

Coastal Management - Introduction

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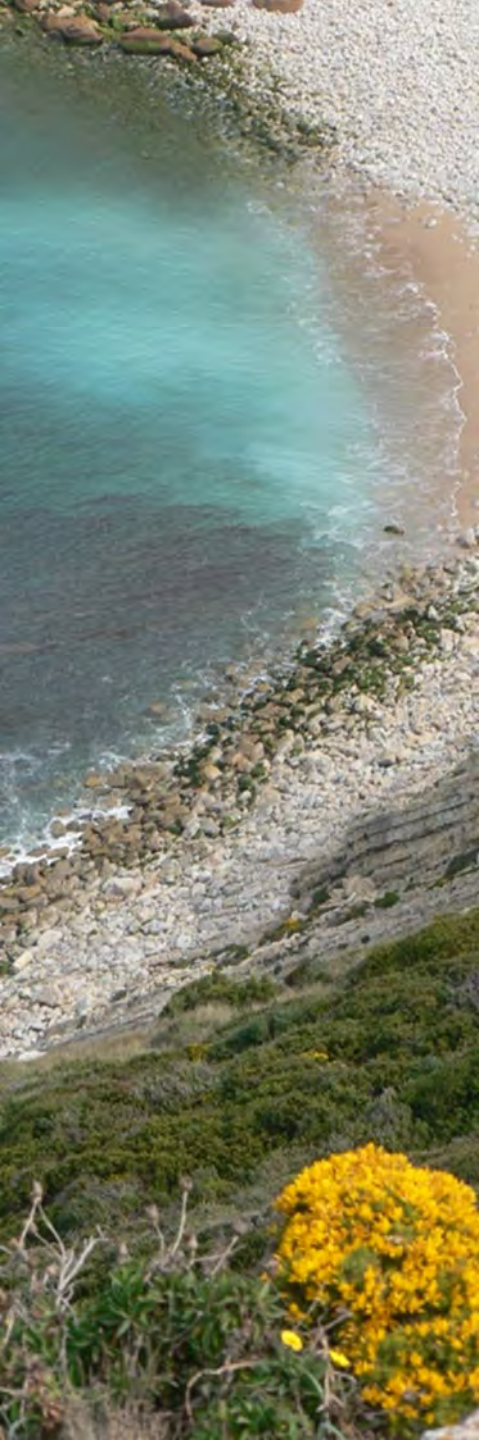
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Overview

1. Europe's coasts – facts, problems & challenges
2. The solution: Integrated Coastal Zone Management (ICZM)
3. Present state in Europe
4. Summary & future perspectives

