The state of and threats to European waters
EU policy context

- 7th EAP (Priority Objectives 1, 2, 3)
- Water Framework Directive
- Floods Directive
- Water Industry Directives
- Nitrates Directive
- WS&D strategy
- Integrated Maritime Policy / Maritime Spatial Planning Directive
- Common Fisheries Policy
- 2020 EU Biodiversity Strategy (e.g. Target 2/Action 5)
- Nature Directives
- Common Agricultural Policy
Data & reporting

2019
MSFD progress on PoMs
HD Article 17
BD Article 12

2020
WFD progress on PoMs (2018)
INSPIRE compliance

2021
MSFD update of Article 11
MSP reporting

2022
MSFD PoM update
WFD 3rd RBMP

2023
MSFD update of Articles 8, 9, 10 + Article 19.3

2024
MSFD progress of PoM

2025
MSFD update of Article 11
HD Article 17
BD Article 12

2026
MSFD PoM update
WFD 4th RBMP

2027

2028
Streamlining environmental reporting: potential alignment MSFD-HBD-WFD-CFP

Other sources of data: Regional Sea Conventions, Copernicus (CMEMS, C3S, CMLS), EMODnet, ICES, CFP, EMSA, EFCA

Involvement in MSFD CIS: WG DIKE, TG DATA, WG GES, TG ML

SDG14: MPAs, bathing waters quality, status of fish stocks, nutrients in seawater

WISE-Marine
Key messages

• This report presents results on the status of EU waters based on the second River Basin Management Plans (RBMPs, 2010-2015).

• Since the first RBMPs our knowledge of Europe's waters has grown significantly, providing a better understanding of the status and the pressures causing failure to achieve good status.

• Nevertheless European waters remain under pressure from water pollution, over-abstraction and structural change from a range of human activities.
Status of surface water 1st and 2nd RBMPs

Ecological status

Chemical status

Ecological and quality element status of European rivers

Source: Results from WFD second River Basin Management Plans (2010-2015)
Surface water chemical status with and without uPBTs*

* Subset of ‘ubiquitous, persistent, bioaccumulative and toxic’ priority substances, mainly mercury
Trends in European river water quality

-Nitrate (from agriculture)-
-BOD5*
-Orthophosphate
-Ammonium (from waste water)

*5-day biochemical oxygen demand

Source: EEA data reported by countries to WISE04 Water quality, 2016
Surface waters main pressures — 2nd RBMPs
Can emissions data inform about status / legacy?

- Emissions reporting can provide information on trends in releases
- Draft results – limited help and little reporting of diffuse emissions
- Need for robust, streamlined approach for reporting of emissions to water

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14 or more MS reporting between 7 and 14 MS reporting

14<>7

<= 7

EPRTR, SoE WISE emissions, WFD inventory
Mixtures

- Copper
- Isoproturon
- Cadmium
- Diuro
European Bathing Water Quality in 2017

- 10th Annual EEA report
- Based on member countries annual reporting
- Launched on 29 May jointly with the European Commission

Key results:
- Nearly all 21,801 bathing water sites monitored last year across Europe.
- 'Excellent' quality standards across Europe dropped marginally from 85.5% in 2016 to 85% last year.

The reason for the slight drop was due mostly to the effect of summer rain as well as changes in methodology in Romania and Sweden.
CSI 018 - Use of freshwater resources

Water abstraction by source in Europe (2015)

Annual
- Groundwater: 24%
- Rivers: 65%
- Lakes: 1%
- Reservoirs: 10%

Seasonal
- Q1: 50,000 million m³
- Q2: 60,000 million m³
- Q3: 55,000 million m³
- Q4: 40,000 million m³

Bars represent:
- Reservoirs
- Lakes
- Rivers
- Groundwater
CSI 018 - Use of freshwater resources

Water use by sectors in Europe (2015)

Annual:
- Agriculture, Forestry and Fishing: 40%
- Electricity, gas, steam and air conditioning supply: 28%
- Mining and quarrying, Manufacturing and Construction: 18%
- Households: 12%
- Service industry: 2%

Seasonal:
- Q1: Agriculture, Forestry and Fishing: 1200 million m³, Electricity, gas, steam and air conditioning supply: 750 million m³, Mining and quarrying, Manufacturing and Construction: 100 million m³, Households: 60 million m³, Service industry: 20 million m³.
- Q2: Agriculture, Forestry and Fishing: 2000 million m³, Electricity, gas, steam and air conditioning supply: 1200 million m³, Mining and quarrying, Manufacturing and Construction: 150 million m³, Households: 100 million m³, Service industry: 50 million m³.
- Q3: Agriculture, Forestry and Fishing: 1700 million m³, Electricity, gas, steam and air conditioning supply: 1000 million m³, Mining and quarrying, Manufacturing and Construction: 100 million m³, Households: 80 million m³, Service industry: 40 million m³.
- Q4: Agriculture, Forestry and Fishing: 1300 million m³, Electricity, gas, steam and air conditioning supply: 800 million m³, Mining and quarrying, Manufacturing and Construction: 100 million m³, Households: 60 million m³, Service industry: 30 million m³.
Water scarcity in Europe (winter and summer-2015)

