

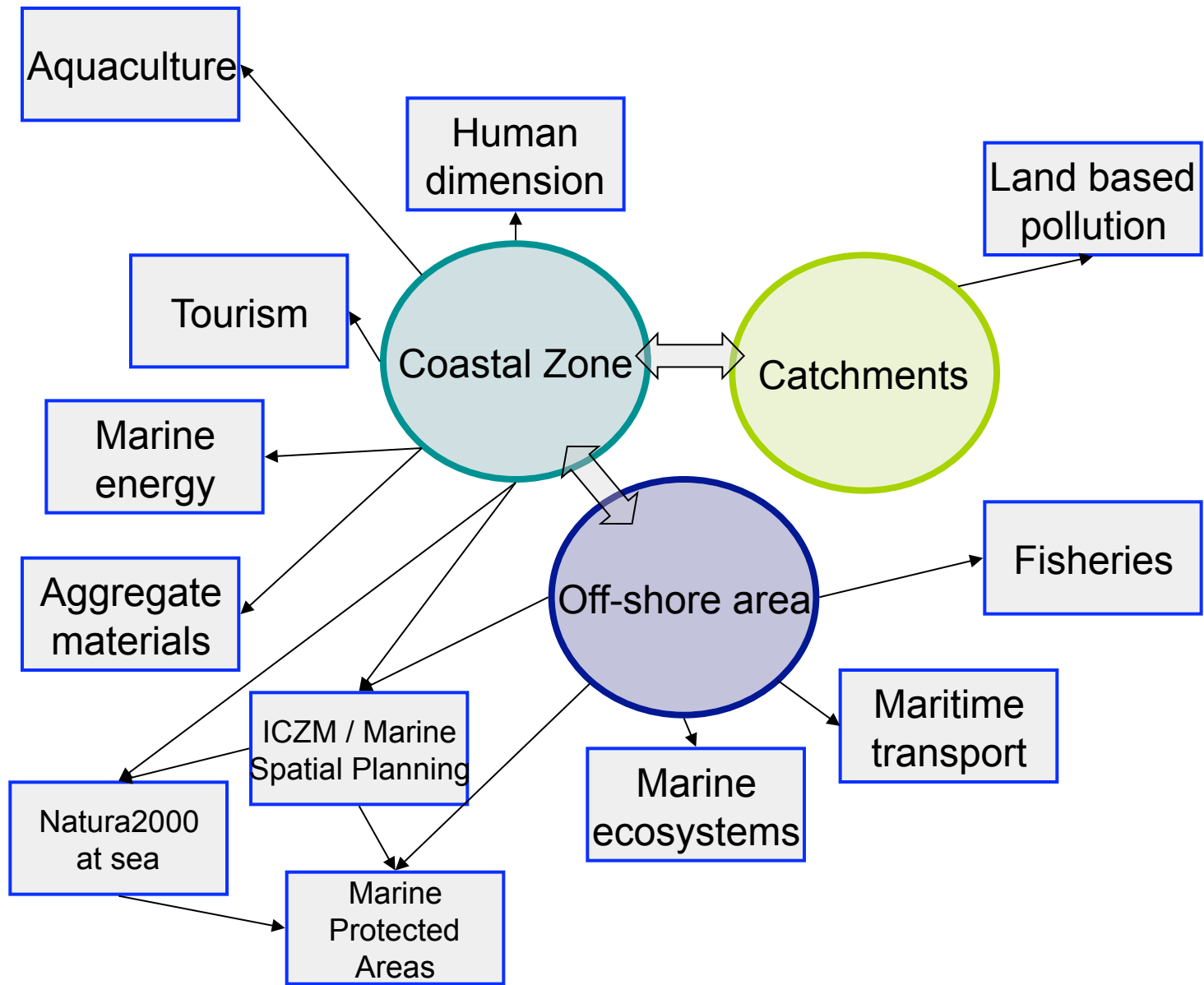


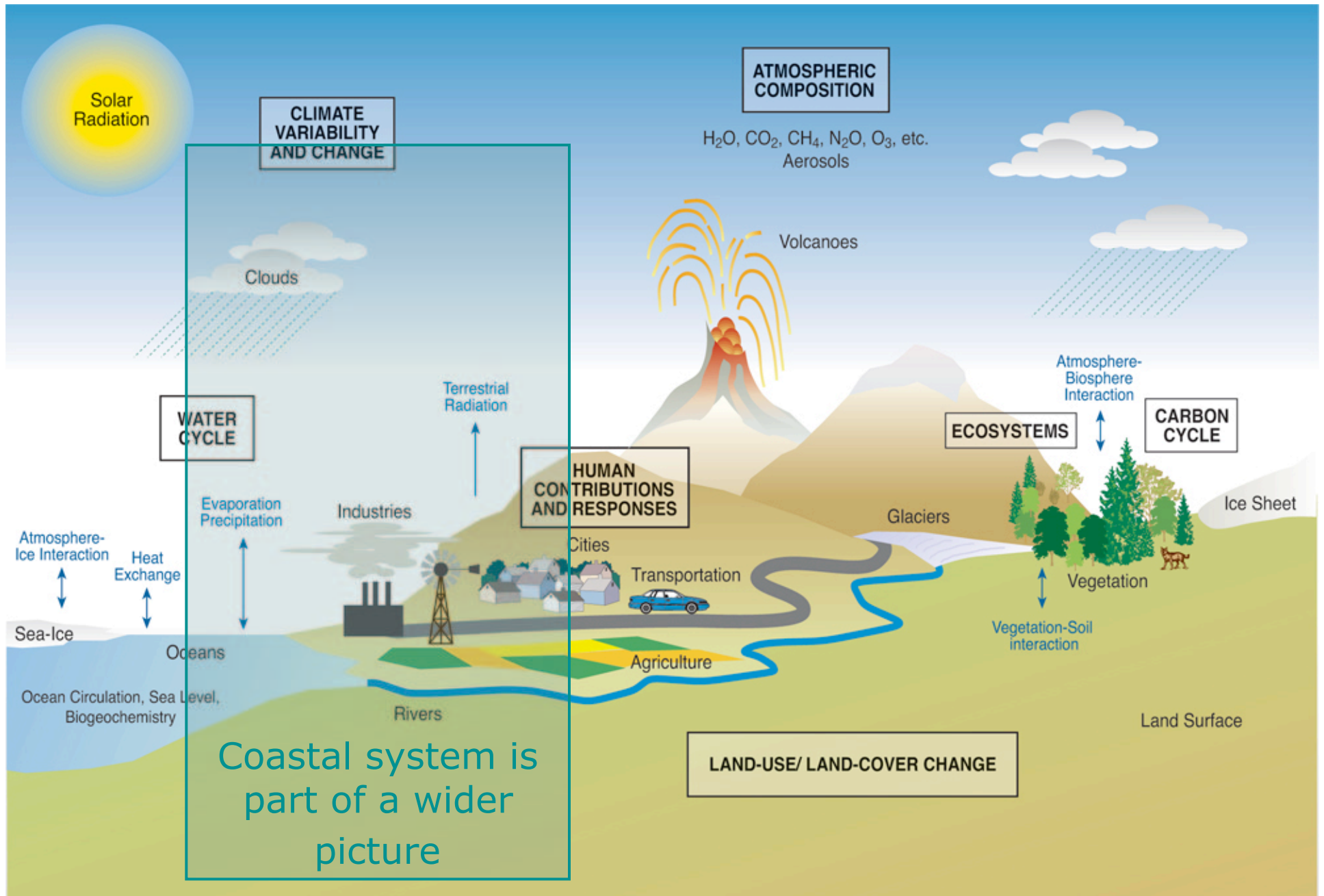
# **EEA activities related to coastal assessments and future plans**