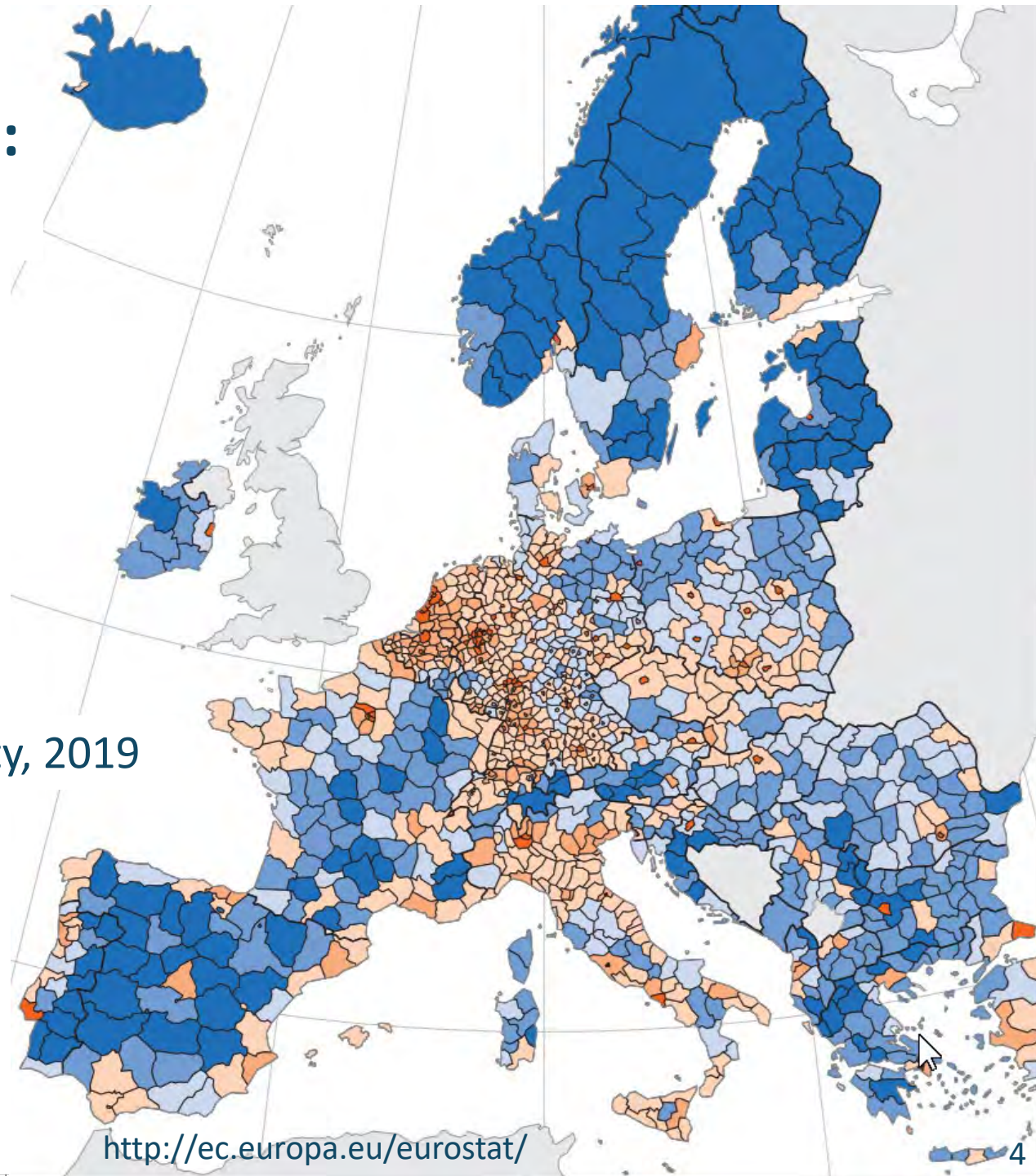




1. Europe's coasts – some facts

- The EU coastline is 68 000 km long, much longer than that of the United States or Russia.
- Over 40 % of the EU population lives in coastal regions.
- As much as 51 % of bed capacity in hotels across Europe is concentrated in coastal regions.
- The seaside is Europe's most popular holiday destination. Employing over 3.2 million people this sector represents over one third of the maritime economy.
- EU public expenditure on protecting coastlines from the risk of erosion and flooding exceeds EUR 5 billion a year.

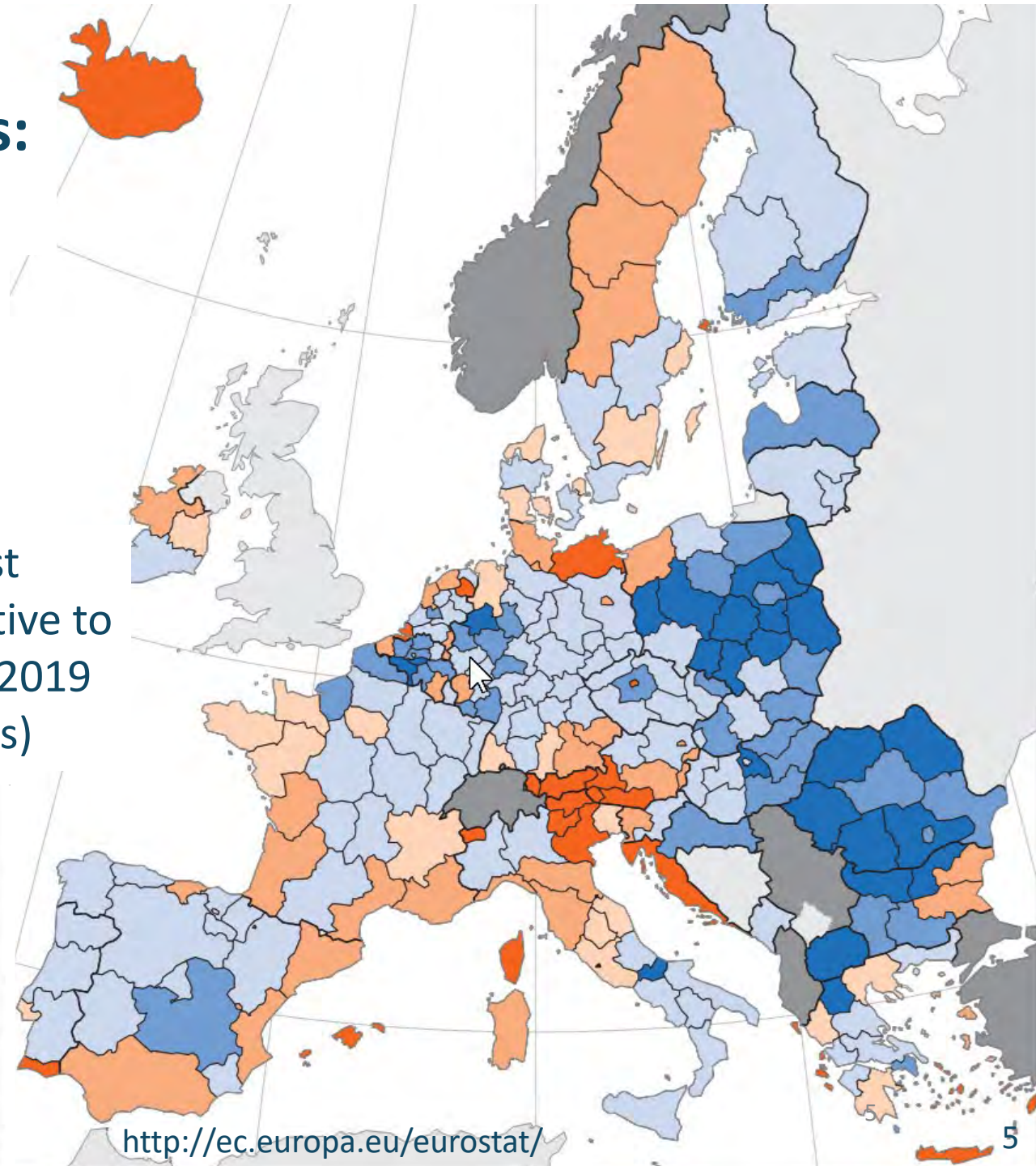
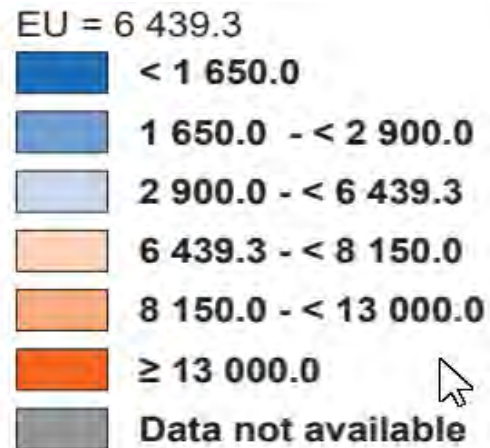
1. Problems & challenges: Coastal population



