

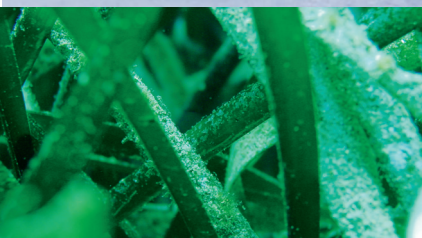
DEDUCE (Développement Durable des Zones Côtières Européennes) is a transnational project supported by Interreg IIIC-South Community Initiative Programme. Its main objective is to evaluate the utility of indicators for optimal decision making on the coast following the principles of the EU Recommendation on Integrated Coastal Zone Management.

## EU grants a million euros for Integrated Coastal Zone Management

Under the name of DEDUCE, nine partners are calculating, testing and validating a set of indicators for measuring the sustainability of the coast. Guidelines for an integrated analysis will be developed, and final reports with recommendations will help the states and regions to evaluate the state of their coasts and their progress towards sustainability.



LAND DEVELOPMENT ON  
THE COAST



DATA QUALITY: OUTDATED  
*POSIDONIA OCEANICA*  
CARTOGRAPHY DATA



DIFFERENT WAYS OF  
MEASURING THE COASTLINE  
LENGTH



Projet cofinancé par la  
Union Européenne

Nord Est SUD Ouest  
INTERREG IIIC



# WHAT IS DEDUCE?



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DEDUCE (Développement Durable des Zones Côtières Européennes) is a transnational project concerning Integrated Coastal Zone Management (ICZM), co-financed by the European Commission and the participating regions, in the framework of Interreg IIIC-South. Its main objective is to evaluate the utility of indicators for optimal decision making on the coast, following the principles and criteria established by the UE Recommendation on ICZM. Nine partners representing all decision-making levels (European, national, regional and local) are carrying out the project, which runs from October 2004 to June 2007

## Context of DEDUCE

On May 30, 2002, the European Parliament and the Council adopted the Recommendation concerning the implementation of ICZM with the aim of fostering the development of integrated management strategies to guide the European coastal zones towards more sustainable scenarios.

In the framework of implementing the EU Recommendation, the European Commission created an Expert Group on ICZM, which established a Working Group on Indicators and Data (WG-ID). The result of the work carried out by WG-ID is a list of twenty-seven indicators that are structured as per the seven main objectives of the European Recommendation:

- To control, as appropriate, further development of the undeveloped coast.
- To protect, enhance and celebrate, natural and cultural diversity.
- To promote and support a dynamic and sustainable coastal economy.
- To ensure that beaches are clean and the coastal waters are unpolluted.
- To reduce social exclusion and promote social cohesion in coastal communities.
- To use natural resources wisely.
- To recognise the threat to coastal zones posed by climate change and to ensure appropriate and ecologically responsible coastal protection.

## Main Objectives and Action Lines

The key challenge of DEDUCE is to prove the usefulness, viability and necessity of an integrated approach to information management by means of environmental and socioeconomic indicators for measuring the degree of sustainable development in the European coastal zones and at all levels: European, national, regional and local.

**The DEDUCE project contains five main actions, which are described in chronological order:**

Calculation of 27 indicators for a sustainable development of the coast



Strengths and weaknesses of an integrated information system based on a GIS



Model of the state-of-the-coast report



Guides on the use of the indicators for decision making



Study of the possibilities of creating a European coastal observatory

## Financial resources

The total cost of the DEDUCE project is 1,656,954 euros, of which about 60 % (992,919 euros) is funded by the European Commission (European Regional Development Fund). The remaining amount is co-financed by the participating regions and other public authorities.

## Organization of the project

The DEDUCE project is directed and coordinated by the Project Leader, the Government of Catalonia, through its Department of the Environmental and Housing.

The administrative management and follow-up on the project is done by the Network Management Group (NMG), made up of a representative from each of the participating partners in the project. This NMG will meet seven times during the project, in a different city each time.

Coinciding with the meetings of the NMG, six Regional Working Groups will be organised for the Assessment of Indicators (Regional Assessment Workshops-RAW), which are the meeting place for governmental representatives and experts on the coast to debate about the indicators and their use.



June 05 NMG meeting in Brussels

### PLANNED CONFERENCE AND WORKSHOPS

Barcelona, Spain	March 2005	NMG	Done!
Malta	July 2005	NMG	Done!
Ostend, Belgium	November 2005	NMG, RAW	Done!
Paris, France	March 2006	NMG, RAW	
Gdansk, Poland	July 2006	NMG, RAW	
Italy	September 2006	RAW	
Riga, Latvia	November 2006	NMG, RAW	
Barcelona, Spain	December 2006	RAW	
Barcelona, Spain	June 2007	NMG, Final conference	

## DEDUCE partner presentations

### THE PARTNERS WITHIN DEDUCE ARE:

#### Department of Environment and Housing, Government of Catalonia (Lead Partner)

The Government of Catalonia executes environmental policy throughout the country through the Department of Environment and Housing. This department has authority and legislative capacity in environmental matters in Catalonia. The Department of Environment and Housing develops the main guidelines on subjects as the water management, waste management, air protection, environmental education and nature protection. The department also develops programs and plans the main objectives of which are environmental protection and sustainable development, such as DEDUCE, of which it is the Leader.

