



# Introduction to the AQUACROSS project

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- ≈ **Name:** Knowledge, Assessment, and Management for AQUAtic Biodiversity and Ecosystem Services aCROSS EU Policies (AQUACROSS)
- ≈ **Type of project:** Research and Innovation
- ≈ **Funding:** Horizon 2020
- ≈ **Budget:** ca. 7 million EUR
- ≈ **Duration:** 1 June 2015—30 November 2018
- ≈ **16 partners**

# AQUACROSS Partners



cesam universidade de aveiro  
centre for environmental  
and marine studies



UNIVERSITY OF  
LIVERPOOL



UCC

University College Cork, Ireland  
Coláiste na hOllscoile Corcaigh

Stockholm Resilience Centre  
Sustainability Science for Biosphere Stewardship



Stockholm  
University



INCDDD TULCEA



# The Challenge

- ≈ Biodiversity provides ecosystem services crucial for human well-being. As biodiversity is declining, despite existing policy efforts, there is an urgent need to both **document** and **evaluate** :
1. effects of drivers of change to biodiversity,
  2. links between biological diversity, ecosystem functions and resilience, and in turn to ecosystem service provision

These actions will help ensure effective **policy** and **sustainable development**.



Image Sources:  
Wikipedia Commons



# AQUACROSS Broad objectives



1. To **support the coordinated implementation** of the EU 2020 Biodiversity Strategy and international biodiversity targets;

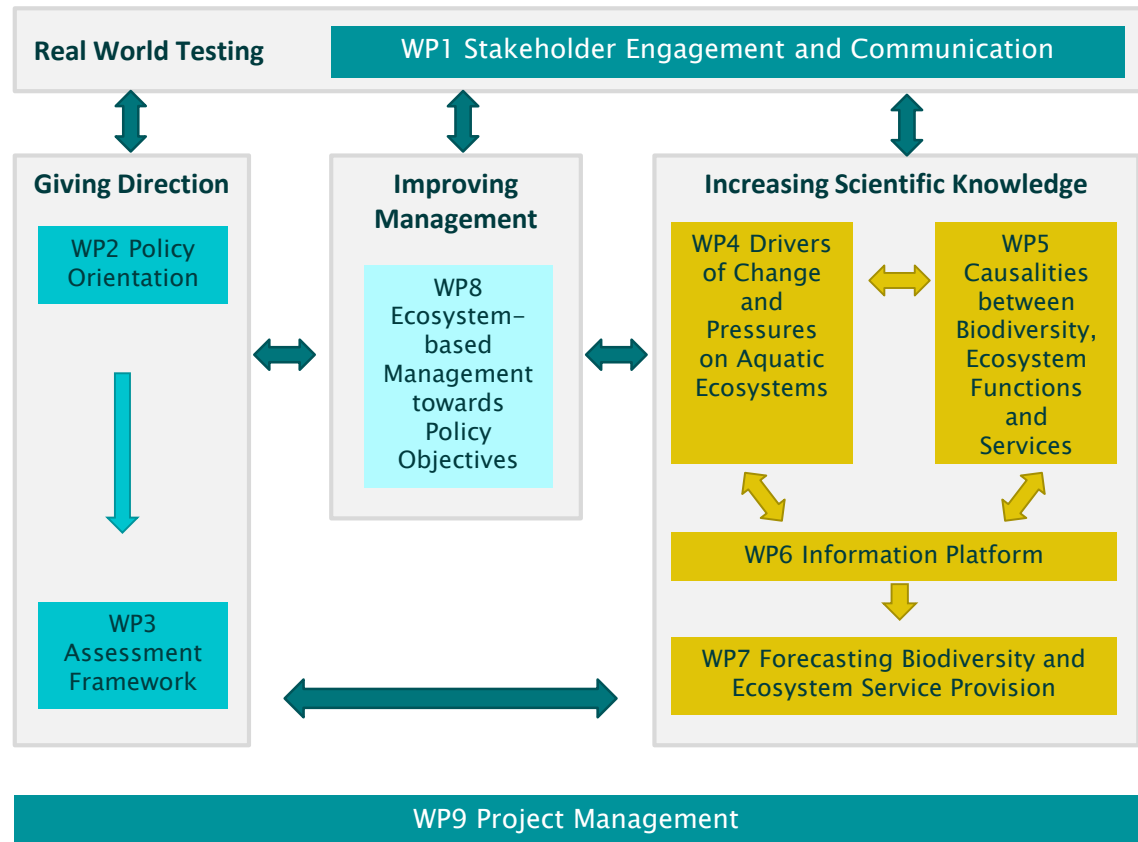


1. To **support the coordinated implementation** of the EU 2020 Biodiversity Strategy and international biodiversity targets;
2. To explore, advance and support the implementation of the **EBM** concept across aquatic ecosystems;
3. To specifically identify and test **relevant management practices and assessment tools**; and,
4. To **mobilise policy-makers, scientists, businesses and societal actors** to learn from real-world experiences, co-build and test project work, and ensure end-users' uptake of project results.