1. Problems & challenges: Coastal tourism



Nights spent in tourist accommodation relative to resident population, 2019 (per 1 000 inhabitants)

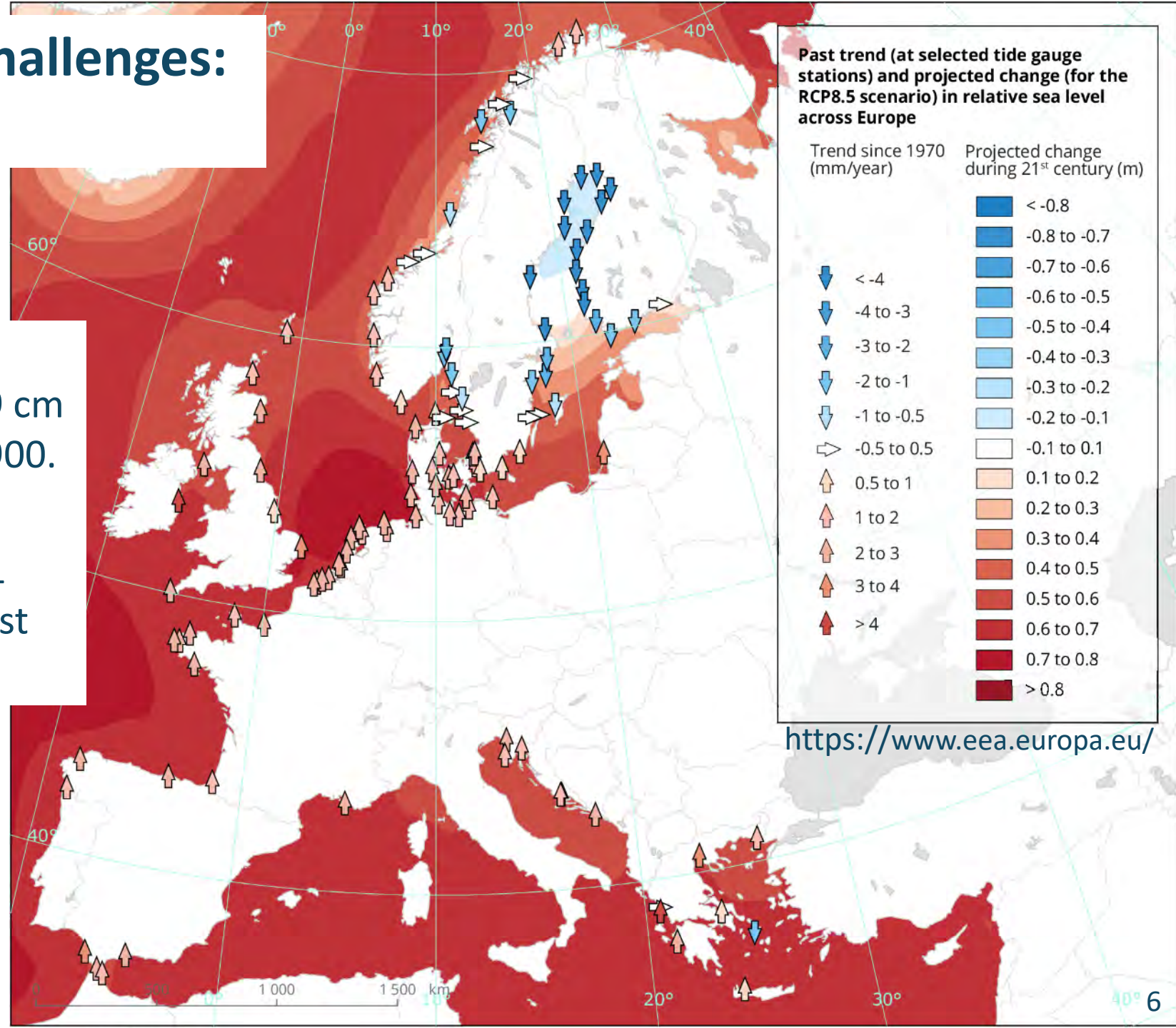


<http://ec.europa.eu/eurostat/>

1. Problems & challenges: Sea level rise

Global Mean Sea level (GMSL) in 2019 was 19 cm higher compared to 1900.