Web: <http://mediambient.gencat.net/cat/inici.jsp>

#### ETC-TE/ UAB

The European Topic Center on Terrestrial Environment (ETC/TE) is an international consortium assisting the European Environment Agency (EEA) in delivering information on the state and trends of the environment to policy-makers and the public. ETC/TE supports the European Commission and EEA Member States in their attempts to achieve sustainable development and to improve their environment. This process involves the European Information and Observation Network (EIONET) and other main stakeholders. ETC/TE tackles a wide range of environmental problems from mapping of areas sensitive to erosion or flooding, to the assessment of soil contamination or the impact of infrastructures on nature designated areas. The ETC/TE core team is based at the Autonomous University of Barcelona (Spain).

Web: <http://terrestrial.eionet.eu.int/>

#### MEPA

The Malta Environment and Planning Authority (MEPA) is a national agency responsible for land-use planning and environmental regulation in Malta. Established under the mandate of the Environment Protection Act (2001) and the Development Planning Act (2001), MEPA's general activities include the following: 1) Preparation of land use and environmental plans to guide development; 2) Regulatory services, permitting and enforcement in the fields of spatial planning and environmental management and protection; 3) Digital mapping, GIS, and land surveying services; 4) Environmental awareness raising and promotion of environmental education; 5) Reporting to the EU Commission and various international convention secretariats on behalf of Malta.

Web: <http://www.mepa.org.mt>

#### IFEN (French Environment Institute)

The French Environment Institute is a department reporting directly to the Minister for Environment. IFEN constitutes the statistical department of the Ministry. In carrying out its tasks, IFEN organizes and coordinates the collection and processing of environmental data, develops methods for producing statistics, conducts studies aimed at improving knowledge of the state of the environment and so on. As European Environment Agency "national focal point" for France, IFEN is charged with coordinating the French network of the main producers of environmental information and forwarding the required information to EEA.

Web: <http://www.ifen.fr>

#### University of Latvia

Institute for Environmental Science and management (IESAM) University of Latvia as interdisciplinary higher education/training and research/development institution is developing collaboration research based ICM methodologies and implementing sustainable coastal development approaches in Latvia via studies/courses, pilot/demo projects, networking/partnership and environmental communication enhancement.

Web: <http://www.lu.lv>

#### Province of West-Flanders

The Province of West Flanders represents a consortium of partners that are actively involved in ICZM. The Coordination Centre for ICZM in Belgium (<http://www.kustbeheer.be>) is a contact point for the coast, where cross-sectoral themes are discussed. Flanders Marine Institute (VLIZ) acts as a coordinating and information platform for marine and coastal sciences in Flanders (<http://www.vliz.be>). The Agency for Maritime Services and Coastal Services – Coastal Division (<http://www.awz.be>) participates on behalf of the Flemish government. The SAIL partnership (<http://www.sailcoast.org>) has played a leading role in the development of sustainability indicators for the coastal zone.

#### Maritime Institute in Gdansk

The Maritime Institute in Gdańsk (MIG) was established in 1950 as a scientific research centre covering the demands of the maritime administration connected with shipping, port operation and other seaborne activities. The scope of work performed by eight research departments covers amongst others: marine technologies, protection of the environment, monitoring and prevention of hazards, coastal zone management with special focus on coastal erosion, transport management and maritime law.