Andrus Meiner, EEA

EEA/EIONET workshop – Maritime and coastal information systems

18-19 Nov 2009, Trieste, Italy





# Aggregation in meaningful way

- Vision of marine and coastal ecosystems
  - towards ecosystem-based management approach
  - implementation of ICZM, including adaptation to climate change impacts
  - integrated monitoring and assessments
- Vision of common maritime space
  - holistic management approach for all sea-related activities
  - information for maritime spatial planning

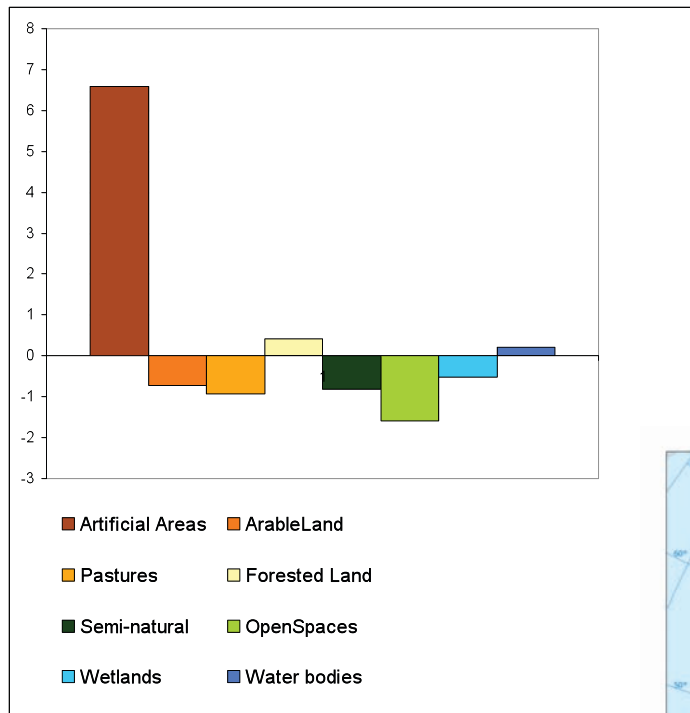


# Integrated approach - assessment of coastal zones and maritime space

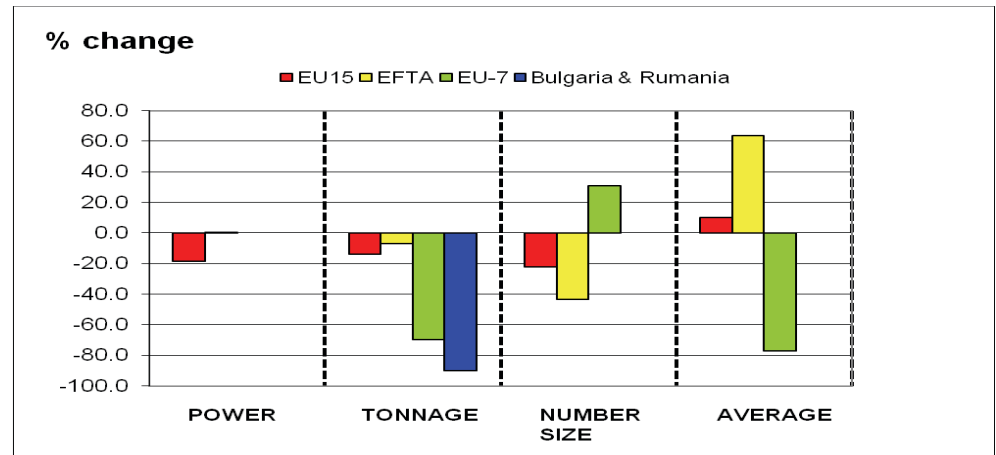
- development and pollution **pressures** that impact coastal and marine areas;
- **services** that are provided by ecosystems of the coastal and marine areas;
- vulnerability to environmental change (incl. climate) and need for **adaptation**;
- policy responses and maritime space **management** (e.g. ICZM and Maritime spatial planning).



