

Hydromorphological alterations, good ecological status and water use

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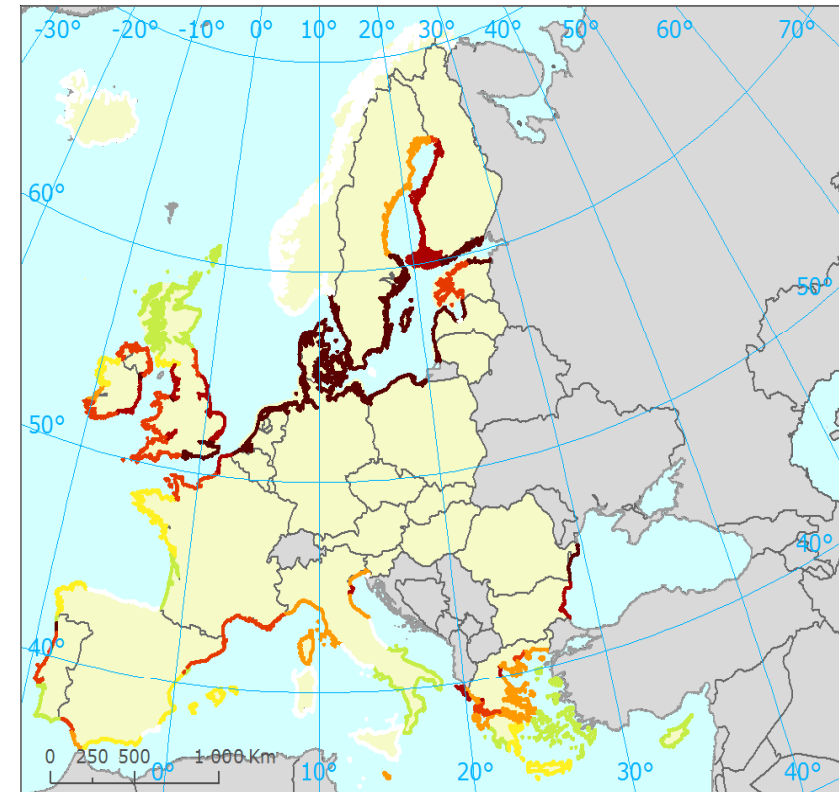
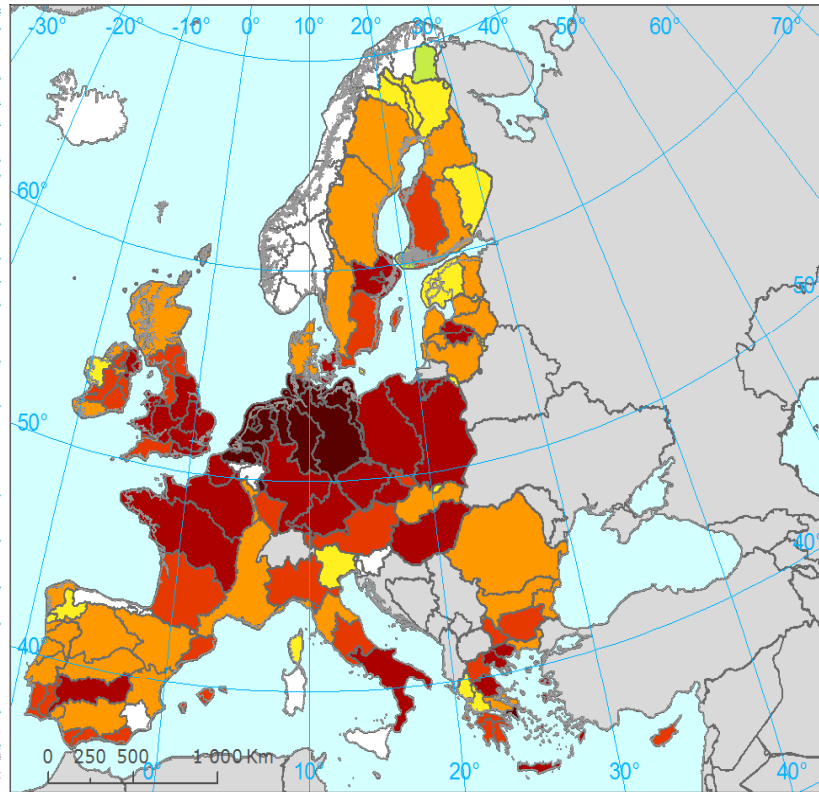
**EURO INBO 2012,
Istanbul, 16– 19 October 2012**

WFD main environmental objectives



- Achieve good status of water bodies in 2015
- Surface water bodies (rivers, lakes – incl. reservoirs, transitional and coastal waters):
 - ✓ Chemical status – priority hazardous substances
 - ✓ Ecological status (potential) – biological quality elements (surface water ecosystems) + supporting elements – physico-chemical and hydromorphological

