The proposal of stocktaking of sea-land interactions thereafter took shape during a Dutch/Belgian brainstorming exercise. The current Belgian report includes only the results of this brainstorming that are relevant for Belgium. The approach in The Netherlands was different, but following the trajectory together proved to be an enriching experience. Subsequently, it was examined what sea-land interactions could be better management through improved coordination of actions and further integration.

It is difficult to make an exhaustive list of relevant influence factors. Consequently, it should be defined what should be examined, what the extent of the interface is, and at what level the problem should be addressed. Indirect interactions are already managed in other forums, in which coordination between administrative entities is organised at the national level (cooperation between the regions and the federal government) and the international level (regional treaties, European directives and other legislation). Examples of this include pollution originating from rivers (which accounts for an average of 80% of pollution of the marine environment), pollution originating from shipping in traffic-separation systems far from the coast (which can affect the coast) or the problem of the introduction of non-indigenous animal species by ballast water. These indirect interactions are not addressed in the current interface analysis.

When establishing what is in fact relevant for the sea-land interface, further elucidation of the definition of the term coastal zone is of great importance:

> *The **coastal zone** is defined as a strip of land and sea of varying width that consists of a terrestrial component that is influenced by the proximity of the sea, and a maritime component that is influenced by the proximity of the land, and which comprises the natural coastal systems and the areas where human activities involve the use of coastal resources.*

During the brainstorming, it was decided to use a definition of the term "coastal zone" that would enable the direct (primary/secondary) interactions between land and sea to be mapped (local, greater scale of direct effects), but without strictly zooming in for example on the beach and the zone up to one nautical mile from the coast. Because of those reasons, the following scale was opted for: a coastal zone that extends from the polders to the 12-mile zone at sea (which corresponds to the limit of the territorial sea, a zone in which Belgium exercises sovereignty). Within those limits, a specific interaction can apply to the entire coastal zone or a certain part of it.

It should also be pointed out that, within the coastal zone, the sea has a special character because it constitutes a collective heritage; involvement and feelings of ownership extend much further than to the inhabitants of the coastal municipalities.

2. What are the interactions: What emerged from the Belgian brainstorming?

Starting from the Belgian/Dutch brainstorming, the list below of relevant interactions of every type – land to sea and sea to land – for Belgium was drawn up (the order in which they appear is not in relation to their priority). These interactions exercise a local and direct influence (independent of their origin), which can lead to concern on the other side of the interface. In the case of every interaction it was examined and clarified which actors are involved and which administrative procedures are applicable. In particular, the existing (formal as well as informal) consultation possibilities or provisions between the administrations concerned were elucidated. This was done in order to investigate at a later stage which sea-land interactions might benefit from improved coordination of actions and therefore integration of decisions; in brief, the aim was to identify any need for further integration.