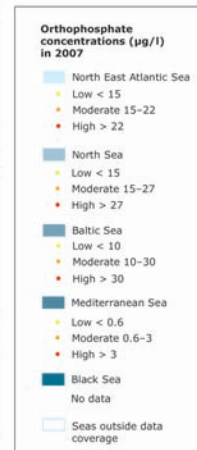
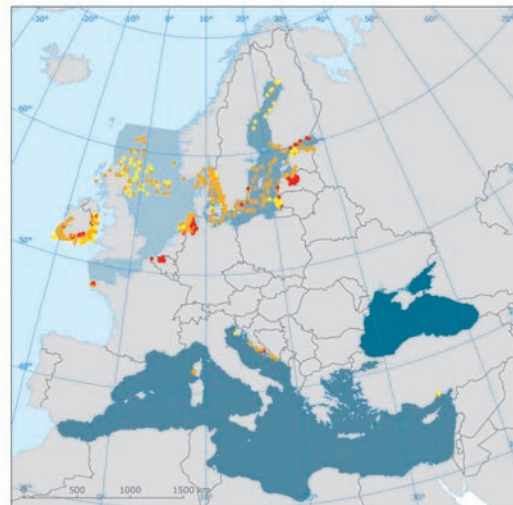
# development and pollution pressures that impact coastal and marine areas



**Net land cover change within the 0-10 km coastal zone 2000-2006**  
(preliminary results based on 15 MS)



**Changes in fishing fleet capacity - defined 1998-2007**  
(Source: EEA CSI034)



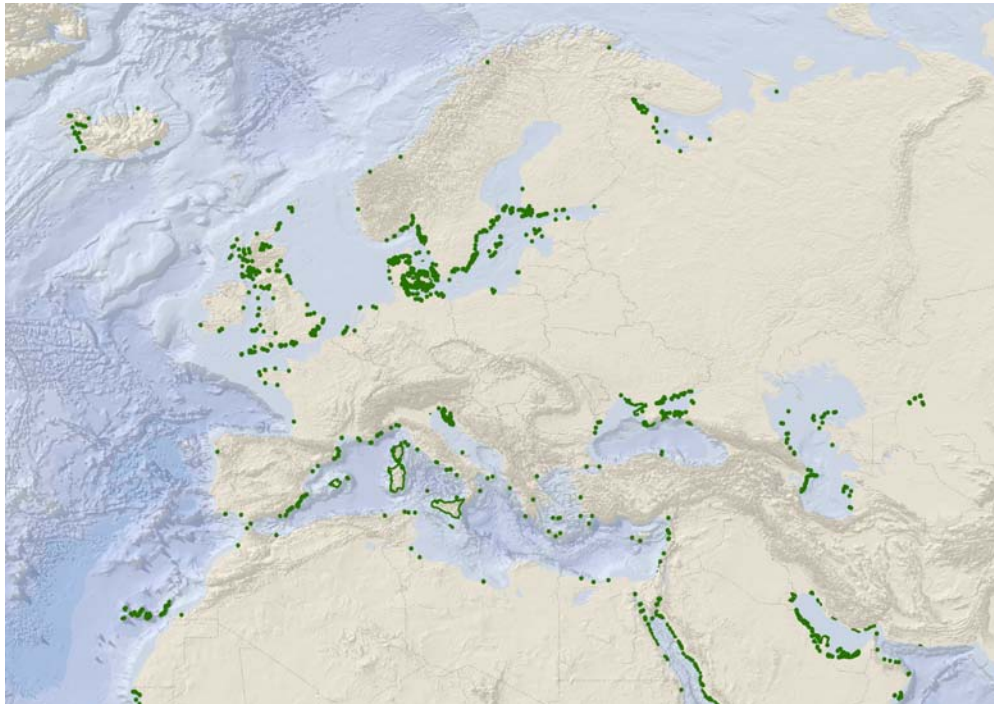
**Phosphate concentrations in European Seas, 2007**  
(Source: EEA CSI021)

# services that are provided by ecosystems of the coastal and marine areas

Habitat type	Overall conservation status per region				
	Green – favourable Orange – unfavourable-inadequate Red – unfavourable-bad Grey – unknown				
	MBAL		MATL	MMAC	MMED
BOR	CON				
Sandbanks slightly covered by sea water all the time	Orange		Red	Grey	Data not available
Large shallow inlets and bays	Orange		Red	Green	Data not available
Coastal lagoons	Orange	Red	Red	Red	Red
Mudflats and sand flats not covered by seawater by low tide	Orange	Red	Red	Grey	Red
Estuaries	Red	Red	Red	Not occurring	Data not available
Reefs	Red		Grey	Green	Orange
Boreal Baltic islets and small islands	Green		Not occurring	Not occurring	Not occurring
<i>Posidonia</i> beds	Not occurring		Not occurring	Not occurring	Orange
Atlantic salt meadows	Red	Red	Orange	Not occurring	Orange

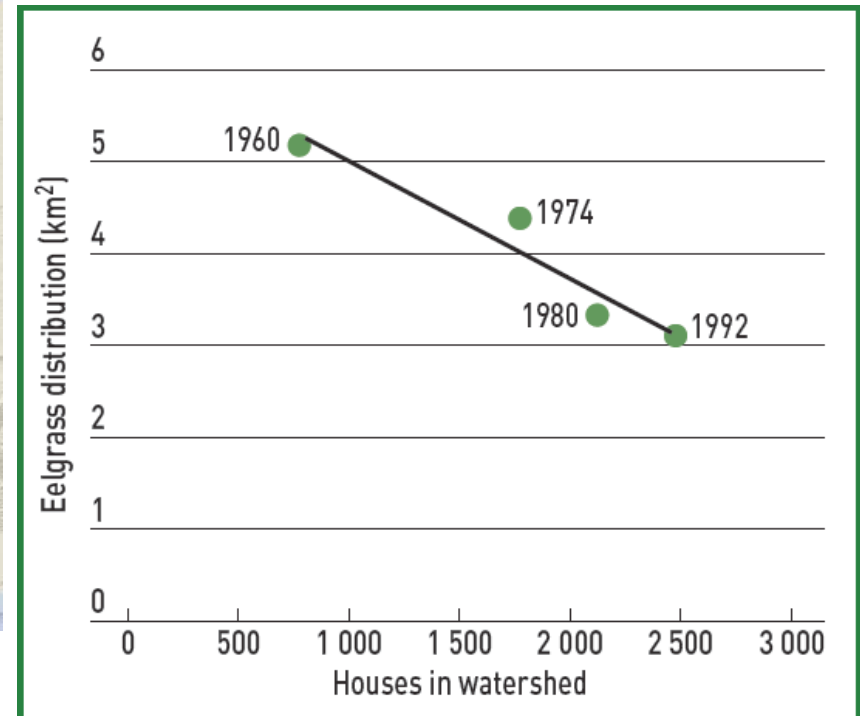
Source: EEA/ETC-BD, Habitats directive Art 17 data base

