

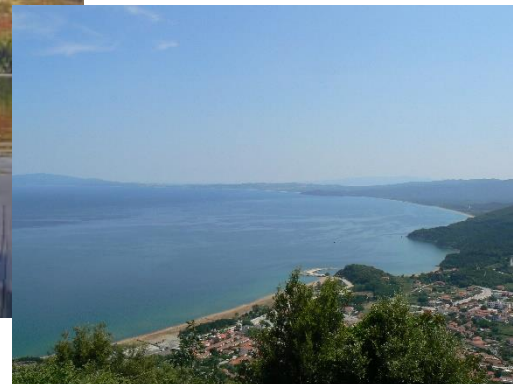
# Water quality assessment in Europe

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***DG Joint Research Centre***

***Sustainable Resources***

***Unit of Water and Marine Resources***



# Outline

Our work in Europe

How can it be useful for the Water Convention ?

# Overview biological assessment methods



**27 EU countries (+Norway)**

**> 400 ecological  
assessment  
Methods**

**Very diverse**

**Why so many ?  
Why so diverse ?**







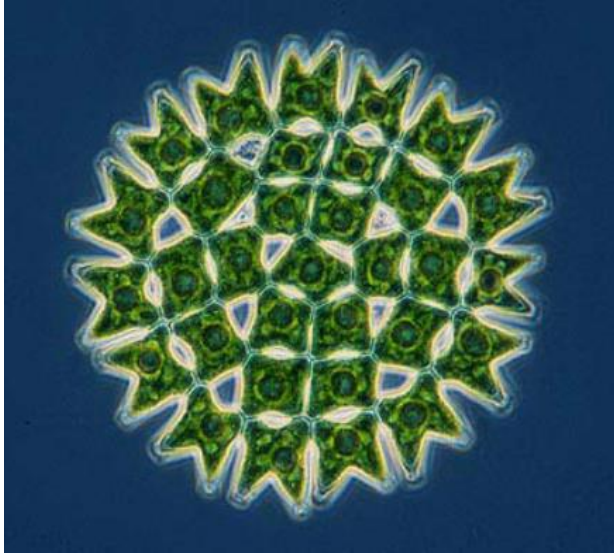
European  
Commission



15 April 2021

Joint  
Research  
Centre





**PHYTOPLANKTON**



**BENTHIC FAUNA**



**MACROPHYTES + PHYTOBENTHOS**



**FISH**

# Problem of indicators

Alien species

Benthic fauna diversity

Fish biomass

Phytoplankton richness

Temperature

Chlorophyll-a

Cyanobacteria biovolume

Number of Diptera  
species

Macrophyte colonization  
depth

Total biovolume

ASPT index

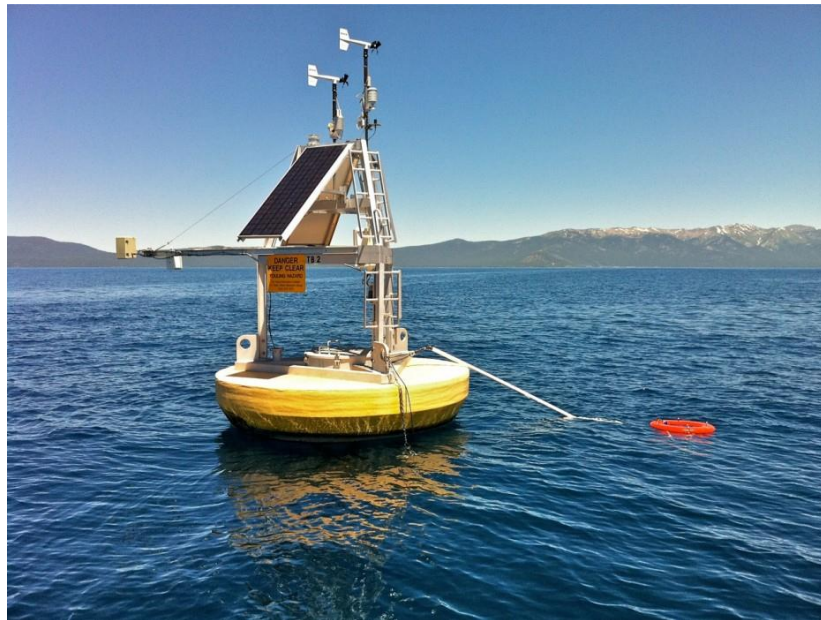
Coleoptera

IPS index

Invasive species %

Fish age structure

EPT taxa richness





# Human pressures: eutro and hymo









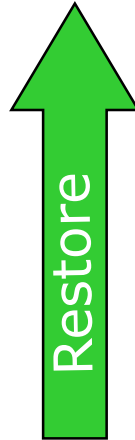
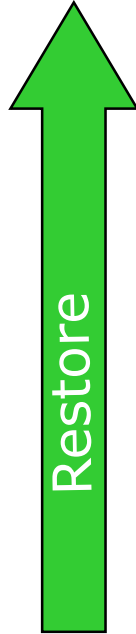


European Commission

# ECOLOGICAL STATUS



# ECOLOGICAL STATUS



Joint Restoration Centre

# Overview biological assessment methods



**28 European countries**

**> 400 ecological  
assessment  
Methods**

**Very diverse**



**Aim: harmonized  
assessment of  
European waters**



# Intercalibration of ecological assessment

- **Comparable** between all 28 Member States (+Norway)