10 Recommendation 2002/413/EC, chapter I, point h

Sea-land interactions	→ examples of concern	Sea-land interactions	→ examples of concern
• Very high tides	→ possible risks for coast and polders	• Coastal defence (management, maintenance, construction of dams and additions)	→ impact on nearby seabed fauna, increased sand extraction at sea
• Stranding of animals in distress and of dead animals (sea birds and mammals)	→ costs of cleaning up special waste, removal of dead animals	• Constructions along the coast	→ possible visual hindrance at sea, increased sand extraction
• Marine litter	→ destruction costs, negative impact on tourism	• Alteration to the baseline (by sand supplementation, digging of tidal inlets)	→ draining of nearby shallow sandbanks, alteration in line delimitating jurisdictions
• Accidental and deliberate ship discharges in sea	→ beach pollution	• Port extensions and constructions in coastal waters (piers, peninsulas)	→ effect on shipping, silting up of nearby shallow sandbanks
• Proliferation of algae and algal products	→ possible nuisance on beaches and for recreation	• Degradation and repair of coastal zones (beaches, marshes and estuaries) that are directly related ecologically to the sea	→ effect on benthos of intertidal zone
• Marine aquaculture	→ possible visual nuisance on land		
• Structures in sea (wind farms, landing of cables and pipe lines)	→ possible visual nuisance on land	• Dredging operations and discharge or dumping of dredging material in sea	→ effect on shipping and on sand extraction activities, adverse environmental effects of dredging material
		• Beach fishing	→ by-catches of sea birds and sea mammals
• Measures taken in marine protected areas	→ restrictions of some recreational activities	• Beach cleaning (machine cleaning)	→ removal of the natural deposition at the high-water line, disappearance of invertebrate fauna of intertidal zone
• Coastal erosion / natural evolutions of the coastline	→ floods, damage to coastal defence	• Direct discharges of contaminated material (liquid or solid) from the coast	→ pollution of the sea, safety at sea
• Fighting disasters at sea	→ risk of beach pollution	• Industrial discharges or ship discharges in harbours	→ direct risk of pollution of coastal waters, or indirect if it occurs in back harbours or behind locks
• Recreational activities at sea	→ negative effect on ecological features (nature reserves and birds) on land	• Recreational activities on the beach	→ possible disruption of marine animals and their resting-places
		• Aquaculture on the land	→ possible escape of non-indigenous species, pathogens, genetically modified species and the discharge of antibiotics and other veterinary products
		• Release of recovered sea birds and sea mammals	→ possible interaction with wild populations and their prey
		• Minor commercial and advertising activities in coastal waters	→ disruption of sea birds and sea mammals
		• Pollution of coast and in ports	→ pollution of coastal waters.

2.1 The functions involved and the related competent services/departments

The terrestrial component of the coastal zone is densely populated. In addition, the whole coastal zone is very important in regard of tourism, and the ports are of great economic significance. A number of economically important activities take place in the marine component of the coastal zone; the most visible of them are fishing and shipping. The table below gives a clear overview of the **variety of functions**. This table from Cliquet and Maes was amended in order to include the administrations concerned. Just as emerged during the drawing up of the interaction files, it is clear that there is a great multiplicity of functions and parties concerned.

	Sea	**Land**
Federal departments	Shipping *- FPS Mobility, Transport; shipping policy, safety and control*	Shipping
	Military activities *- FPS Defence*	Military activities
	Sand extraction *- FPS Economy, Quality, Safety*	
	Energy (off-shore wind turbines) *- FPS Economy, Energy*	Energy
	Cables and pipelines *- FPS Economy, Quality, Safety*	
	Protection of marine environment *- FPS Public Health, Safety of the Food Chain and Environment*	
	Fighting pollution *- FPS Public Health, Safety of the Food Chain and Environment* *- FPS defence; marine* *- FPS Mobility, Transport; shipping policy, safety and control* *- FPS Internal Affairs, civil defence*	Pollution
	Science Policy *- Federal Science Policy*	
	Control (police) *- FPS Mobility, transport; shipping control* *- FPS Internal Affairs , shipping police* *- FPS defence; marine*	Control (police)
Flemish services	Dredging *- Min.Fl.Com.; AWMA*	Nature conservation and protection *- Min.Fl.Com.; AMINAL*
	Pilot services *- Min.Fl.Com.; AWMA*	Town and country planning *- Min.Fl.Com; AROHM*
	Sea rescue *- Min.Fl.Com.; AWMA*	Drinking water extraction *- Min.Fl.Com.; AMINAL*
	Shipping support *- Min.Fl.Com.; AWMA*	Tourism *- Min.Fl.Com; AROHM* *- Min.Fl.Com.; AWMA*
	Removal of shipwrecks on navigation lanes *- Min.Fl.Com.; AWMA*	Seaports *- Min.Fl.Com.; AWMA*
	Fisheries *- Min.Fl.Com.; adm. Agri policy*	Coastal defence *- Min.Fl.Com.; AWMA*
		Management of open space *- Min.Fl.Com.; AWMA* *- Min.Fl.Com.; AMINAL*
		Science Policy *- Min.Fl.Com.; FCSP*
Province	Support for fighting pollution	Implementation "of higher right"
Coast municipalities		Implementation "of higher right" Police Upkeep of beaches (concessions)

Source: Cliquet and Maes (2001) Policy-supporting study for an integrated coastal zone policy in Belgium: Which integrated coastal zone policy? In:Flanders Marine Institute. FMI Special Publication 4 (2001) Management of coast and sea: policy-supporting study in Flanders. Workshop 9 November 2001. Amended by sea-land interactions to identify the administrations concerned.