# Location of seagrass in Europe



## Threats:

- Eutrophication
- Fishing
- Turbid conditions
- Coastal development



Change in eelgrass area in Ninigret Pond, Rhode Island (United States) plotted against increasing number of houses in the watershed<sup>[13]</sup>.

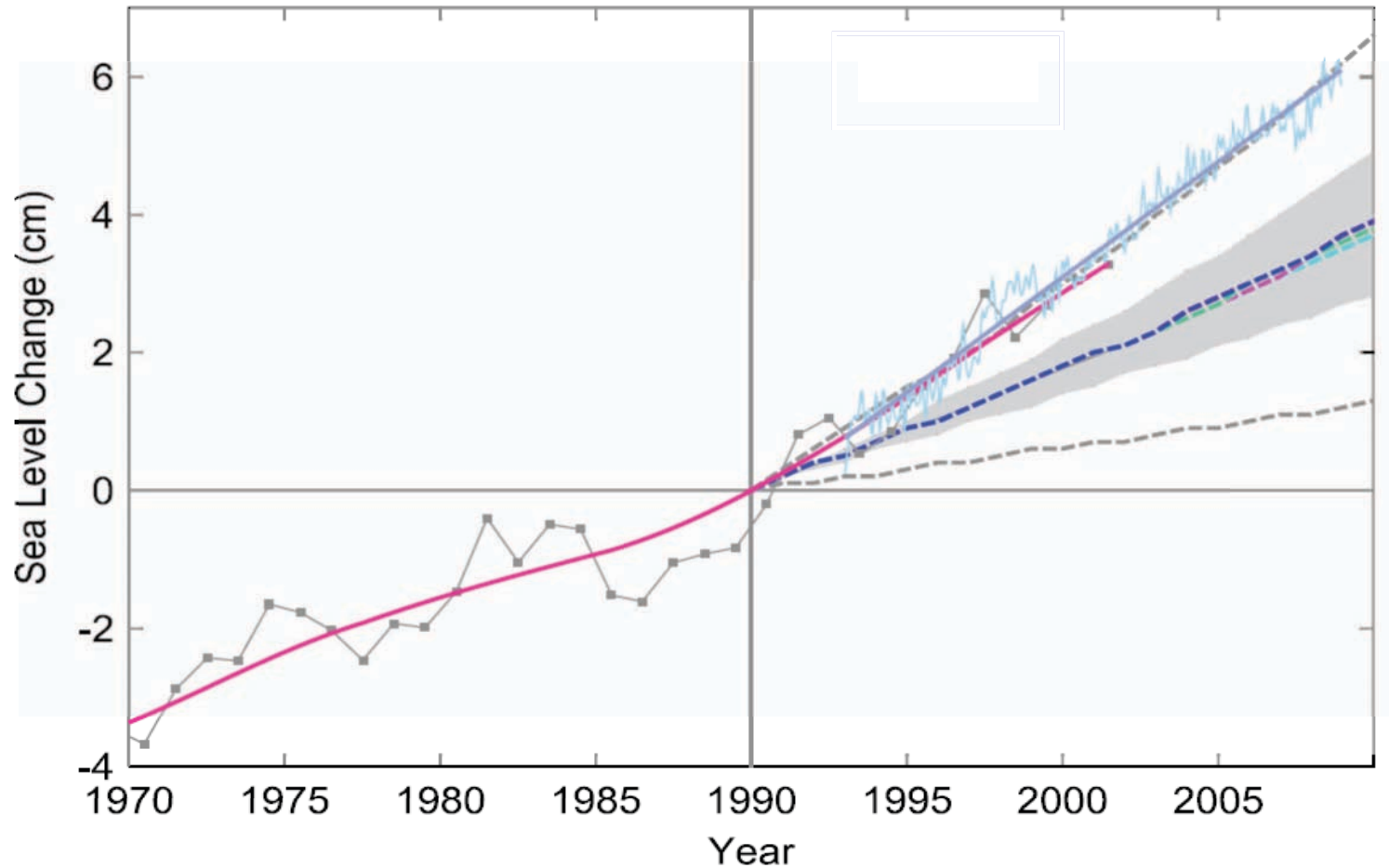


# Awareness raising:

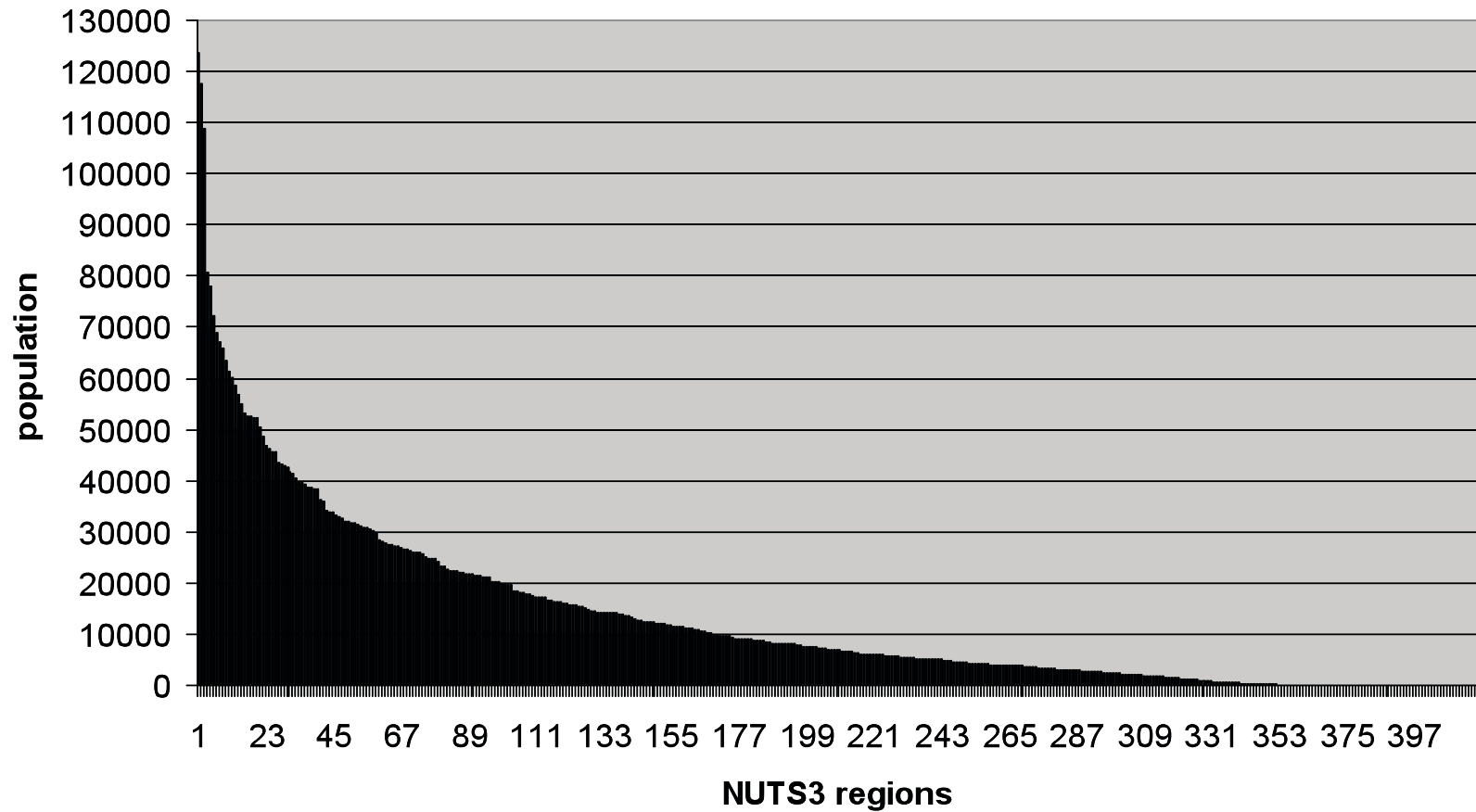
Coastal services degraded as a result of development and resource use