It was rising at an accelerating rate of 3.1 mm/year during the last two decades.





1. Problems & challenges: Inadequate, non-sustainable management

- Legislation and policy sectorally based and uncoordinated
- Inappropriate and isolated sectoral planning decisions
- Rigid bureaucratic systems and limited local creativity
- Lack of resources for local initiatives
- Lack of coastal development visions for management
- Limited understanding of coastal processes
- Scientific research and data isolated from end-users



2. The solution: ICZM

Integrated Coastal Zone Management

ICZM is a dynamic, continuous and iterative process designed to promote sustainable management of coastal zones

ICZM seeks to balance the benefits from

- economic development and human uses of the coastal zones,
 - protecting, preserving, and restoring coastal zones,
 - minimizing loss of human life and property and the
 - public access to and enjoyment of the coastal zone,
- all within the limits set by natural dynamics and carrying capacity.

➡ **ICZM is the sustainable development of coastal zones**

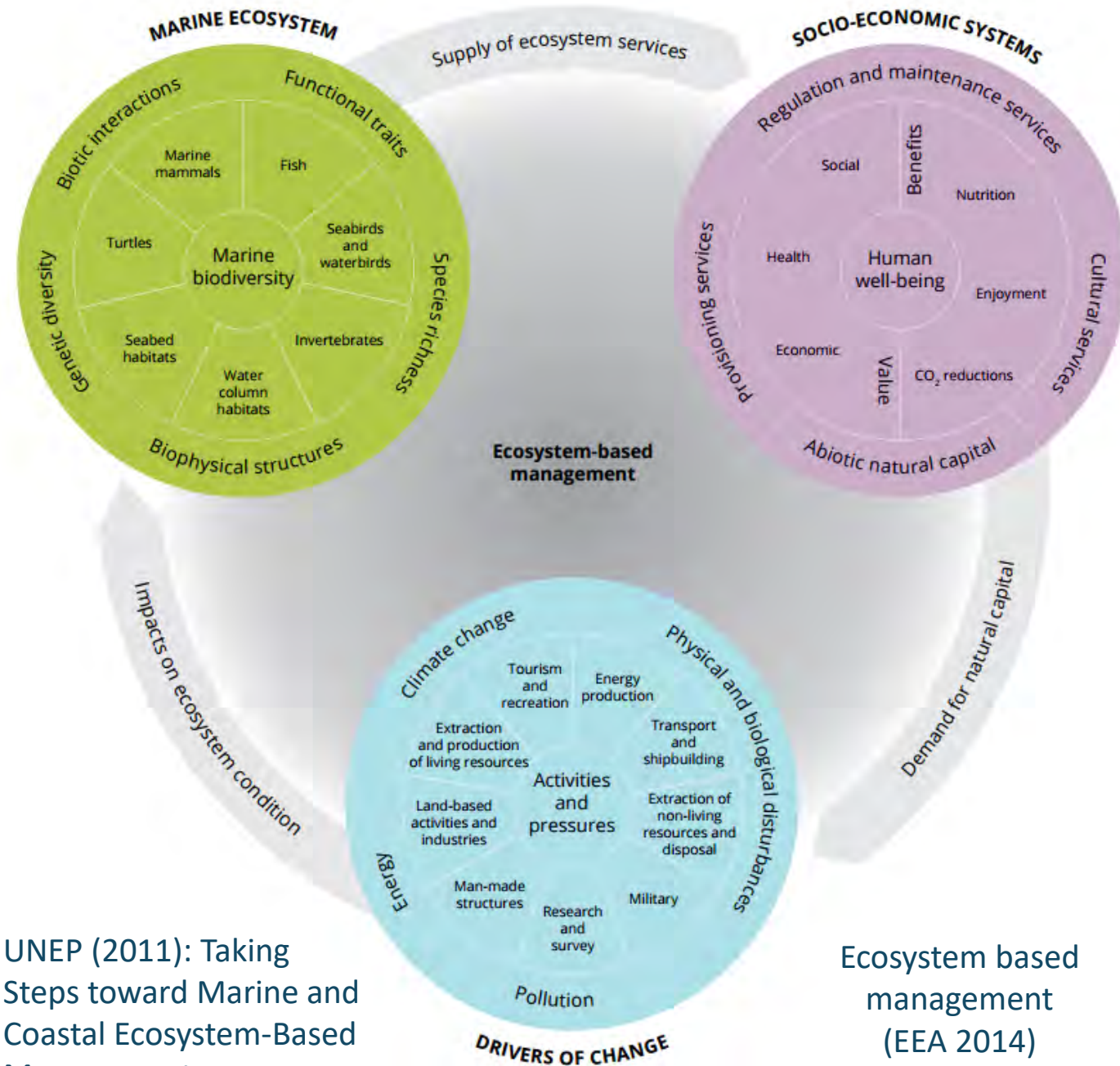
➡ **ICZM takes into account the ecosystem approach to management**

2. The solution: ICZM

What is an ecosystem-based management ?