Web: <http://www.im.gda.pl>

#### Municipality of El Prat de Llobregat

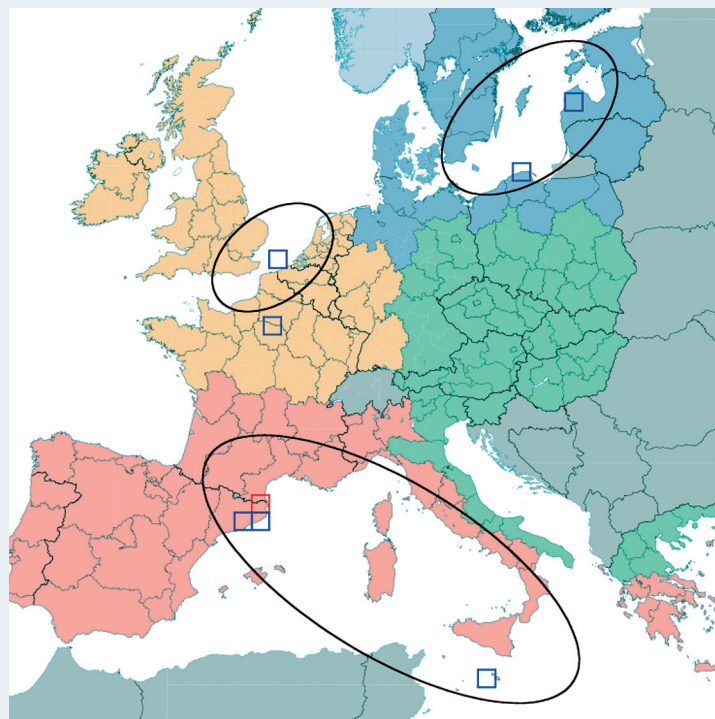
The municipality of El Prat de Llobregat, with 32 km<sup>2</sup> of surface and 63,000 inhabitants is located on the plain of the Llobregat Delta. The 8 km of El Prat coastline has some nature areas (sand dune communities, wetlands and pinewoods), but a quarter of this coastline it has been occupied by the enlargement of the port of Barcelona in the recent years, and there is an important coastal erosion process. In this context, the participation and results of this project area of considerable interest to our municipality.

Web: <http://www.aj-elprat.es>

#### Municipality of Viladecans

Viladecans Town Council is the local government organization of the town of Viladecans, which has 63,000 inhabitants. Viladecans is a littoral town situated 12 km south of Barcelona, with a total surface of 22.11 km<sup>2</sup> that involves a coastline of 2.8 km, a forest zone of 1.84 km<sup>2</sup> and a delta zone with high wildlife values. As a council, Viladecans has worked and participated in several sustainability indicator system projects at different levels, such as Towards a Local Sustainability Profile. European Common Indicators (European Communities, 2000-Subv. 00/294518) or its own Local Agenda 21.

Web: <http://www.aj-viladecans.es>





# Degree and trend of urban pressure on the coast

**In recent decades, one of the processes that has contributed most to the transformation of coastal areas (land and sea) and the loss of their intrinsic value has been urban development**

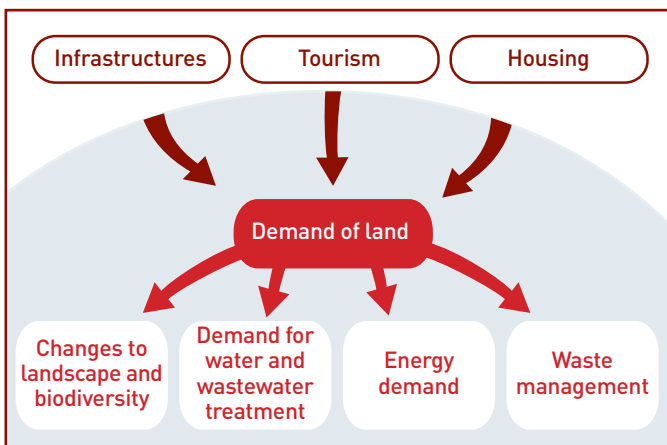
Three motivating factors or forces to a large extent condition the intensity and patterns of urban expansion: the demand for housing, the demand for infrastructures and tourism. The use of land for urban zones has a major direct impact on the territory due to land occupation, but it also has important indirect impacts such as energy demand (derived from the increased use of energy and new mobility), demand for water, waste water treatment and waste management. Transport networks for connecting cities also add to the fragmentation and degradation of the natural landscape and the loss of biodiversity.

The town planning approved during the past decade did not within itself consider specifically the importance of the environmental and social value of coastal areas, which led to indiscriminate construction, resulting in the loss of large areas of land and the fragmentation of a fragile and scarce territory like the coastal landscape. It was not until the coastal areas reached the point of urban saturation and the derived environmental impacts became intensified that the realisation came of the importance of preserving coastal areas, not only for their environmental and social values in themselves, but also because the loss of these also implies the loss of a significant element of the economy for the territory (it should be remembered that many of the environmental and social values that have disappeared today were at the time the element of attraction for this urban development).

**One of the main objectives of the European Recommendation concerning the implementation of Integrated Coastal Zone Management is “to control as appropriate further development of undeveloped coast”**

To fulfil this objective it is necessary, on the one hand, to observe the expression “to control as appropriate”. But, it is even more important is to know what the state of urban development in coastal areas is and what are the driving forces, in order to establish appropriate measures intended to achieve the specific objective. For this, tools that help to measure this state are needed.