- Coastal ecosystems (land and sea) provide and sustain
  - Provisional services
    - fish, seabed resources, energy
  - Cultural and amenity services
    - tourism, recreation, heritage
  - Regulating and supporting services
    - shoreline stabilization, buffering from natural hazards, support water quality

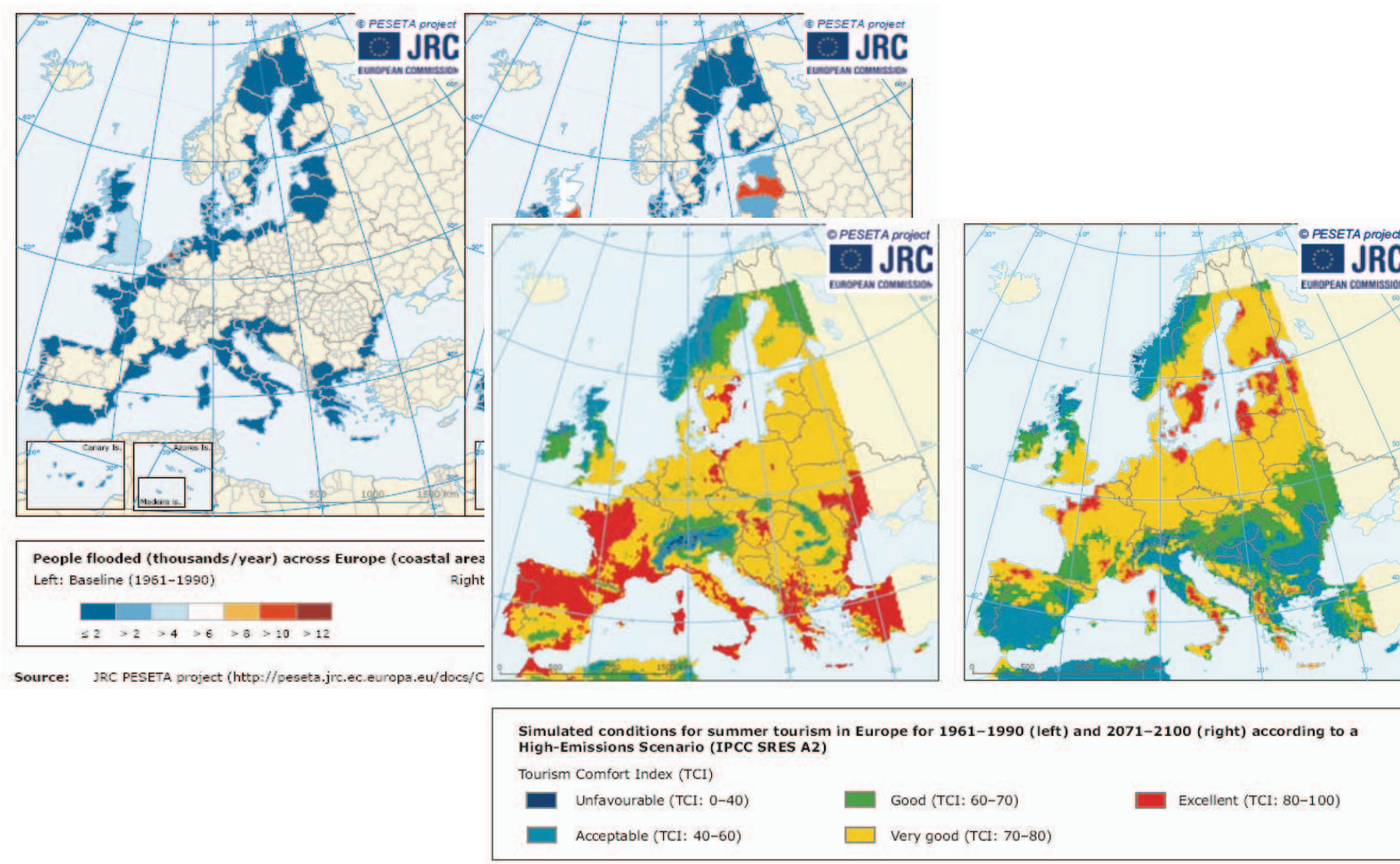
# vulnerability to environmental change (incl. climate) and need for **adaptation**