Definition:

Ecosystem-based management is an approach that goes beyond examining single issues, species, or ecosystem functions in isolation. Instead it recognizes ecological systems for what they are: a rich mix of elements that interact with each other in important ways.



UNEP (2011): Taking Steps toward Marine and Coastal Ecosystem-Based Management

Ecosystem based management (EEA 2014)

Source: Adapted from Stanners et al., 2007; EC, 2008; Ecorys, 2012; Maes et al., 2013, EC, 2015.

2. The solution: ICZM

An example



UNEP (2011)



Unplanned development



Degraded and unproductive



Planning with an ecosystem perspective

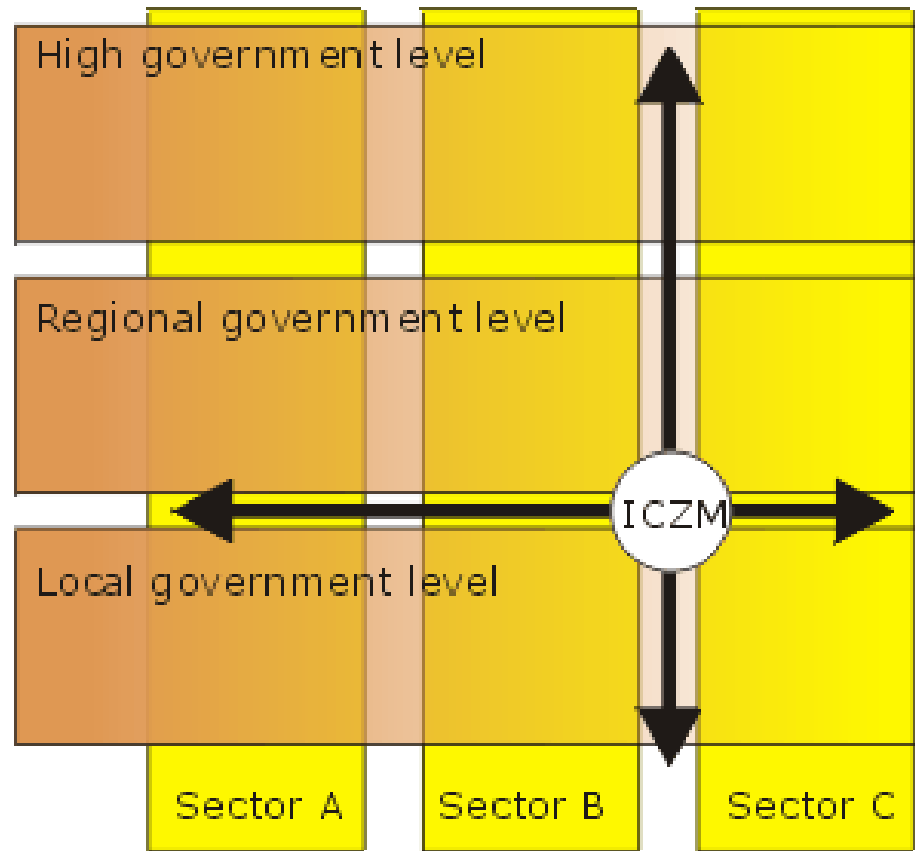


Healthy and productive



2. The solution: ICZM

What does it mean: 'Integrated'?



It refers to the integration of

- multiple objectives,
- the multiple instruments and policies needed to meet these objectives
- all relevant policy areas, sectors and levels of administration,
- multiple disciplines and
- terrestrial and marine components.

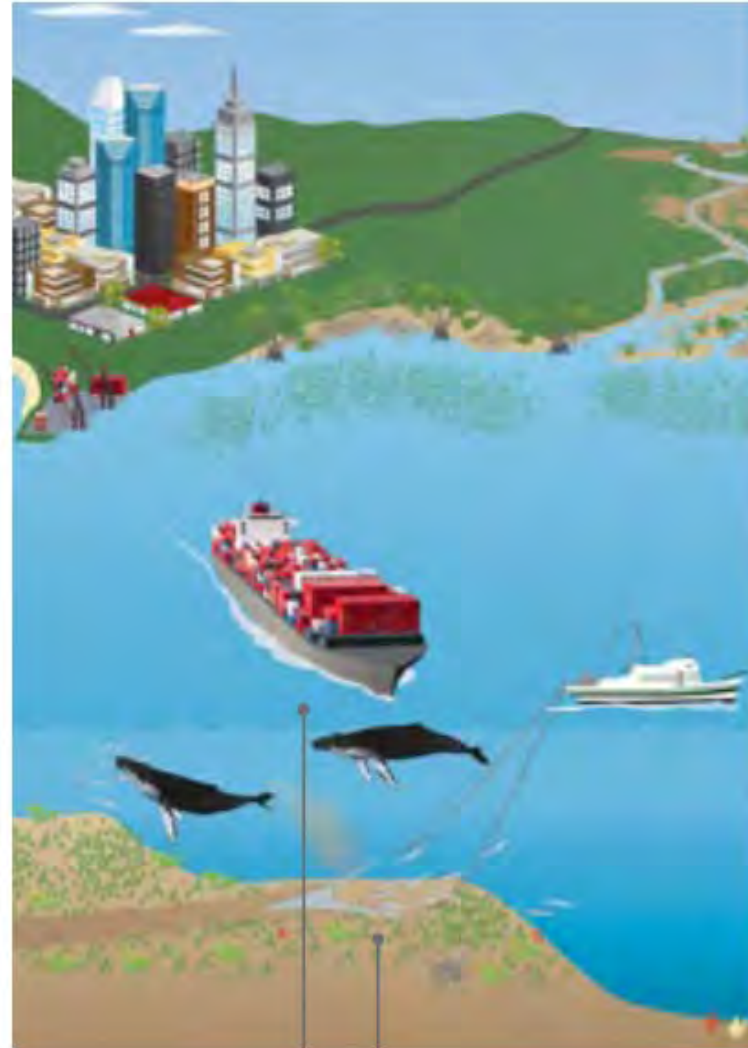
➔ **Integration of temporal and spatial as well as horizontal and vertical aspects**