With the aim of evaluating and promoting the evolution of coastal areas towards more sustainable scenarios within the framework of the above-mentioned European Recommendation and with the support of the WG-ID, DEDUCE is calculating a series of indicators that enable the measurement of the level of development and of urban pressure at a given moment and evaluate trends in these throughout the years. This will enable us to define, if necessary, the need for changes in current coastal management and policies.



Cabo de Gata-Spain



West-Flanders



The indicators that DEDUCE calculates for measuring the level of fulfilment of the abovementioned objective are shown in the following table, which also shows the measurement/s associated with each indicator.

objective 1	Indicators to measure Objective 1: To control as appropriate further development of undeveloped coast	
	Indicators	Measures
	Demand for property on the coast	Size and proportion of the population living in the coastal zone
	Area of built-up land	Percent of built-up land by distance from coastline
	Rate of development of previously undeveloped land	Area converted from non-developed to developed land use
		Percentage of new development on previously developed land
	Demand for road travel on the coast	Volume of traffic on coastal motorways and major roads
	Pressure for coastal and marine recreation	Number of berths and moorings for recreational boating
	Land take by intensive agriculture	Proportion of agricultural land farmed intensively



Catalonia-Spain



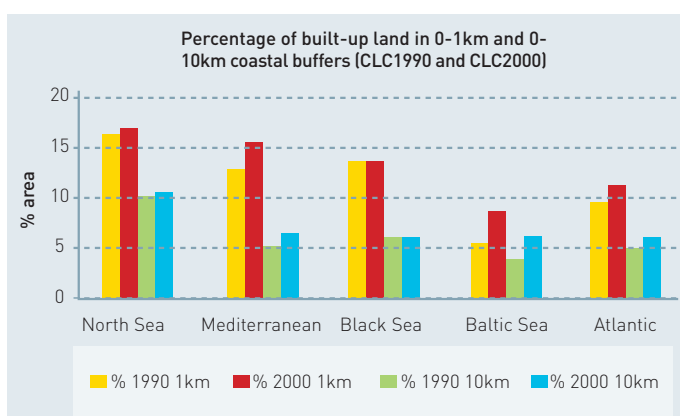
Catalonia-Spain

It should be remembered that, as ICZM itself says, DEDUCE aims to look at the coast from an integrated point of view in order to deduce the causes and the effects of a series of phenomena. Thus, the analysis of results must not be limited to a specific set of indicators for a specific objective but to establishing the relationship between indicators selected for different goals in order to find out the driving forces at a specific level.

We hereby present some results of the first indicators of Objective 1 that have already been calculated: "Demand for property on the coast", which measures urban pressure on the coast in terms of population density and proportion of inhabitants living in coastal zones, and "Area of built-up land", which measures urban pressure in terms of built-up land (urban, commercial, and industrial zones and land used for infrastructures).

## Results show that urban pressure is more concentrated in the first kilometre of the coastline in all the regions of Europe

This difference between the first kilometre of the coast and the following 10 km buffer area is particularly acute in the regions of the Mediterranean Sea and the Black Sea. It is the coasts of the North Sea and the Mediterranean Sea where the land is most built-up, although not exceeding 20% of territory on average. The greatest increase over the period 1990-2000 took place on the Baltic and the Mediterranean Seas.



Source: ETC-TE/ UAB (CLC: Corine Land Cover)

At country level, the percentage of urban development on the coast becomes more noticeable. On the North Sea, Belgium is the country with the most built-up coastal territory, with almost 50% of that in the first kilometre of the coast, and Slovenia, on the Baltic Sea, has almost a third part of built-up land in the same strip. On the Mediterranean, Spain, France and Italy stand out, with over 20% of built-up land in the first kilometre of the coastal zone.



Catalonia-Spain



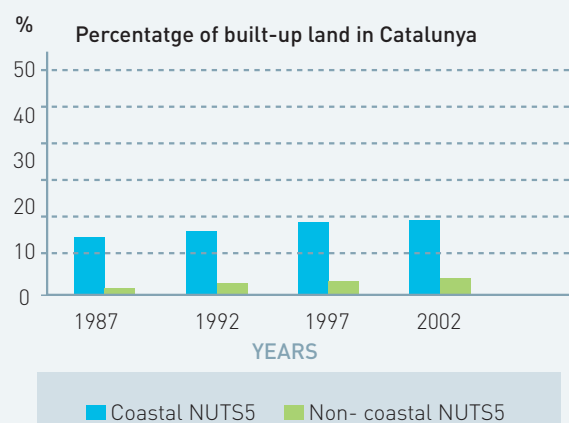
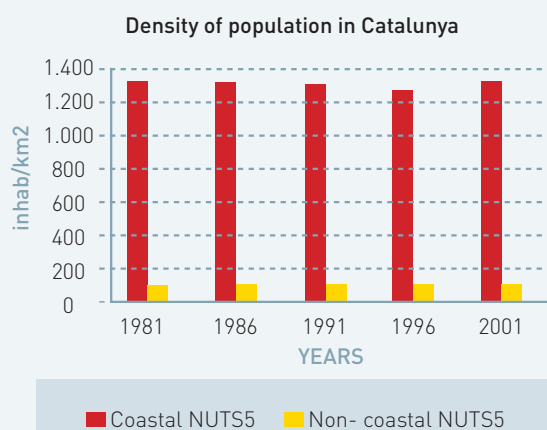
**An example of high land development in Spain can be found in the DEDUCE region of Catalonia, where 35% of the first coastal buffer zone (the first km) is built-up**