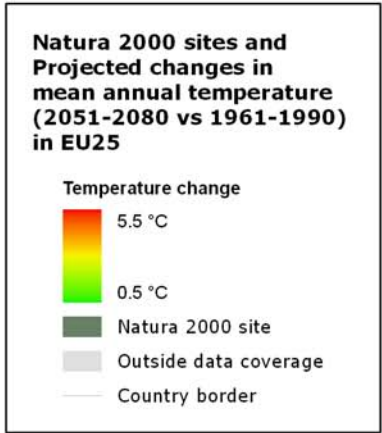
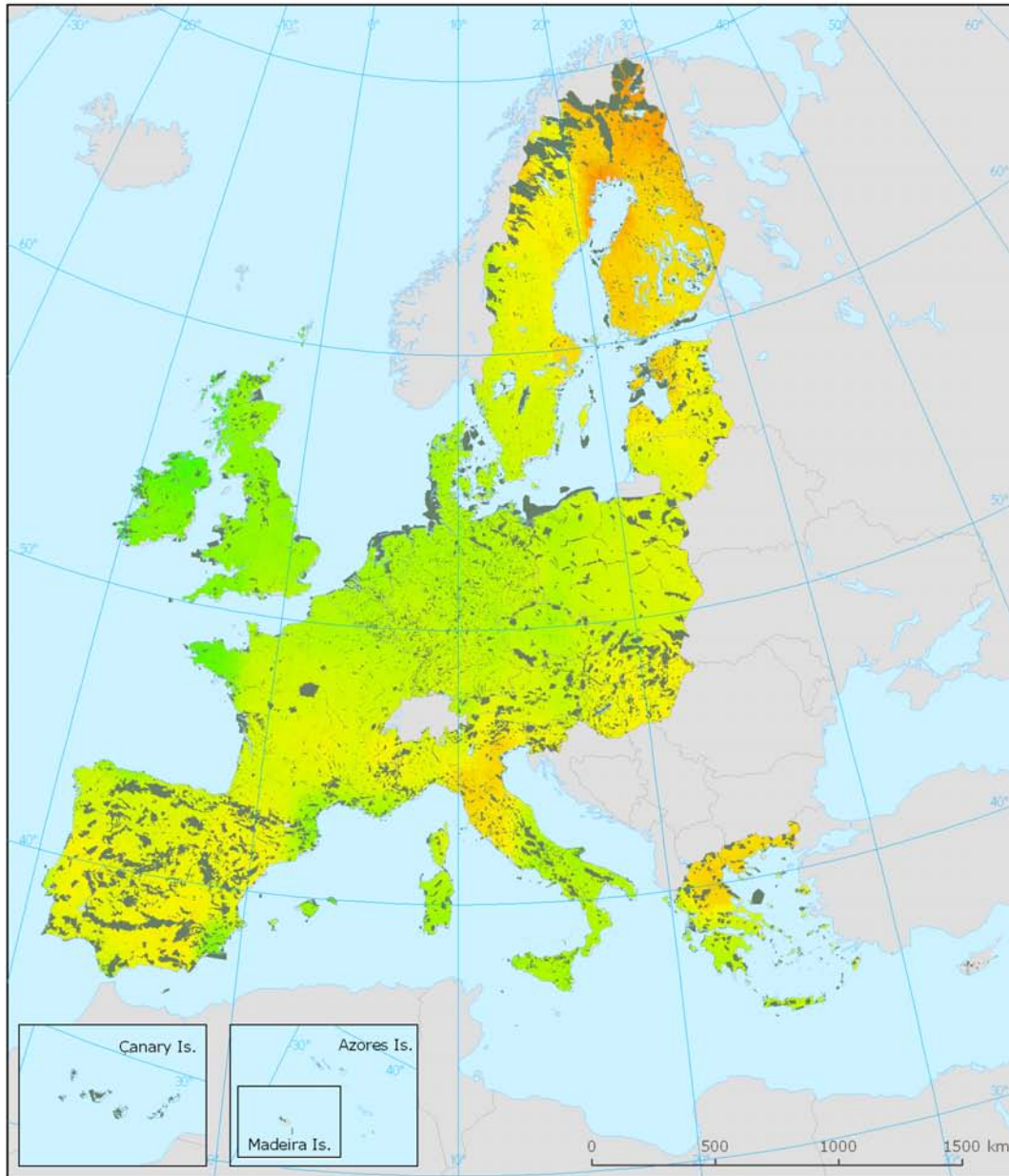


### European population below 5 m elevation and inside 1 km coastal zone



# Projections of climate change impacts





Note: Only Natura 2000 areas but no temperature data in Cyprus

Linking spatial data sets with spatially distributed modelling results

**PROJECTION:  
HadCM3 model;  
emissions scenario B2**



# policy responses and maritime space **management** (e.g. ICZM and Maritime spatial planning)

- process-based indicators
  - i.e. indicators for monitoring the implementation of integrated policies and measures
- outcome-based indicators
  - i.e. indicators for measuring the effectiveness of policy response actions



# Analysis of policy effectiveness

Request to EEA - provide information in conjunction with SoER reports focusing on:

- What has been done?
  - Steps taken to implement responses e.g. ICZM progress indicators
- Does it make a difference?
  - Evaluation of effectiveness of steps taken
- Are we moving in the right direction?
  - Analysis on the progress to solve problems



# IMP and MSFD

Maritime policy and marine directive

Marine Strategy Framework Directive:

“The implementation of the MSFD is not a mere sectorial development unrelated to maritime economic activities. While it will help to define more accurately the boundaries of sustainability, this Directive has to be taken into account as really forming part of the Integrated Maritime Policy in the broad sense (and not a separate development which gives a "green" complement to ongoing efforts).” (Commission statement Rome, 18 May 2009)

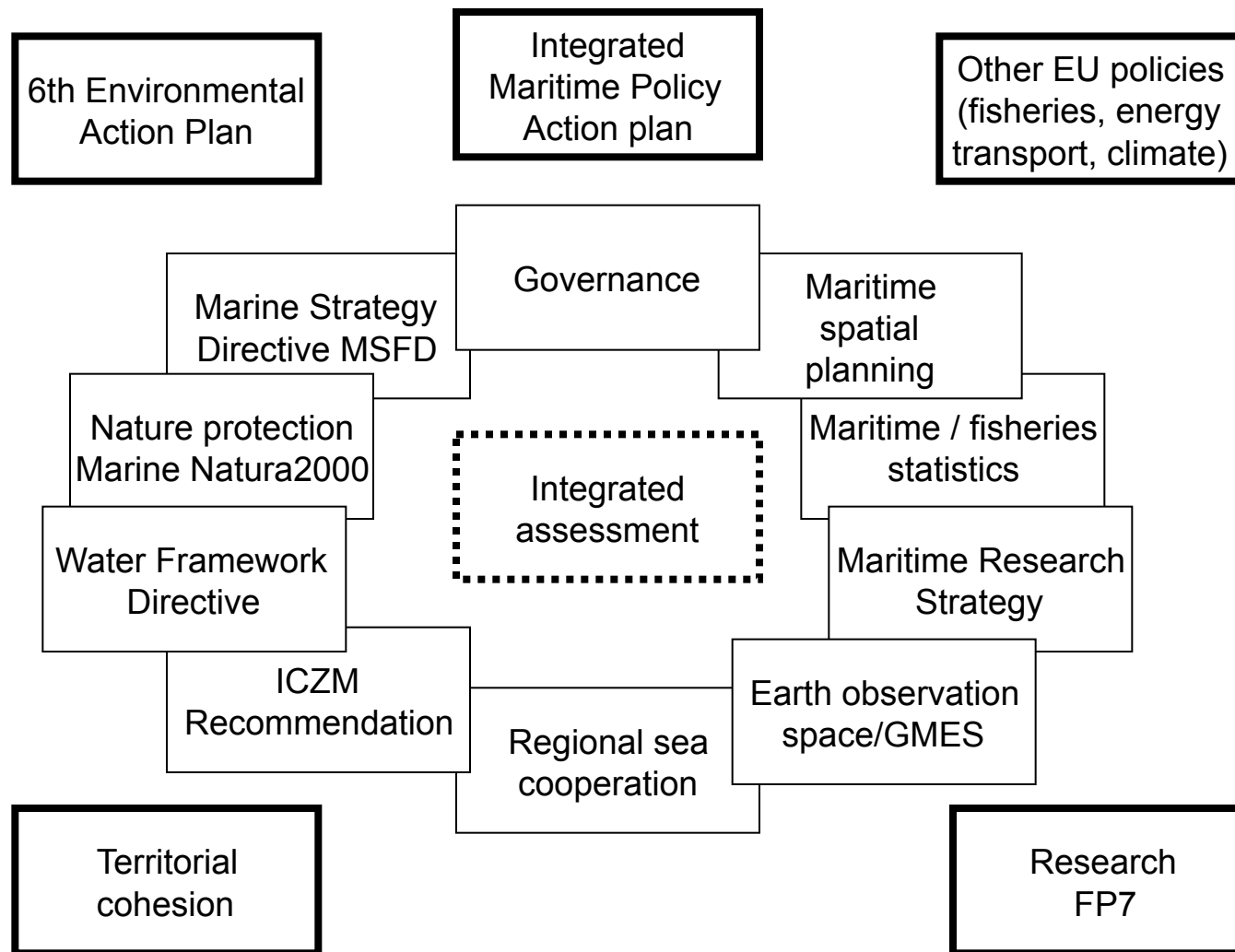


# MSFD requirements and linkages to Maritime Spatial Planning

- Structured approach allows combining the process with MSP
- Art. 5 and Art. 6 Duty of cooperation
- Systematic process to elaborate '**marine strategies**', culminating in the '**programme of measures**'.
- Programme of measures shall include **spatial protection measures** (Art. 13(4))
- **Socio-economic considerations** – in 'initial assessment', in 'programmes of measures', in 'exceptions'
- Stakeholder consultation
- 6-yearly review (& possible revision) of marine strategy elements



# Context of policy areas relevant to coastal and marine environment



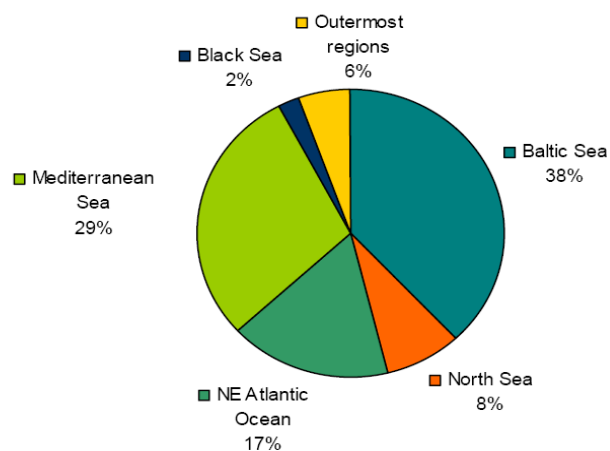


# Boundary conditions for EEA assessment of coasts

- Relevant to EU policies
- European focus
- Spatial assessment
- Environment as entry point
- Trend analysis
- Contribution to conceptual development