2. The solution: ICZM

An example - Integration of multiple objectives



Conflicting uses



UNEP (2011)

Shipping corridor passes through important feeding habitat for endangered whales, causing collisions.

Bottom fishing in the whale habitat leads to ocean floor disturbance and a decline in food sources for whales.

Accommodating uses and reducing conflict



Key whale feeding habitat is closed to shipping traffic and fishing, and whale mortality decreases. Ocean floor recovers from fishing activity, biodiversity increases, and ecosystem processes are restored.

Shipping corridor is re-routed and new zones are created to support sustainable fishing in less sensitive habitats.

2. The solution: ICZM

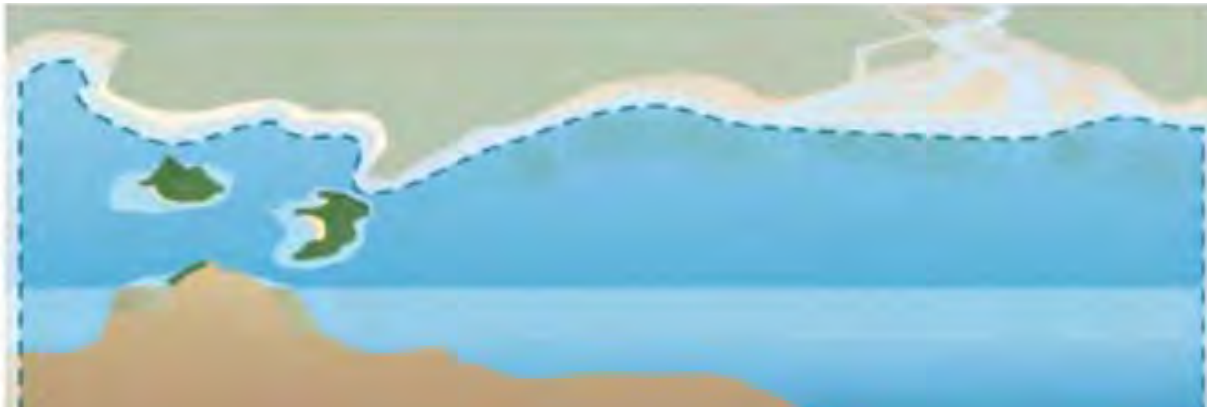
An example - Integration of multiple policies



Integrated Coastal Zone Management

ICZM focuses on the land side of the coastal zone, typically encompassing the coastal plain as well as the nearshore marine environment.

EU-Recommendations on ICZM, EU-Habitats Directive



Marine Spatial Planning

MSP covers the marine environment, either within a single jurisdiction (such as territorial seas or within federal waters) or across many jurisdictions (provincial or state waters, territorial seas, and even areas beyond national

EU-Marine Strategy Framework Directive & EU Maritime Spatial Planning Directive



Watershed Management

Watershed management extends through drainage basins; the focus of management is primarily on activities that affect water flows, and secondarily on activities that affect water quality, including inputs of sediment and chemical contaminants.

UNEP (2011)

EU-Water Framework Directive.....