River basin district level

Winter 2015

Summer 2015

Sub basin level

Winter 2015

Summer 2015

Population and area exposed to water scarcity conditions in Europe (summer 1990-2015)

Visualisation of the water scarcity; WEI+ interactive map

European Environment Agency

**EEA thematic marine assessments**

**Aim:**
- Providing a *harmonised* assessment of contaminants across Europe’s seas

**Methodology:**
- Application of existing multi-metric indicator-based classification tool
- Trends where available

**Data and information sources:**
- ICES’ DOME data portal, primarily HELCOM & OSPAR monitoring data
- Data delivered through the EIONET Central Data Repository
- Direct data delivery from France and Portugal
- EMODnet Chemistry (Baltic Sea and Black Sea)
- EMBLAS project (Black Sea)
- Only approved and published threshold values (all taken from EU directives or OSPAR (+1 from HELCOM and +1 from ICES)
- Assessment grid 20-100 km INSPIRE compliant
Key messages:

- Contamination of Europe’s regional seas continues to be a large-scale challenge, though progress is observed.

- Concentrations of some well-known contaminants appear to be declining though not all do yet meet agreed thresholds.

- Positive effects of the significant efforts to reduce input to the marine environment are observed for some ecosystem features.

- Key politically agreed targets will not be achieved on time e.g. the Generation target and the targets for a good environmental status set out in the MSFD will not be met by 2020.

- Full transparency on data and methodologies applied.
Eutrophication

Key messages:

- Eutrophication caused by inputs of nutrients, especially nitrogen and phosphorus, is a widespread and well-documented issue in many European marine waters.

- The cure, reduction of nutrient inputs, is embedded in several EU water policies, e.g. the WFD and MSFD.

- The reduction required to meet the objectives will come via the Nitrates and Urban Waste Water Treatment Directives.

- Examples of successful implementation of nutrient management strategies are showing up, e.g. the Baltic Sea and North Sea regions. However, further reductions in nutrient inputs are required to meet WFD and MSFD objectives.
Cumulative Pressures

- X% of EU seas is exposed to moderate or high potential cumulative effects. Intensity of cumulative effects is regional seas specific.
- Cumulative effects are higher in coastal zone in all regional seas, except in the Baltic sea, where the open sea area is potentially more sensitive.
- The offshore water-column habitats are the most effected in all regional seas, except in the Baltic sea, where the coastal water column is potentially the most affected habitat.
- Most potentially affected species groups:
  - Seals, breeding birds and fish in the Baltic Sea.
  - Fish, cetaceans, seals and turtles (other RS).
Key messages:

• Observations in Sea Surface Temperature and Ocean Acidification indicates that significant systemic changes in the oceans and degradation of ecosystem resilience are already happening.

• High proportion of vulnerable species and habitats continues to be in unfavourable conditions.

• Examples of recovery of certain species, e.g. White-tailed Eagle, are appearing in seas with solid, consistent cooperation and efforts.

• Achieving ‘good environmental status’ for marine biodiversity and favourable conditions for species and habitats will not be possible by 2020.

• Management efforts targeting individual species and habitats have led to improving conditions regionally.
Marine protected areas

Key messages:

- Europe has designated more than 10% of its seas within marine protected area networks, thus meeting Aichi target 11 before 2020.
- The coverage of marine protected areas (MPAs) varies significantly across regional seas, and more MPAs are needed in some regional seas.
- MPA coverage is in general higher in coastal waters and territorial waters compared to offshore waters. As such, not all biodiversity features appear adequately represented.
- Greater conservation gains may be possible by taking further steps to guarantee MPA effectiveness through a whole sites approach to management of protected sites e.g. increased protection levels.
Status of marine fish and shellfish

Fig. 1: Landings of fish per regional seas, and proportion of European fish landings per regional sea.

Fig. 2: Trend in the status of stocks assessment and progress made in GES assessment in the North-East Atlantic and Baltic Sea since 1945.

Proportion of European fish landings per regional sea:
- Assessed stocks
- Unassessed stocks

Note:
- GES could not be calculated for the Azores as it only concerns unassessed stocks.
1. EU projects need to increasingly address the sea-land interaction, i.e. the land-sea continuum, for example in terms of contaminants, eutrophication and plastics. Data sets, methods and studies are very much at different levels of development and studies segmented (i.e. addressing only land or sea).

2. There is a need to guide the implementation at the EU level of the EBM approach, which features at the core of the water, marine and maritime EU policies. An integrated approach recognizing all the functions of water is key to ensure effectiveness and efficiency of policies, which would address key nexuses (e.g. water-energy-food/agriculture-ecosystems).

3. There is a need to further progress our understanding of the chain ‘ecosystems condition/status → ecosystems services supply (or capacity to)’
4. There is a need for scenarios/outlooks/modelling/integrated assessment tools to further support policy makers.

5. There is an urgent need to streamline EU reporting with regard to water and biodiversity, particularly with regard to MSFD, HBD, WFD and CFP. This process has been initiated at DG ENV and will get increasing attention through the Streamlining Environmental Reporting process and Reportnet 3.0.

Stakeholders’ contribution:

- Research community and practitioners -> 1, 2, 3, 4
- EU institutions -> 2., i.e. toward more integrated and coherent reporting at EU level in terms of content and timing.
Thank you for your attention