The table above clearly shows that there is a great multiplicity of government departments (ministries of transport, environment, defence, town and country planning etc), which each represent their own users and interests. Such a sectoral approach is not only part of the specific Belgian state structure but is a common feature of all countries. In this context, those responsible must be able to promote the interests of the sector that they represent (both on land and at sea). However, they must also ensure that the interests of one particular sector do not predominate at the expense of other sectors.

A multi-use approach to the coastal zone should look at how space can be handled in a rational manner. Conflicts of interests are inherent in all situations where different users and therefore competent departments are involved, irrespective of whether the competent departments belong to the federal or regional government. Every government department must take account of the interests of the groups or interests that they represent, or of those whose activities they manage and control. However, they must also ensure that a balance is maintained and does not lean too far in one particular direction (e.g. exclusively towards economic or ecological development). It is therefore important that there is a concerted search for ways of reconciling any conflicts of interest. In so doing, the departments involved should be aware, also in their own interests, that the system must be sustainable for all sectors. Integrated (integral) management can only be successfully concluded by the joint pursuit of a collective and sustainable compromise in consultation with all the parties involved. A first step in the right direction consists of a shared execution of a conflict analysis, to which the present report is already a contribution.

2.2 Are there already success stories? Where is improved integration desirable?

For every interaction identified in the sea-land exercise, the question was asked whether closer cooperation was necessary in the domain concerned. While this exercise was being carried out, it was observed that there are already good examples of integration of actions, while solutions are still to be concidered 'work in progress' for some other subjects.

2.2.1 Success stories

- With regard to port operation and maintenance there is already an efficient cooperation agreement concerning dredging and dumping of dredging material, whereby environmental standards and quality control of the dredging material are integrated in the ewecution of the dredging activities and the granting of related permits.

- The cooperation agreement concerning the establishment of a Coastguard cooperation structure was signed on 8 July 2005 by the federal government and the Flemish government and subsequently submitted to the two parliaments for ratification. With this agreement, all activities at sea can be discussed in one single forum and the interface aspects can be examined in a coherent manner if necessary.

- The North Sea Disaster Plan offers a collective operational structure for interventions by governments in shipping disasters at sea.

- User agreements were developed in order to steer the interaction between the recreational sector and marine protected areas in the right direction. As a result of a recent legal amendment, user agreements of this kind are now incorporated in federal legislation, and policy plans for marine protected areas are drawn up in cooperation with all stakeholders.

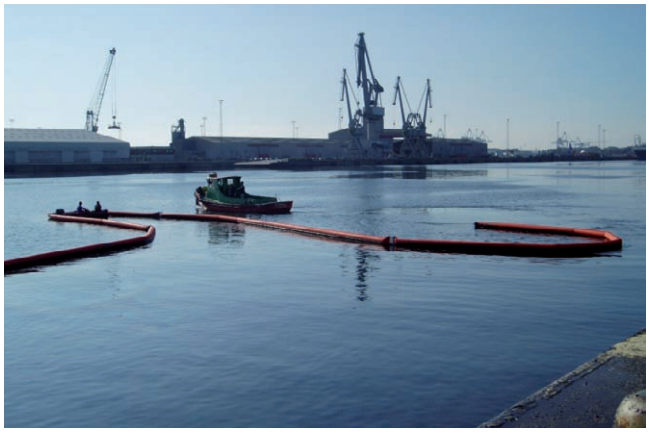
- There is a cooperation protocol between FPS Environment and FPS Foreign Affairs (Civil Defence) about the use and deploiment of oil pollution response material in ports and on beaches. These components of the sea-land interface are also followed up as a matter of priority by FPS Environment in the context of a series of operational procedures for fighting marine pollution. A playbook on marine pollution was drawn up in January 2006 and presented by the Minister of the North Sea *inter alia* to the coastal municipalities who had requested it. This document examines how, by whom and with which resources and responsibilities, a response can be given to pollution washed up on the beach, which originated from, or was transported by, the sea.