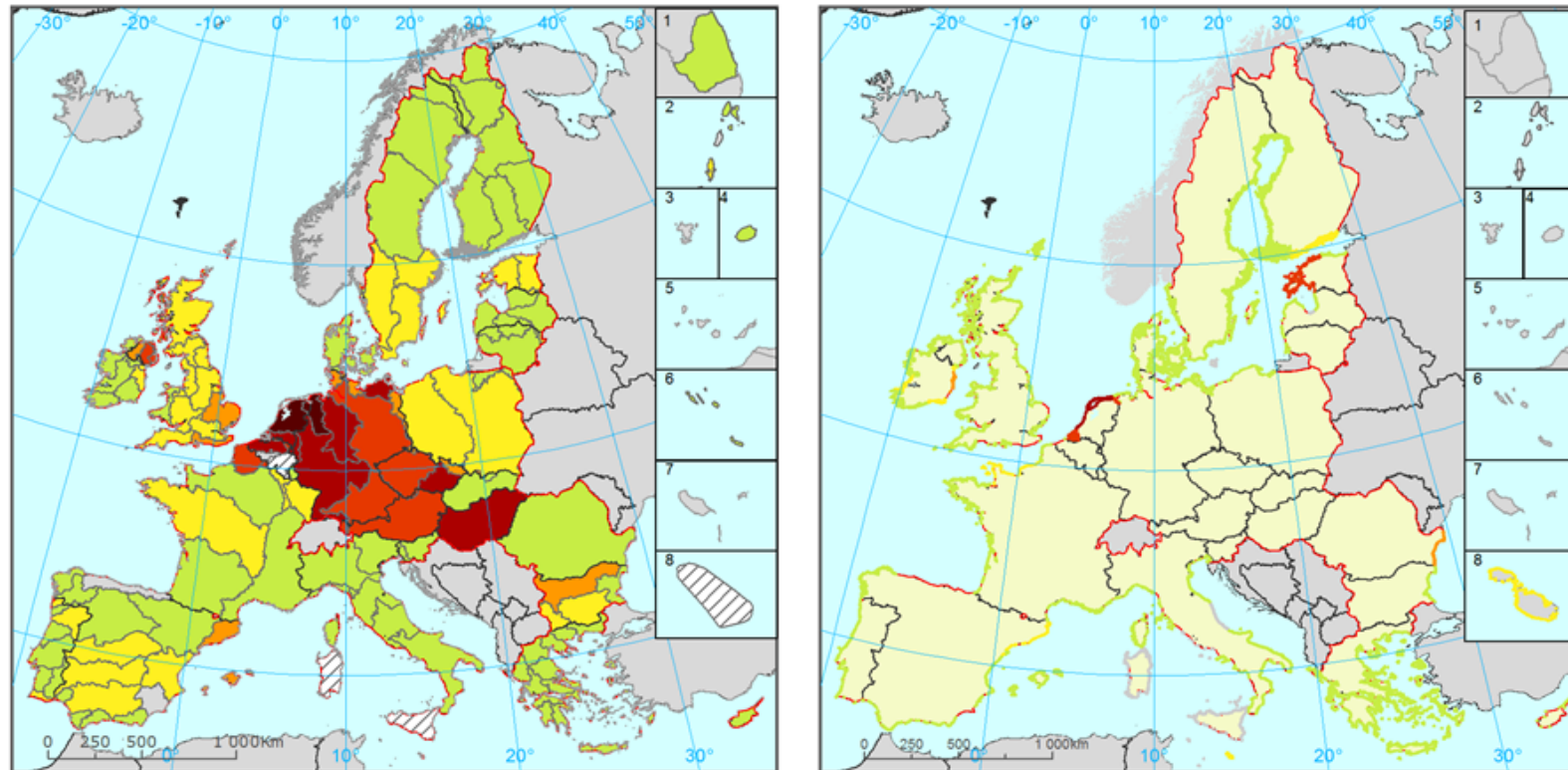
Ecological status or potential in 2009



**% of classified water bodies in less than good ecological status or potential
(left map: rivers and lakes, right map: transitional and coastal waters)**

□ no data reported ■ <10 % ■ 10-30 % ■ 30-50 % ■ 50-70 % ■ 70-90 % ■ >=90 %

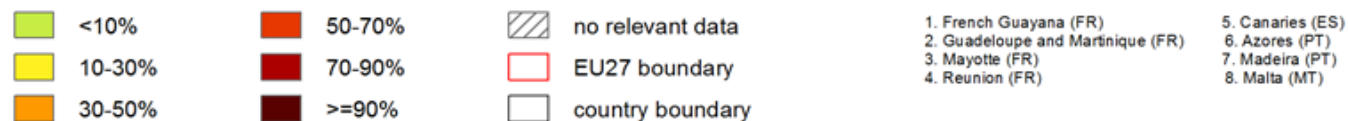
Hydromorphological alterations



Pressures and measures

Submissions in accordance with Article 13 reports of the Water Framework Directive, Version of 3/5/2012