This high level of occupation, mostly forced by the tourism activity, has led to the fragmentation of many coastal ecosystems and to unsustainable patterns of development on the coastal towns (ex. high seasonality). In the coastal municipalities (NUTS5 or LAU2 classification units) this percentage decreases to 20%. Nevertheless, the levels of occupation of coastal territory are, in all cases, considerably above the level of urbanisation in non-coastal municipalities, something which has been the case since the 1980s. Following the same pattern, the population density in the coastal municipalities is much higher than in non-coastal ones, provoking an imbalance on the distribution of population. Despite this level of urbanisation of the coast, the rhythm of occupation of the land has not slowed. This reality has recently led to the drawing up and approval in 2005 of a Master Plan for the Coastal System, a supramunicipal plan that protects and regulates urban development in a strip that stretches from the coastline to the first 500 m from the TMZ (Terrestrial Maritime Zone) or for 1 km inland or more in some places where the greatest urban pressure is concentrated.

**Thanks to this plan, during the next few years it is expected the rate of development of previously undeveloped land in the first coastal strip to decrease**



Catalonia-Spain



Source: Generalitat de Catalunya



## Defining a common methodology

**Standard Indicator Format (SIF) is a methodological sheet that ensures the use of a common methodology on the calculation of indicators and measurements**

The purpose of the SIF is to ensure comparability and uniformity as well as to help the partners to jump-start their calculations. It ensures that proper data are collected, processed and represented in a way that facilitates their analysis. The result of applying the SIF are graphs and maps that offer a synthetic view of the data. These graphs and maps are then represented on an Indicator Fact Sheet (IFS), where they are analysed, interpreted and evaluated for their implications for planning and management. The IFS is the tool that may help understanding better the state of the coast and support the management and decision-making to progress towards sustainability.

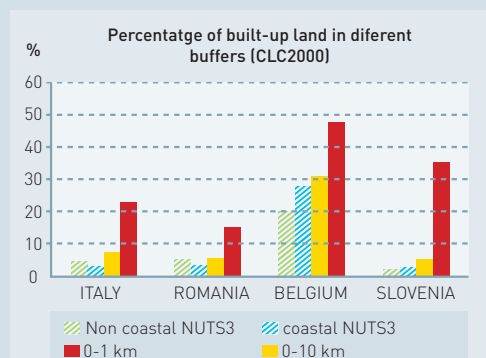
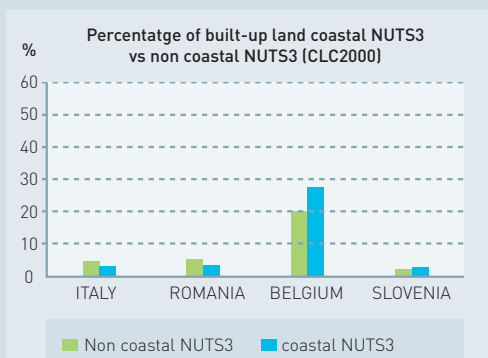
Measurement		
25.1	Name of the measurement	
What should the measurement tell us?		
Defining the measurement, explaining its purpose and justifying the parameters		
Parameters		
(i)		
(ii)		
Coverage		
Spatial		Temporal
Data sources		
Methodology		
Steps		Products
1		
2		
...		
Presentation of the data		
Map 1	Map description	Example map
Graph 1	Graph description	Example graph
Adding value to the data		
Other interesting calculus that add value to the measurement		
Aggregation and disaggregation		
Specify other levels of data aggregation or disaggregation (NUTS levels, other coastal strips, etc.)		

## Can we define a single spatial coverage of the coastal zone?

**When defining the methodology for calculating the indicators, a very important question arises: what is the coastal zone exactly? Where does it start and where does it finish? And can we define a single spatial coverage for the coastal zone?**

The complexity of defining the spatial coverage of the coastal zone comes from the fact that it is a multiple field (sea, land and interface between land and sea, the coastline), involving multiple topics and multiple scales (not all processes occur in the coastal zones at the same spatial and temporal scales). What is the coastal zone from the geophysical point of view, can be different from the ecological one. To sum up, the administrative boundaries define their own coastal municipalities, coastal provinces, etc, and they all have coastal planning and policies that ultimately affect the coast. Yet more specifically, and to give an example: when measuring nutrient concentration at sea the basin influence should also be taken into account, since nutrient concentration all along the basin affects nutrient concentration at sea. Therefore, policies made at basin level influence the sea... but it is very far from the coast itself!