- A cooperation agreement was concluded to ensure protection of the maritime archaeological heritage. For centuries, the southern bend of the North Sea and the English Channel has been one of the busiest shipping routes in the world. It is therefore not surprising that the North Sea contains an estimated number of several thousand shipwrecks. Some of these shipwrecks have great scientific value from an ecological as well as archaeological point of view. For a number of years, historians, biologists and other scientists have been looking for ways to investigate valuable wrecks and to preserve them where possible.

- In 2003, the minister for the North Sea formulated the objective of developing a sustainable management plan for the North Sea. It was stated then that the spatial planning of the North Sea would take place in phases and that there would always be consultation with all actors involved, while taking account of the results of existing scientific studies. New rules were laid down for sand extraction and electricity production, by delineating *inter alia* zones in which these activities are permitted and integrating a sustainable approach in the approval procedure. Subsequently, marine protected areas were identified and the necessary management measures defined. Both phases were successfully concluded and we now have a "land registry" for the North Sea at our disposal, including user agreements for protected marine areas.

2.2.2 Components where improved integration is desirable

However, it has also been determened that there are examples of interactions where integration of actions is absent or insufficient but is in fact considered desirable. Examples of this are:



- Management of nature in the coastal zone, both on land and at sea (e.g. temporary closure of zones for certain activities), and of uninterrupted protected areas that extend beyond the jurisdiction limits (integral protected areas);

- Management of the baseline (sand supplementation);

- Management of infrastructure/constructions that have an impact on the interface (e.g. landing of cables, port extension works, piers, peninsulas etc);

- The development of aquaculture in sea and on land;

- Activities undertaken in the context of coastal defence, storm tide, predictions and warning systems;

- The practice of fishing from the beach. Because the use of entangling nets in the recreational fishing sector is still allowed on the territory of the Flemish Region, by-catch of porpoises and other sea mammals is still too high.

- In view of the strong environmental dimension of the European Recommendation, integration should also address environmental procedures (environmental-effect assessments, permits, authorisations) of the interactions and strategic plans mentioned above (e.g. environmental planning on land and at sea).

3. What kind of integration could form a solution?

In the recommendation, the objective of integrated management is formulated as follows: "a sustainable development in the coastal zone by means of optimal management of human activities in this zone, in order to improve the condition of the coastal environment and maintain its diversity". By means of an integrated approach, the attempt is made to incorporate a 'sustainability' dimension and to build the environmental aspect into the economic and social dimensions of our society. In addition, integral environmental management should analyse coastal zone problems in a way in which as much attention is paid to the coast's marine component as to its terrestrial component. An integrated approach is in fact necessary on both sides of the interface. Therefore, an approach is employed that considers all involved sectors and components at the same time and on the same footing. Sustainable management can therefore become the gateway for all players in order to further develop the coastal zone on the social, economic and environmental level.

Our experience in dealing with conflicts can contribute to the effort towards achieving sustainable coastal zone management in an integrated way, which takes account of all players and in which exercise of the different functions in the coastal zone proceeds in an ecologically responsible manner. The list below includes various possible approaches, which can be used to pursue further integration. It should be noted that the following checklist can be followed irrespective of the nature of the problem or the identity of the "interested parties" (conflicts of interest with professional organisations, between different departments of the same authority, between similar departments of different authorities or between different departments of different authorities). Furthermore, this checklist is not only intended to be applied at an intra-national level. It is also valid at the international level, e.g. for developing international cooperation ageements between Belgium and The Netherlands, or between Belgium and France.