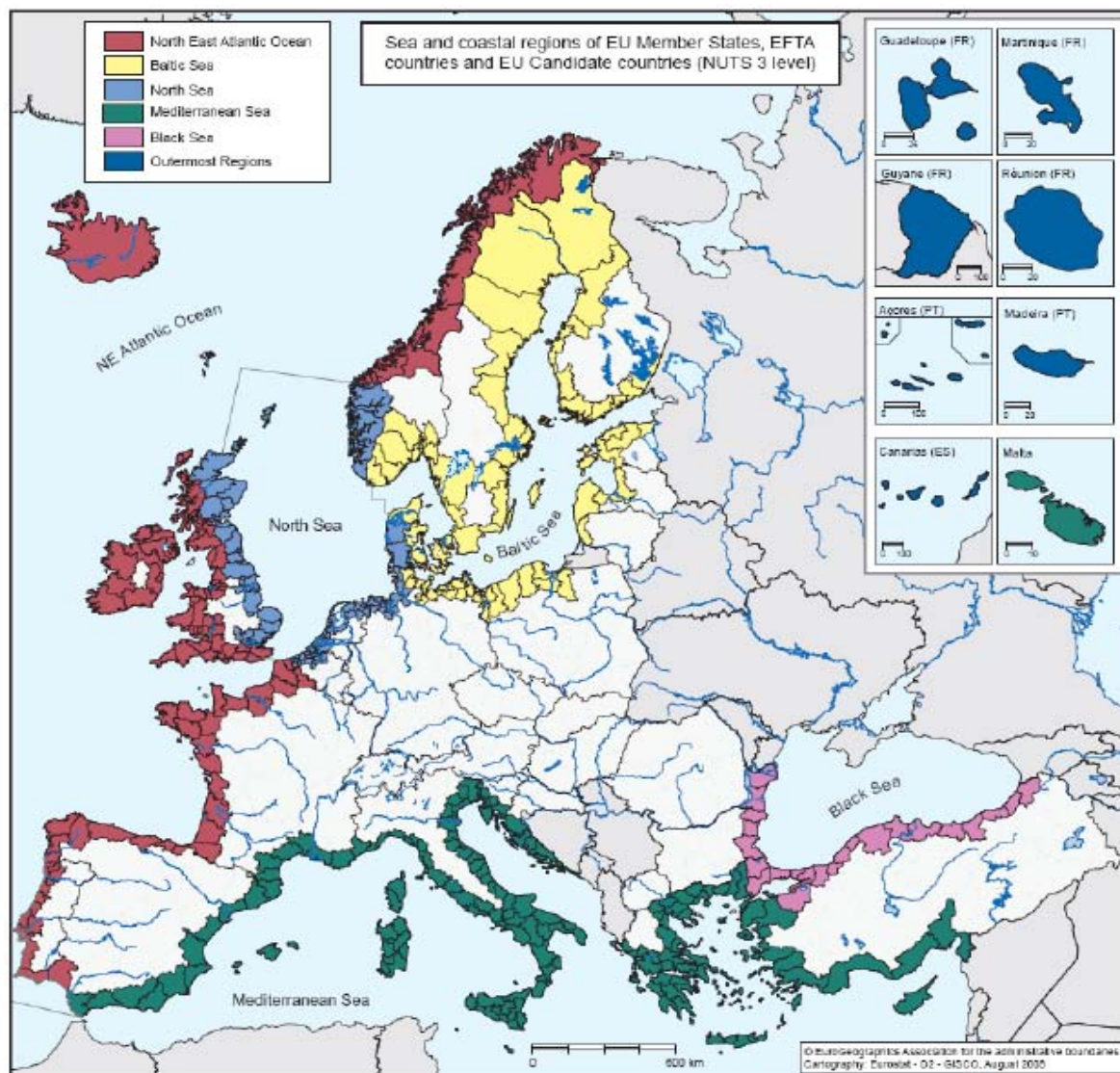
# Coastal regions of EU Sea basins

Relative size of sea basin catchments



Source: Eurostat, Regio database

Source: Eurostat, GISCO



# Supporting formation of information systems

- Support **E**uropean **M**onitoring and **D**ata **NET**work (EMODNET) formation and WISE-Marine
- Interoperability of national coastal atlases
- Spatial data infrastructure to support maritime spatial planning implementation
  - compliance with INSPIRE requirements
  - reference features, state of environment, operational monitoring and sea uses



# Main objectives of work

- Provide information of **state of coastal environment**, best management practices and policy responses (DPSIR)
  - Changes
  - What has been done
- Provide **follow up**, using 2006 report as a baseline
  - Support State of the Environment and Outlook spin-off products
  - EU's ICZM strategy (2000/2010) and other relevant policies
  - Follow up 15 priority actions identified in the Executive summary of the 2006 report
- Contribute to **methodology** for integrated spatial assessments (multi-scale nested approach for environmental accounting)



# Towards a project plan

EEA multi-annual work programme for 2009-2013: integrated approach for coasts

- **EEA activities**

- AMP2010 work areas
  - *Maritime* (planning, concept, outline, coastal zone)
  - *Marine* (TCM waters, links to MSFD implementation)
  - others

- **ETC activities**

- IP2010 activities across four European Topic Centres
  - LUSI -> coastal land accounts, sustainable tourism, ICZM
  - Water -> transitional, coastal and marine waters, fisheries
  - Biodiversity -> coastal habitats, Natura2000 at coast & sea
  - Air and Climate Change -> coastal vulnerability, adaptation

- **EIONET activities**

- Support through relevant NRC networks (several)





# Preliminary time table

- **2010** Project plan and annotated outline, project data base established
- **2011** Main implementation effort, incl analysis and drafting
- **2012** Consultation (TBC), finalisation, editing, production, dissemination
- Tentative publishing date Q4 2012 ( $\pm 1/2$  year)





Thank you!

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<http://www.eea.europa.eu>