To add difficulty, the results of a measurement calculated at different coastal buffer zones may differ considerably from each other, to such an extent that differences between the coastal zone and inland may even invert depending on the coastal coverage considered. An example of this case is shown in the following figures, where the percentage of built-up land is calculated at different spatial buffers. When considering coastal NUTS3 as the coastal zone and comparing it to non-coastal NUTS3 (figure left), some regions appear to have more built-up land in the hinterland than in the coastal zone. The same measurement calculated at 10-km and 1-km coastal buffer zones (figure right) reflects that land development is mostly concentrated in the first kilometers of the coast, especially in the first kilometer. Therefore, calculating the measurement in coastal NUTS3 produces an important attenuation of the phenomena. This can be seen also within the regions where built-up land is already higher in coastal NUTS3 than in non-coastal NUTS3: differences between inland and coastal zones become especially increased when considering the measurement at 1-km coastal buffer zones. Even at 10-km coastal buffer zones the effects can be diluted. Thus, different coastal buffer zones can lead to different results and not all spatial coverages are valid for all the measurements.



Source: ETC-TE/ UAB (2005)



## Different ways of measuring the coastline length

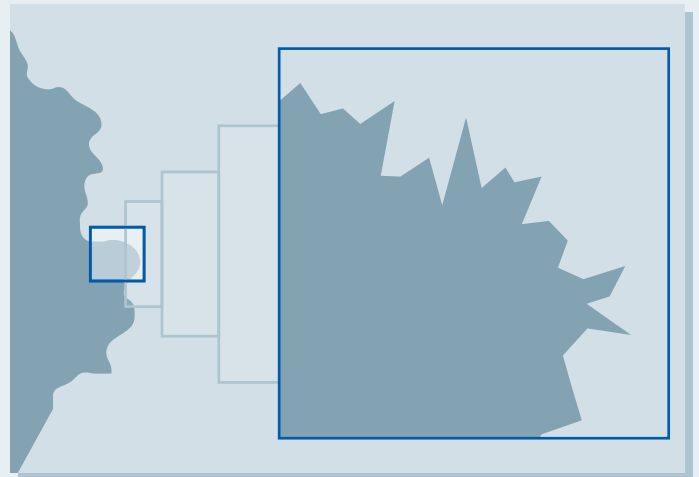
The coastline length is a parameter that is used for standardizing the results of measurements made in different regions and comparing them to each other. For example, to compare the pressure exerted by harbours or by recreational boating (number of berths and moorings) between two regions or the length of protected and defended coastline, these measurements must be related to a standard value such as the coastline length (number of berths per km of coastline). However, its usefulness is proportional to the difficulty for establishing a common

methodology for its calculation. Different ways and methodologies can be found in the scientific literature resulting in a high variety of coastline lengths for the same region.

After internal deliberation, DEDUCE has reached the consensus of measuring the coastline length at the line that defines the Maritime and Terrestrial Zone (coastal zone of public domain designated, delimited and regulated by law), since all regions have this administrative boundary and this ensures homogeneity and comparability in the calculations.

### IMPORTANT ISSUES THAT CAN LEAD TO DIFFERENT RESULTS ARE:

- > > > The coastline to measure: usually measured at the high tide mark.
- > > > The scale at which it must be measured: the complexity of the coastal sections (inherent “roughness” of the coastline) leads to differences in length with scale. The more complex the shoreline, the longer the measured coastal length.
- > > > Counting or not artificial structures: harbours, dykes and other artificial structures built on the shoreline become new coastline and add to the existing coastline, regardless of its artificial nature. Should they be counted when measuring coastline length? Some regions do count them and update coastline length with new artificial coastline (see figure below), others do not and others count them or not depending on the purpose of the measurement.



Although the coastline is a continuous curve, it is not smooth at any point. In fact, at any resolution, more inlets and peninsulas are visible that were not visible before. Thus as we look at finer and finer resolutions, we reveal more and more lengths to be approximated, and our total estimate of length appears to increase infinitely.