The information flow between all those involved needs to be promoted by means of a structured exchange of information. As a matter of fact, information exchange concerning the environment is mandatory for all authorities, as stipulated in the Aarhus Treaty of 1998. Structured exchange of information ensures that all parties concerned are kept informed. Subsequently, there can be joint evaluation as to whether and when further consultation is necessary. For subjects that do not belong to clear sea-land interactions, there is no need for integral management in the shape of consultation between government departments competent for the terrestrial and the marine component. For these subjects, the relevant and exclusively Flemish or federal jurisdictions can be exercised autonomously. Examples include the impact of horse riding in the dunes (an exclusively Flemish jurisdiction) and the analysis of the black box of ships that extract sand and gravel in the EEZ (an exclusively federal jurisdiction).
Where necessary, structured consultation can be organised between the services or departments concerned. Consultation (informal and non-structured) can also be organised between the relevant interested parties (users). Consultation procedures can be laid down in the form of rules and agreements. Cooperation agreements can be reached between competent government departments (irrespective of level: federal, regional, province etc). In regard of the follow-up of subjects that relate to sea-land interactions, there is a need for integration of management and consultation between competent government services or departments on land and their counter parts at sea. When existing structures cannot offer any solution for those subjects, one can consider sectoral cooperation agreements (such as already exist for dredging activities) or thematic cooperation such as that between FPS Environment and FPS Internal Affairs for the development of material to fight pollution, or between the Flemish and federal authorities in connection with their actions at sea.

4. Conclusion & discussion

The competent administrations have the duty to society to resolve conflicts of interest. In the context of sustainable multi-use approach, success stories are the proof that mutual accommodation can occur in an effective manner. Recent examples of the way in which this problem is handled in the Belgian coastal zones show that there is room for the development of win-win situations. Integration at the decision-making level can certainly be achieved through adapted information and consultation mechanisms. An important component of this integration is the pursuit of complementarity between top-down and bottom-up approaches. When both approaches join by means of information exchange and consultation, it can only be beneficial for both.

Information exchange forms a very important step, and must also be used to determine whether new interactions are developing for which cooperation is desirable. The stocktaking of existing interactions is certainly not exhaustive and should be continually questioned. Consequently, integrated and sustainable management is also a dynamic process.

Chapter 6: Trends and suggestions

1. Trends in coastal management

Attention for coastal zone management in Belgium has existed since the beginning of the 1990s, and therefore predates the European Recommendation. But the Recommendation has ensured that efforts were made to achieve closer consultation and stronger integration of coastal zone management. Furthermore, it has led to closer cooperation inside and between federal, regional (Flemish) and provincial administrations. A few striking examples are discussed below.

Figures about the coast, put in the spotlight:
In order to be able to draw up an evaluation of the management, an **instrument** is required. **Sustainability indicators** (see Chapter 4) can fulfil this role if they are used correctly and actively. They can indicate whether Belgium is evolving in a more sustainable direction or in the opposite direction. The indicators of the sustainability barometer for the coast and the indicators of the European working group reveal a good many trends on the coast at the ecological, economic as well as social level. Supplementing the indicator set with relevant interface-related elements is an exercise that is worth considering.

A few general trends are:

- Quality of life in the coastal region is faced with its own specific problems. On the one hand, it is put under pressure by tourism, with typical related consequences (such as an increase in the amount of traffic, waste production, and water consumption). On the other hand, the number of protected areas on the coast is increasing slowly but surely, which will benefit not only quality of life but also the appeal the region exerts on tourists.
- Tourism is more than ever a major source of employment on the coast, whereas agriculture and fishing are declining in significance. The importance of the ports as economic gateways is growing.
- The results of efforts made to improve environmental quality are visible from evaluation of the indicators of swimming water quality on the coast and oil pollution at sea.
- Population ageing on the coast is increasing and is more pronounced than inland. This gives rise to new challenges and opportunities for coastal policy.