# We have intercalibrated 400 methods of 28 countries

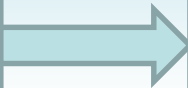
IC Decision

IC Guidance and manual

Technical reports



400 diverse systems



Harmonised assessment

Info / data  
collection



**Indicator  
Validation**

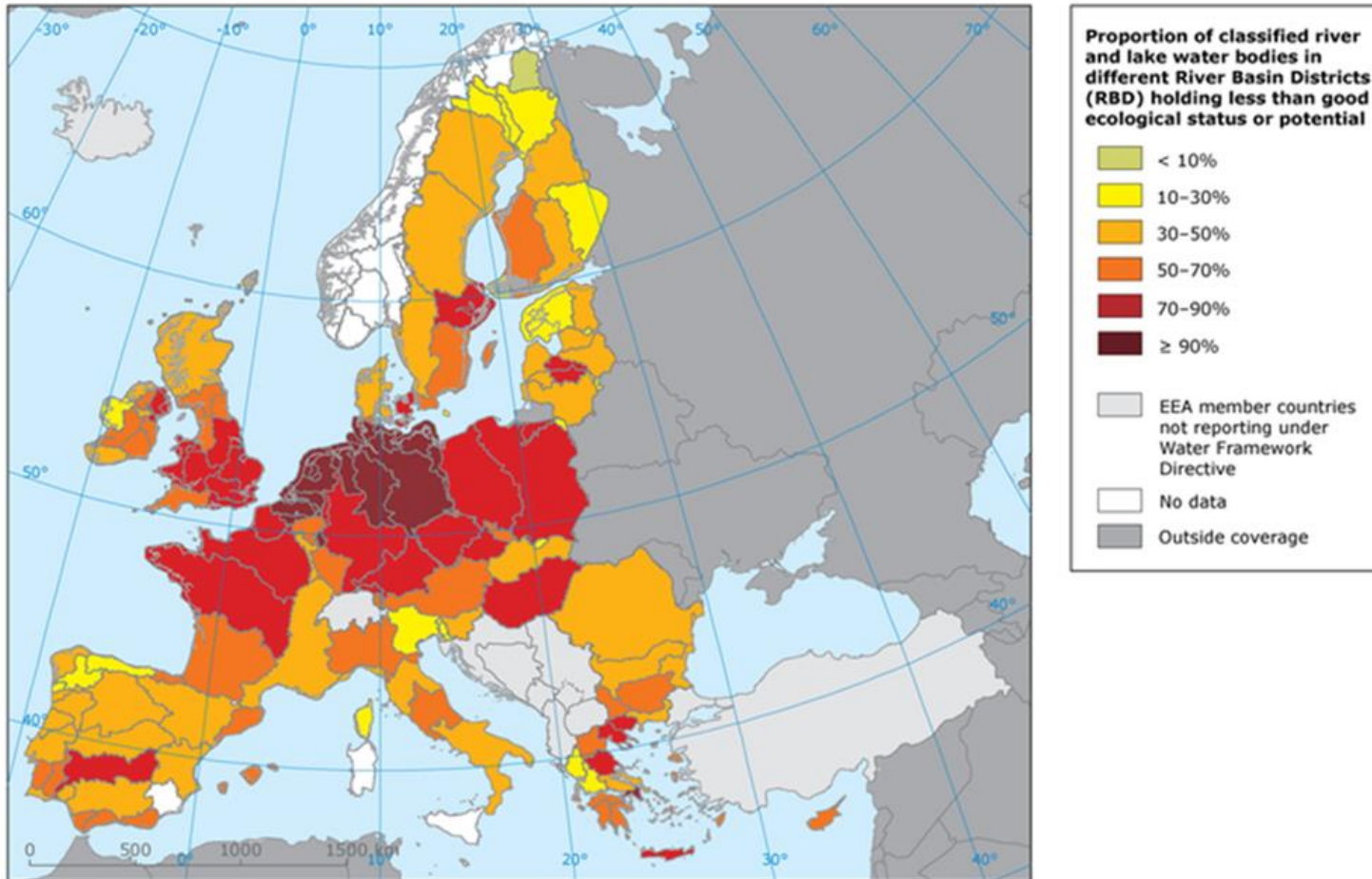


**Indicator  
harmonisation**

Guidance: Methodology  
framework