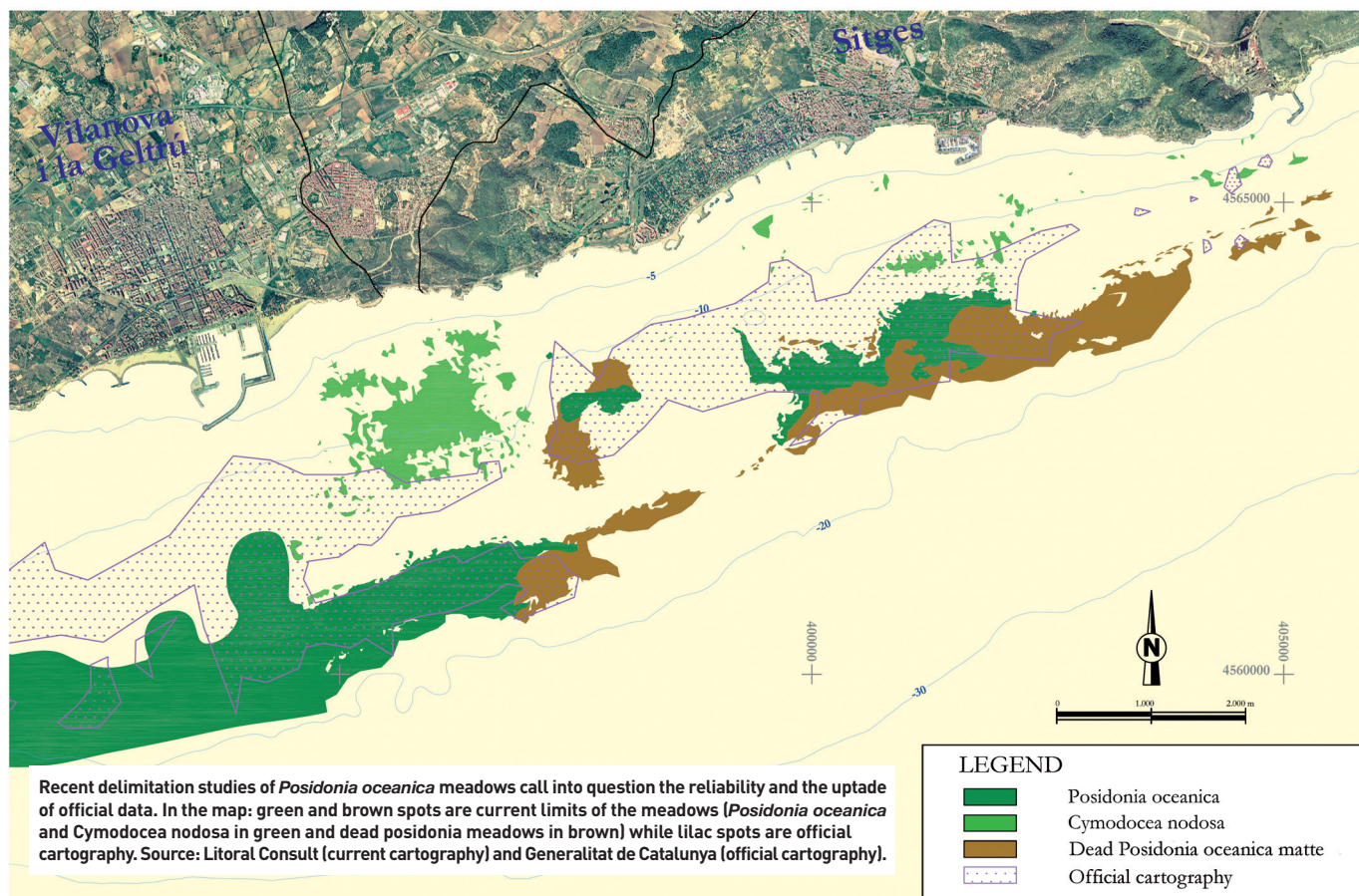
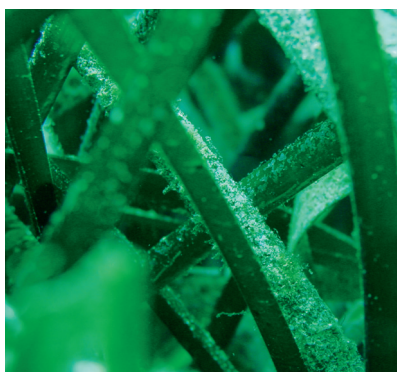
Coastal artificialisation within the Maltese Islands mostly concerns harbour, recreation or road development infrastructure. Artificial Coastline in 2004 within the Maltese Islands amounts to 20.94 % of total coastline. Coastal length marginally increased by 1% from 1994 to 2004. (This excludes developed coastline more than 1 metre from the shoreline). Source: MEPA (2005).