Who's afraid of sustainable management?
A number of surveys specifically about (aspects of) coastal policy have been performed in recent years. Heightening the awareness of and informing coastal residents and visitors contribute to the creation of a carrying capacity for a sustainable coastal policy. In fact, policy options can only count on a carrying capacity if the population is aware of the arguments that underpin the choices made.
The surveys show that participants feel they are poorly to very poorly informed by the government[11]. Forty-eight percent think they do have an understanding of the concept of sustainability, but most have difficulty describing it[12]. Nevertheless, it is clear that people do want to be informed about developments on the coast. There is particular interest for information relating to nature, safety and health. [13]
Utilising an integrated approach towards the realisation of specific projects can be a good impetus for future coastal management. In recent years, the implementation of these projects has been increasingly linked with information campaigns, and separate budgets are often foreseen for communication purposes.

Securing that all administrative levels are aboard:
The coast is important for all sectors and many public and private players. A top-down as well as a bottom-up approach can play an important role in the development of an integrated coastal zone policy.
Top-down approach: Coastal Zone Management in Belgium is a matter for federal and regional governments in the context of the CCIEP, where FPS Environment has a pioneering role and promotes sustainable development horizontally.
Bottom-up approach: in addition to the federal and regional (in this case Flemish) authorities, major parties also include the ***province of West Flanders*** (as sole coastal province), ***coastal municipalities*** and polder municipalities. They are involved in the process in the framework of the Coordination Point, but especially through participation in specific projects.
For about two years now, the coastal municipalities have been organising their own consultation meetings between mayors, which represents the entire coast. This consultation features a six-month rotating presidency. At this political municipal consultation, priority problems are brought forward from a local perspective, e.g. house prices and second homes, fisheries and kite-surfing. The strength of this consultation resides in the fact that the 10 coastal municipalities jointly address the appropriate policy level – province, Flemish region or federal state – in order to work out a solution.

Focus on the sea-land interface:
The discussions on the precise content of "integrated coastal zone management" have led to a **focus on the sea-land interface**, but without losing sight of the relationship with the hinterland (inland) and the marine environment. The question as to which themes integrated coastal zone management should actually address comes up regularly. These discussions have also given a first insight into how optimisation of coastal management and specific realisations in this context can be pursued (see also Chapter 5).

Coordinated action is needed now more then ever
Consultation is necessary as a large number of departments, and their various administrations or services, are involved in policy making, management and control of activities related to the coastal zone. This is now even more the case than previously, not only because pressure on the coastal zone has increased through intensive use, but also because European and international regulations are gaining importance. Unilateral approaches have no place in the ongoing future-oriented policy-debate. The use of mechanisms elaborated to take account of contrasting interests and opinions is fundamental to the development of a coastal zone management policy.

11 Beleving en deelneming in kustverdediging [Experience of and participation in coastal defence], commissioned by Coast Department (AWMA) of the Ministry of the Flemish community.

12 Onderzoek naar het draagvlak voor duurzame ontwikkeling in de kuststrook [Investigation of the carrying capacity for sustanable development in the coastal strip] . HIVA, commissioned by the province of West Flanders. 2003.

13 Hoeberigs, T. 2005. Een onderzoek naar the informatienoden en the kennis over the zee bij jongeren en senioren [An investigation of the information needs and knowledge of the sea of young and senior citizens]. Proposals for improving communication by the Flanders Marine Institute (FMI). [Thesis] Artevelde College, Social Work training. 50pp.

A separate approach?
There will not be a separate approach for the coast for the time being. However, the coast does figure in various sectoral approaches and in the bigger picture in general.
The master plan for the coastal subspace can be regarded as an integrated plan on land, onto which sectoral approaches are grafted.
Spatial planning at sea is addressed as a matter of priority. Major steps have already been taken to achieve an integrated "Master Plan" for the North Sea. The two most important phases have already been concluded: the initial phase featured delineation of zones for exploration and exploitation of sand (RD 07/10/2004), and of a zone for the installation of wind turbines (RD 17/05/04). The second phase entails establishing special protection areas and taking protective measures for birds and habitats (two RDs of 14/10/05).
In addition, the Cooperation Agreement between the federal and Flemish governments concerning the establishment of a Belgian Coastguard offers a framework for a specific and coherent approach for all actions at sea. The further development of marine policy will also entail repercussions for ICZM. Now the challenge consists in ensuring that sectoral approaches and small-scale and large-scale plans are geared to each other so that the sum total can result in a more sustainable policy for the coast.