Expert panels

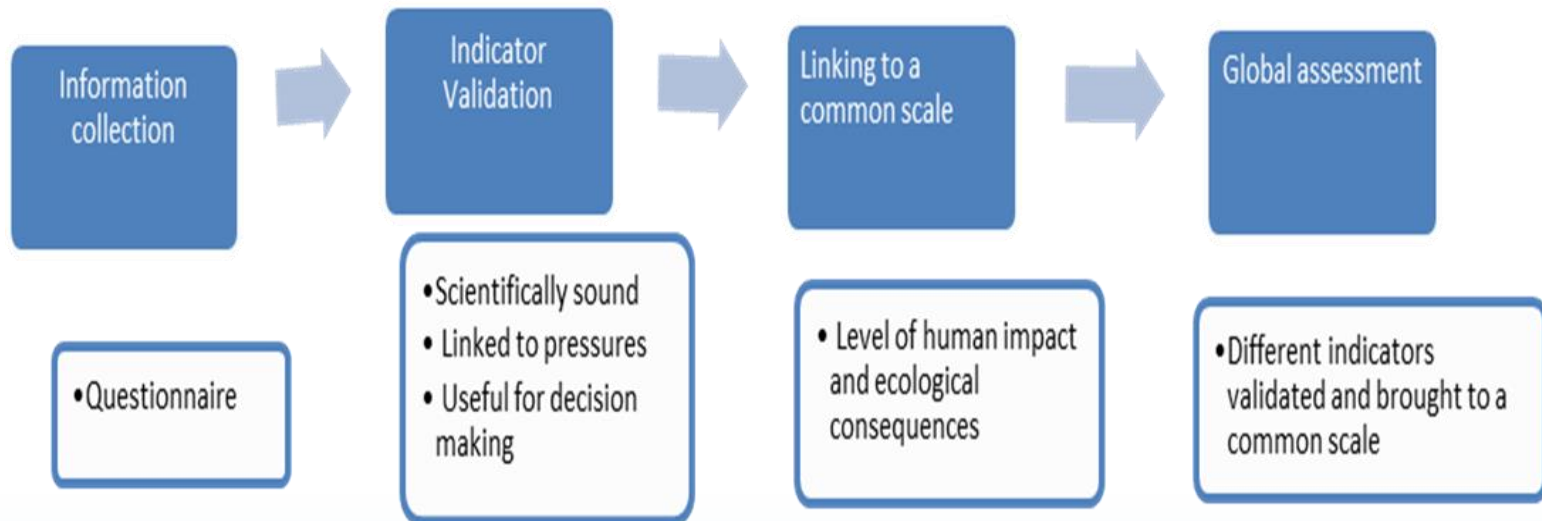
# 400 assessment systems in use





# Global assessment

- Different types of indicators
- Single indicator(s) not feasible
- + remote sensing and modelling



# Summary

- In Europe: Ecological assessment
- Assessment compared & harmonised between countries = intercalibration
- Experience can be used at global scale