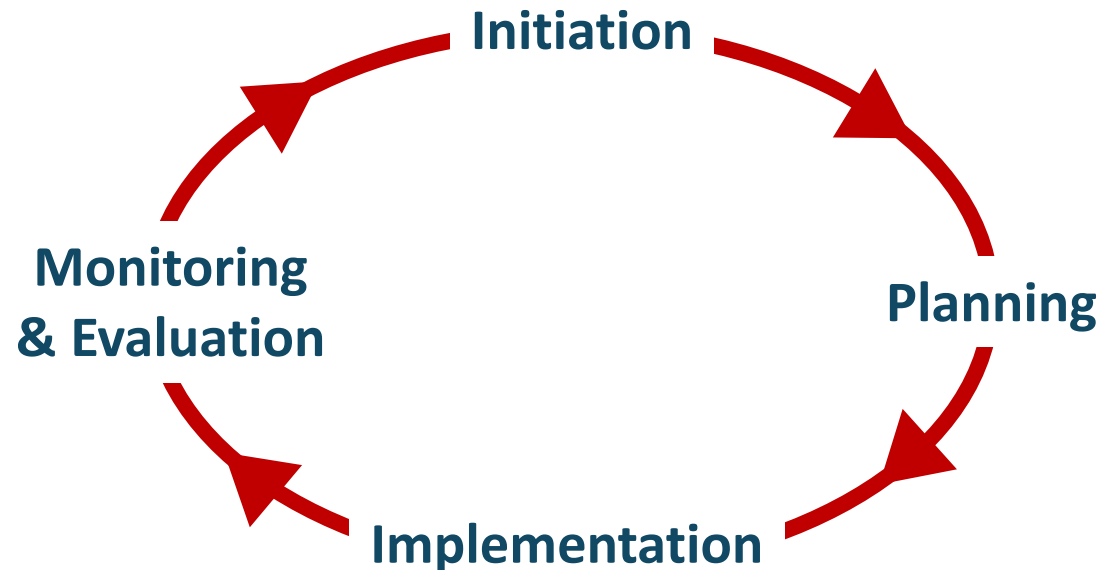
2. The solution: ICZM

Integration of land and sea in a coastal zone

- A general definition of the 'Coastal Zone' does not exist.
- It has to cover a band of land and sea, that can be defined based on e.g. functional relationships, geographic properties or administrative boundaries.
- Depending on national definitions, the seaward boundary can be several 100 m or far off-shore up to the outer limit of the Exclusive Economic Zone (EEZ).
- The same is true for the landward boundaries.
- In general, a trade-off exists between a comprehensive large scale definition of the coastal zone and a narrow, small scale approach with high practical, administrative and political acceptance.

2. The solution: ICZM - a circular process

ICZM is a **stepwise, circular process** covering aspects like information collection, stakeholder involvement, development of measures, decision making and management



➡ **It is not restricted to 'management'!**

➡ **It is an iterative process!**

3. Present state

ICZM & Sustainable Development (Agenda 21)

Agenda 21, the Rio Declaration on Environment and Development, and the Statement of principles for the Sustainable Management of Forests were adopted by more than 178 Governments at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, 3 to 14 June 1992.

Programme Areas

- **Integrated approach to the planning and management of land resources.**
- **Integrated management and sustainable development of coastal and marine areas, including exclusive economic zones.**
-

3. Present state

ICZM & Sustainable Development in the Baltic

In 1996, the Prime Ministers of the Baltic Sea Region took the initiative to develop an Agenda 21 for the Baltic Sea Region. In 1998, the Foreign Ministers adopted the Agenda 21 for the Baltic Sea Region, which includes agreed overall goals and sectoral goals and an action programme for sustainable development.

Baltic 21 Action Programme: Spatial Planning Actions

- Implementation of Stockholm Declaration on Sustainable Spatial Development Policy
- **Further Development of Integrated Coastal Zone Management**
- Integration of Baltic 21 into European spatial planning documents

➡ ICZM shifted from a nature protection towards spatial planning

3. Present state

ICZM policy in Europe

RECOMMENDATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the implementation of Integrated Coastal Zone Management in Europe of 30 May 2002

Chapter IV

Member states should develop a **national strategy** or, where appropriate, several strategies, to implement the principles for integrated management of the coastal zone.....

These strategies might be specific to the coastal zone, or might be part of a geographically broader strategy or programme for promoting **integrated management** of a larger area....

...Member States should consider developing **national strategic plans** for the coast....

3. Present state

ICZM policy in Europe

RECOMMENDATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the implementation of Integrated Coastal Zone Management in Europe of 30 May 2002 – Principles:

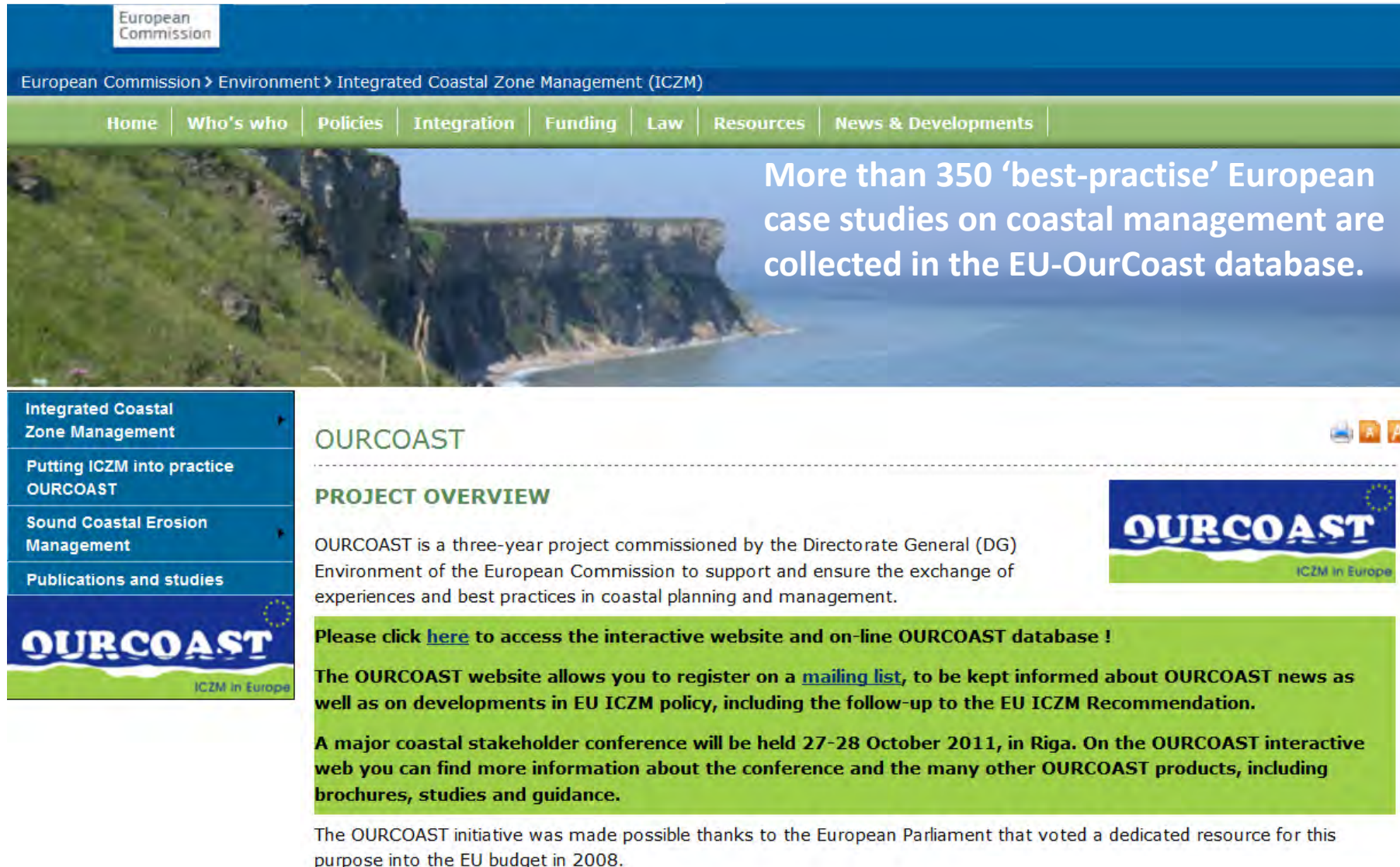
- broad thematic and geographic perspective,
- long-term perspective,
- adaptive management,
- local specificity (local to regional approaches),
- respecting carrying capacity of ecosystems,
- involving all parties (public participation),
- involvement of all relevant administrative bodies and
- coherence between sectoral policy as well as between planning and management.



Focus on regional approaches which facilitate policy, planning and management and involve stakeholders and the public

3. Present state

Case studies in Europe



European Commission

European Commission > Environment > Integrated Coastal Zone Management (ICZM)

Home | Who's who | Policies | Integration | Funding | Law | Resources | News & Developments

More than 350 'best-practise' European case studies on coastal management are collected in the EU-OurCoast database.

Integrated Coastal Zone Management

Putting ICZM into practice OURCOAST

Sound Coastal Erosion Management

Publications and studies

OURCOAST
ICZM in Europe

OURCOAST
ICZM in Europe

OURCOAST

PROJECT OVERVIEW

OURCOAST is a three-year project commissioned by the Directorate General (DG) Environment of the European Commission to support and ensure the exchange of experiences and best practices in coastal planning and management.

Please click [here](#) to access the interactive website and on-line OURCOAST database !

The OURCOAST website allows you to register on a [mailing list](#), to be kept informed about OURCOAST news as well as on developments in EU ICZM policy, including the follow-up to the EU ICZM Recommendation.

A major coastal stakeholder conference will be held 27-28 October 2011, in Riga. On the OURCOAST interactive web you can find more information about the conference and the many other OURCOAST products, including brochures, studies and guidance.

The OURCOAST initiative was made possible thanks to the European Parliament that voted a dedicated resource for this purpose into the EU budget in 2008.

4. Summary - Integrated Coastal Zone Management

- ICZM is part of the Agenda 21 process. It has the goal to ensure a sustainable coastal development and implements the Agenda 21 ideas.
- ICZM includes the ideas of an Ecosystem Approach to Management.
- A separate, legally binding directive does not exist in Europe, but integrated management is demanded from different sides (international agreements, EU guidelines and directives, national landscape and spatial planning).
- The major ideas of an Integrated Coastal Zone Management are widely accepted, for example early public information, participation as well as stakeholder involvement.



- However, despite a large amount of literature on ICZM it remained largely academic with limited practical local impact.

4. Future perspectives:

A Systems Approach Framework (SAF) for ICZM?

A Systems Approach Framework provides an improved stepwise, systematic approach, guidelines and supporting tools



The time needed between the recognition of a problem (or an opportunity) until the implementation of solutions/adaptation measures often took decades. Today, increasing pressures on the coast (e.g. sea-level rise) require much faster action. A SAF allows to shorten the time required for solving a problem.





Thank you for your attention!

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Rostock



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