2. Suggestions for coastal zone management in the future

Although it is not the intention to provide a separate policy plan for the coast, a number of suggestions can be made towards the Flemish Region and the federal government for the further development of sustainable coastal zone management.

Using indicators as scientific basis and policy-supporting instruments
Sustainability indicators for the Belgian Coast are based on six priorities, which were developed by means of a participative process. However, these priorities have never been consolidated at the political level. It would have been better if the indicators had been grafted onto an approved vision of the future for the coast.
Making indicators and background information available via a website is one side of the story. On the other hand, the indicators should be made known to a wider group and actively promoted. The combined use of different media for the promotion of indicators therefore seems a good approach to reach this goal. In addition, the use of the indicators by all coastal actors can be stimulated, as evaluation instruments or for outlining policy-options.
In order to guarantee the scientific accuracy of the indicators, sufficient attention needs to be devoted to updating these instruments as well as to cooperation with data providers and related bodies. An evaluation of the indicators is planned for 2007 to ascertain whether they are capable of adjusting the policy-making process and to determine where optimisation is necessary (not only adjusting, but also as a evaluation of the "distance to target").

In addition to the indicators that give the condition and trends of the coastal region, "progress indicators" will be able to assist the federal and Flemish governments in evaluating the process of integrated coastal zone management in general. It is recommended to test progress indicators at different times and with different interested parties. Initial tests with the progress indicators[14] show clear progress in 2005 compared with 2000.

14 On 19 October 2005 for provincial and municipal parties concerned; on 8 November 2005 for regional and federal parties concerned.

Stimulating and setting up concrete projects to illustrate sustainable coastal management:
Integrated Coastal Zone Management can be best made clear with concrete projects, locally as well as in an international or European setting. This enables the benefits of integrated working to be illustrated. It is useful to test specific projects against the principles laid down by the European Commission, as well as providing clear follow-up during execution and evaluation. This initiates a genuine policy cycle.
Not all projects have an impact on the environment or nature, as a result of which some projects are not subject to the traditional licensing system or EER-procedures. Nevertheless all aspects of sustainability must be addressed in all projects. There is no separate official mandatory supervisory system for the coast. However, a logo and sustainability criteria were designed to identify projects that meet ICZM principles. The system is not yet widely known and the way in which this should be achieved must still be examined in detail.

A coast forum: achieving greater involvement
So far, there has been no structural consultation with the general population about the future for the coast. The involvement of the general population can be organised in different ways, but what form this should take is a matter for further investigation. The coordinating role could be included in the tasks of the ICZM Coordination Point or of permanent structures such as the CCIEP.

Achieving integration between competent bodies:
In the brainstorming exercise on sea-land interactions, it became clear that a frequently returning problem relates to the lack of effective integration of coastal management between competent federal, Flemish, provincial and municipal bodies (see also Chapter 5).

In short, it was determined that greater consistency is necessary at the following levels:
- Management of nature in the coastal zone, both on land and at sea (e.g. temporary closures of areas for certain activities), and uninterrupted protected areas that extend beyond the jurisdiction limits (integral protected areas);
- Management of the baseline (sand supplementation);
- Management concerning infrastructure/constructions that have an effect on the interface (e.g. landing of cables, port extension works, piers, peninsulas);
- The development of aquaculture in sea and on land;
- Activities undertaken in the context of coastal defence, storm tide, predictions and warning systems;
- The practice of fishing from the beach.

This exercise should also address environmental procedures (environmental effects assessment, permits, authorisations) of the above interactions, and strategic plans (e.g. environmental planning on land and at sea).

The possibilities for a coherent approach to the above interactions must be examined in greater detail. Coherence/adjustment can take various forms: efficient information flow, consultation, policy coherence, establishing procedures and developing cooperation agreements/protocols. Various success stories show that the type of response can assume different forms.