# Pillars of AQUACROSS



- ≈ **Pillar 1: Real world testing**
- ≈ **Pillar 2: Giving direction**
- ≈ **Pillar 3: Increasing scientific knowledge**
- ≈ **Pillar 4: Improving management**
- ≈ **Case studies across all pillars**



# Introducing Ecosystem Based–Management



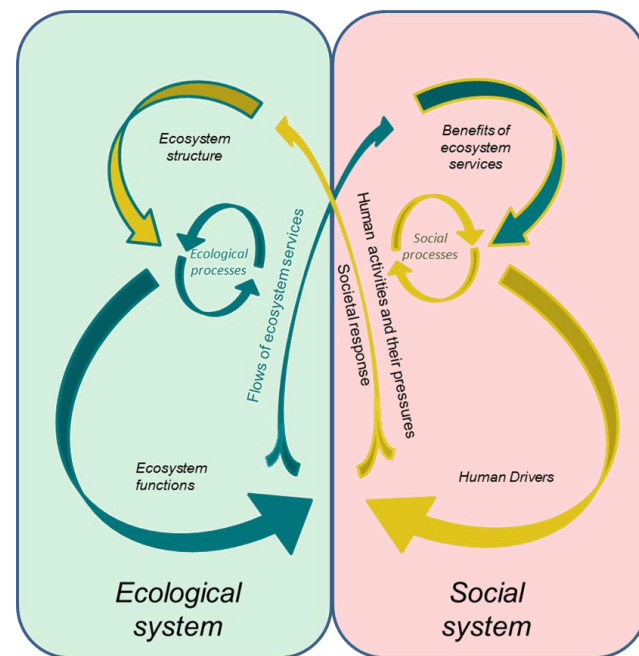
- ≈ What makes EBM so relevant for the protection of aquatic biodiversity?
- ≈ Ecosystem Based Management: AQUACROSS concept (Del. 3.1) and Assessment Framework (Del. 3.2) define EBM “*as any management or policy options intended to restore, enhance and/or protect the resilience of the ecosystem*” (Gomez et al. 2017 and 2016)



# AQUACROSS EBM proposed strategies consider



1 EBM considers ecological integrity, biodiversity, resilience and ecosystem services	<ul style="list-style-type: none"> <li>- joint value of all ecosystem services</li> <li>- protects the integrity of the ecosystem as a means to preserve ecosystem services and biodiversity</li> <li>- focus on multiple benefits or env. services</li> </ul>
2 EBM is carried out at appropriate spatial scales	<ul style="list-style-type: none"> <li>- taking into account ecosystem boundaries</li> </ul>
3 EBM develops and uses multi-disciplinary knowledge	<ul style="list-style-type: none"> <li>- understanding of the ecological and social systems to be managed</li> </ul>
4 EBM builds on social-ecological interactions, stakeholder participation and transparency	<ul style="list-style-type: none"> <li>- balance ecological and social concerns</li> <li>- prominence to transparent and inclusive decision-making</li> <li>- advance collective action by building consensus on a shared vision for the future (e.g. the array of ecosystem services to be preserved)</li> </ul>
5 EBM supports policy coordination	<ul style="list-style-type: none"> <li>- break silos and create new opportunities of pursuing different policy objectives simultaneously</li> </ul>
6 EBM incorporates adaptive management	<ul style="list-style-type: none"> <li>- ability to respond to a range of possible future scenarios.</li> </ul>