## Outdated *Posidonia oceanica* cartography data

Decision-making and coastal policies must be based on real and updated data, otherwise they are not practical tools. Whether these policies will work properly or not depends on the reliability and quality of these data and, also, on their availability and on the updating capacity of the institutions that generate them. **Data that are outdated or that are not easily available are not useful for coastal management and may lead to erroneous decision making**

An example of the consequences that obsolete data have for coastal management and decision making can be found in Catalonia: *Posidonia* meadows official cartography has led to a recent proposal of Natura 2000 sites that indeed do not have *Posidonia oceanica* meadows. These official data were last updated in 1992. More recent studies carried out by private companies highlighted the nonexistence of these and other meadows, which had gone back during the past years due to degradation but were not updated on official maps (the only free data available). This fact demonstrates not only a lack of update of public data which leads to erroneous decisions at management level, but also a failure in the transfer of information between public institutions and private companies, which may lead to multiplying updating efforts, both from private companies and public institutions.





# NEWS AND ANNOUNCEMENTS

## REGIONAL WORKSHOPS

### **Report on the workshop “Our Coastal Policy in Focus” About indicators for the coast – Ostend, Tuesday 8 November 2005**

On November 8 2005, Flanders Marine Institute (VLIZ) and the Coordination Centre for ICZM hosted the workshop “Our Coastal Policy in Focus” in Ostend (Belgium), attended by 50 participants. During the morning programme, invited speakers gave their vision of the importance of ICZM and the advantages of working with an indicator-based approach. During the afternoon programme, two parallel workshops dealt with the calculation and standardisation of sustainability indicators for the coast, and with the evaluation of the implementation of ICZM.

**Participants in the workshop on sustainability indicators were invited to evaluate and comment on methodology developed by DEDUCE. Overall, the sustainability indicators and standardized tools for calculating them in Europe’s coastal zones are seen as useful instruments, although a number of improvements can be still made.**

Due to the diversity in background of the participants in the second workshop, a broad range of viewpoints and opinions were brought in. Generally speaking, the progress indicator is a good instrument, but caution is required when attempting to interpret the output. It is suggested to regularly repeat this kind of exercise, so that the evolution in implementing coastal zone management can be followed closely.

Ann-Katrien Lescrauwaet and Leen Vandepitte (VLIZ)  
Kathy Belpaeme, Hannelore Maelfait and Sylvia Theunynck (Coordination Centre ICZM)

## OTHER NEWS

### **Expert group ICZM Recommendation 5th Meeting, 22 September 2005, Brussels**

Françoise Breton, Chair of the Working Group on Indicators and Data, presented in the 5th Meeting of the Expert Group ICZM Recommendation, held in DG ENV (Brussels), the latest activities undertaken by the WG-ID, highlighting some examples of indicator results already produced and activities planned in various countries. As regards the sustainability indicators, the working group proposes to focus on providing methodological support; liaise on projects that provide indicators, such as DEDUCE; perform quality checks; analyse the available results. To assist the actual implementation of the indicator, the working group has developed guidelines that contain explanatory notes and suggestions to organise workshops to fill out the indicator with the various levels of governance and interested parties.

**As a focus for future work, in 2006, it is proposed that the working group concentrate on continued actual indicator production; involvement of more countries in the working group; assessment of the indicator results and a methodology to link the sustainability indicators and the ICZM progress indicator.**

On the current basis of the EU ICZM Recommendation, a more firm requirement for the delivery of the indicators is not feasible. Possible further action after the ICZM evaluation clearly should provide a stronger basis as regards data and indicators. That being said, the diversity of coastal situation is a reality and the sustainability indicators could be regarded in terms of concentric circles, whereby the core is formed of indicators on which all agree, a second circle would be indicators on which most agree and a third circle, indicators that countries add to cover the specificity of their coastal areas.

**However, to have a better view across Europe more countries should participate in the actual indicator work.**

ETC-TE /UAB. From the Minutes of the 5th Expert Group on ICZM Recommendation (22 September 2005, Brussels).



## UPCOMING EVENTS

The Network Management Group will meet in Paris on 21 and 22 March 2006. The Regional Assessment Workshop of Paris partners will be held also in Paris on 23 March 2006.

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- **Department of Environment and Housing, Government of Catalonia (Lead Partner):** <http://mediambient.gencat.net/cat/inici.jsp>
- **European Topic Center on Terrestrial Environment (ETC/TE):** <http://terrestrial.eionet.eu.int>
- **Malta Environment and Planning Authority (MEPA):** <http://www.mepa.org.mt>
- **IFEN (French Environment Institute):** <http://www.ifen.fr>
- **University of Latvia:** <http://www.lu.lv>
- **Province of West-Flanders (consortium):** [http://www.kustbeher.be](http://www.kustbeheer.be) (consortium coordination)
- **Maritime Institute in Gdansk:** <http://www.im.gda.pl>
- **El Prat de Llobregat Town Council:** <http://www.aj-elprat.es>
- **Viladecans Town Council:** <http://www.aj-viladecans.es>



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