Obtaining a higher level of integration in existing instruments
The implementation of the recommendation should be incorporated in existing instruments such as master plans, long-term visions and strategic environmental-effect reporting. In view of the fact that new measures will not necessarily be taken to implement the Recommendation, the existing instruments must also be adapted to permit a more integral approach in an integrated way. The use of European progress indicators can help in the evaluation of progress made.

Perspectives for long-term consultation and "adaptive management"
So far, consultation with regard to ICZM is conducted within the North Sea and Oceans Steering Committee (CCIEP), as well as within the consultative group and task force in the organisational structure of the Coordination Point. The combination of these top-down and bottom-up approaches (and possibly with the Coastguard structure with regard to issues of sea-land interface) can ensure optimal consultation, as has been demonstrated in the exercise on sea-land interactions.

However, two issues should be brought to attention:
1) The ICZM Coordination Point is currently based on cooperation agreements concluded for a period of one or three years, depending on the partner. Another solution could offer benefits in the area of personnel, budgets, project follow-up, etc.
2) The exercise on sea-land interactions exhibited a few shortcomings, e.g. fisheries were not discussed. In order to solve this, it can be considered whether representation in relation of the bottom-up approach should be widened in the existing framework, or whether additional links should be laid with other stakeholders. However, it remains to be a precondition that such stakeholders should feel called upon to contribute to an exercise on integrated coastal zone management. These questions are not reflected upon in this report.

Stimulating further reflection on future developments
The sectors can be stimulated to make known their in which direction they would like to see this process continue. In this exercise, it can be indicated how they can contribute to a more sustainable management of the coast (which would be beneficial for the economy, society and the environment). Such an approach can set the agenda for future follow up and stimulate discussion with other sectors. This can provide the impetus for further development of integrated management by the competent governments.

However, formulating and implementing real integrated management calls for clear priorities, choices, responsibilities and instruments. The final result is the integration of existing and future policy orientations, with regard to all relevant policy areas. A suitable framework must be developed for this involving all departments, whether they are federal or regional.

The elements presented above can be part of a long-term vision for integrated coastal zone management that takes account of all interests and values.

ABBREVIATIONS:

AMINAL	Administration for Environment, Nature, Land and Water
AROHM	Department of Town & Country Planning, Housing, Monuments and Landscape
AWMA	Administration of Waterways and Marine Affairs
CCIEP	Coordinating Committee for International Environmental Policy
CoPraNet	Coastal Practice Network
COREPOINT	Coastal Research Policy Integration
DG	Directorate-General
DWTC	Scientific, Technical and Cultural Affairs Services
EC	European Commission
EER	Environmental Effect Reporting
EEZ	Economic Exclusion Zone
EIP	Environmental Implementing Plan
ENCORA	European Network for Coastal Research Coordination Action.
FCSP	Flemish Council for Science Policy
FESP	Flanders Environmental Structure Plan
FPS	Federal Public Service
FMI	Flanders Marine Institute
FPB	Federal Planning Bureau
FSDP	Federal Sustainable Development Plan
GMO	Genetically manipulated organism
ICE	Interministerial Conference on the Environment
ICSD	Interdepartmental Commission for Sustainable Development
ICZM	Integrated Coastal Zone Management
Min.Fl.Com	Ministry of the Flemish Community
MMM law	Law of 20 January 1999 for protection of marine environment in sea areas under Belgian jurisdiction
MNZ	North Sea and Oceans Steering Committee (formerly North Sea Technical Commission)
MUMM	Management Unit of the North Sea Mathematic Models
NGO	Non-governmental organisation
OECD	Organisation for Economic Cooperation and Development
PPS	Programming Public Department
RBINS	Royal Belgian Institute for Natural Sciences
RD	Royal Decree
REU	Rational energy use
SAIL	Schema d'Amenagement Integrée du Littoral [Integrated Coastal Development Plan]
SD	Sustainable Development
SMEs	Small and medium-sized enterprises
SPSD	Scientific Support Plan for Sustainable Development
SWOT	Strengths, weaknesses, opportunities and threats
Terra-CZM	Terra Coastal Zone Management
UN-CSD	United Nation Commission on Sustainable Development
WG-ID	Working group "indicators and data"