## AQUACROSS ASSESSMENT FRAMEWORK

# A teaser of the conference...

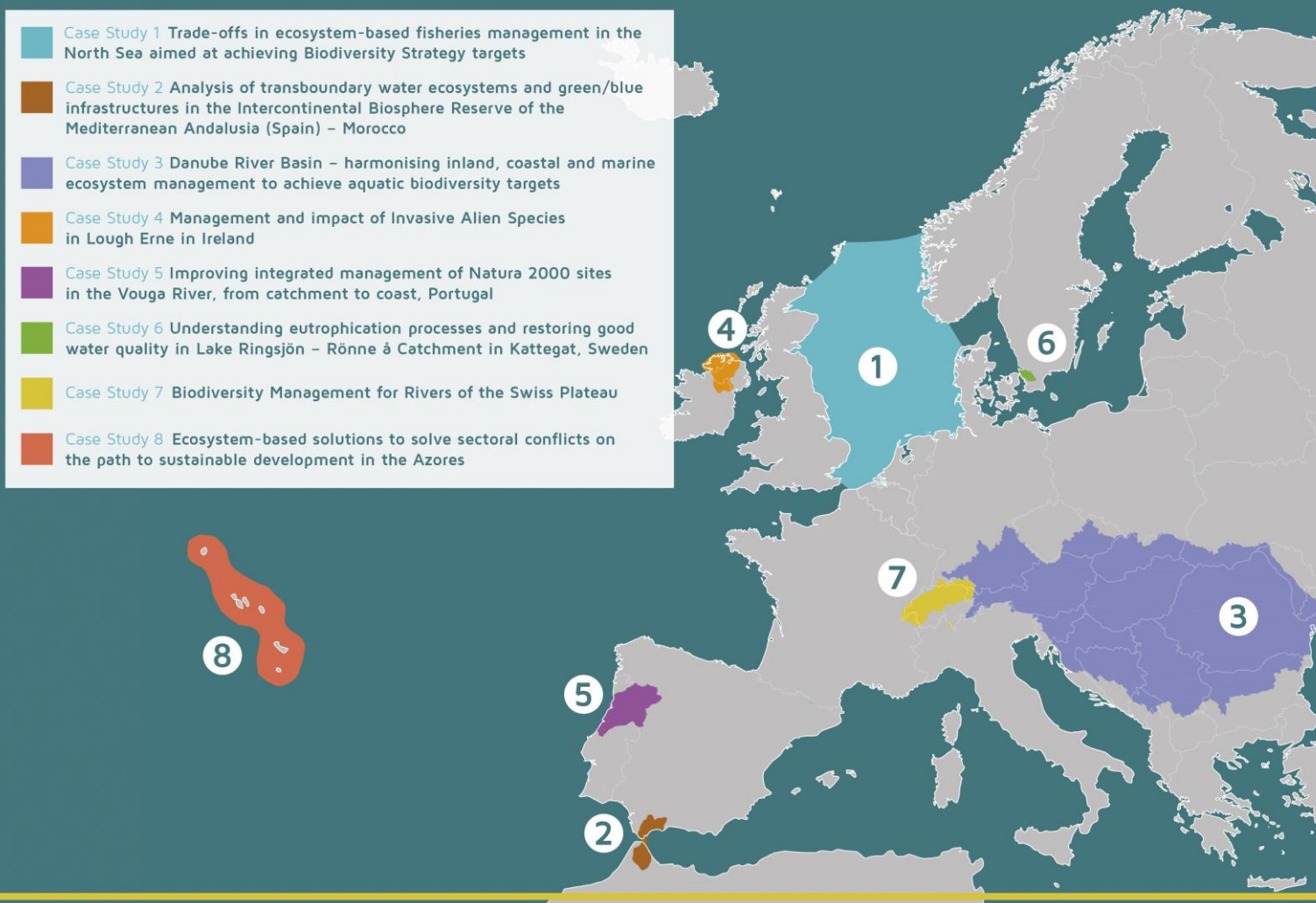


- ≈ *Highlight the need for a change! (current practices, assessments, approaches) if we are aiming to achieve the objectives of the EU 2020 BioDiv Strategy.*
- ≈ *Showcase the added value of integrative policy and EBM assessment frameworks for the protection of aquatic biodiversity*
- ≈ *Improve understanding of aquatic biodiversity, supporting ecosystems and related services across Europe, and the drivers and pressures that affect it*
- ≈ *The role of local stakeholders and the elicitation of societal preferences for biodiversity protection*
- ≈ *Effective support tools*
  - *aqualinks to assess causalities*
  - *information platform to facilitate the dissemination of data, research methods and results across aquatic domains*
- ≈ *Application of ecosystem-based management concepts in aquatic ecosystems at different scales: is EBM worth pursuing? Findings from Case Study work.*

# AQUACROSS Case Studies

















## Location of AQUACROSS case studies



# AQUACROSS Case Studies – Aquatic realms



	Freshwater	Coastal	Marine
CS1: North Sea			
CS2: Intercontinental Biosphere Reserve of the Mediterranean			
CS3: Danube			
CS4: Lough Erne, Ireland			
CS5: Ria de Aveiro, Portugal			
CS6: Sweden			
CS7: Swiss Plateau			
CS8: Azores			



# AQUACROSS Case Studies – EU Biodiversity Strategy to 2020



## EU Biodiversity Strategy 2020 Targets

### Target 1

Protect species and habitats

e.g. CS5 – Ria de Aveiro

### Target 2

Maintain/restore ecosystems

e.g. CS3 Danube, CS7 Switzerland, CS2

### Target 3

Sustainable agriculture/forestry

e.g. CS6 Sweden, CS4 Lough Erne

### Target 4

Sustainable fishing/healthier seas

e.g. CS1 – North Sea, CS8 - Azores

### Target 5

Combat Invasive Alien Species

e.g. CS4 Lough Erne

### Target 6

Avert global biodiversity loss

e.g. CS6 – Spain-Morocco IBRM

## Cross-cutting

Financing

Stakeholder engagement

Knowledge base and data

e.g. all CS