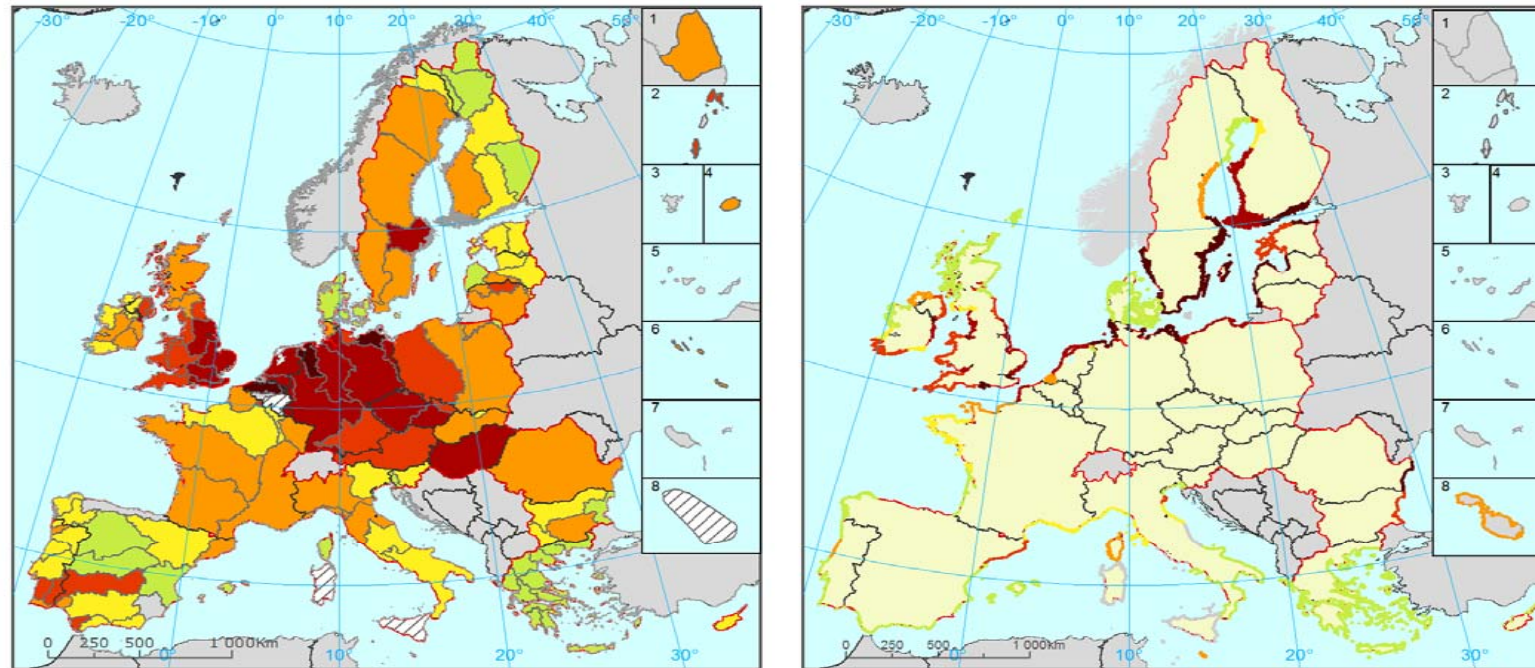
Percentage of classified surface water bodies affected by hydromorphological pressures
(left map: rivers and lakes; right map: transitional and coastal waters)



Map produced by CENIA, CR on behalf of European Commission ©, DG Environment, September 2012
Data source: Administrative boundaries: © EuroGeographics, © FAO (UN), © TurkStat Source: European Commission – Eurostat/GISCO ESRI, 2003, EEA data service based on various data providers

Ecological status or potential in 2015

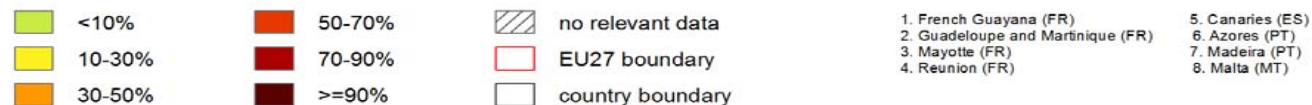
(find 5 differences...)



Ecological status or potential of surface water bodies

Submissions in accordance with Article 13 reports of the Water Framework Directive, Version of 3/5/2012

Percentage of classified surface water bodies with less than good ecological status or potential by river basin district 2015
(left map: rivers and lakes; right map: transitional and coastal waters)



Map produced by CENIA, CR on behalf of European Commission ©, DG Environment, September 2012
Data source: Administrative boundaries: © EuroGeographics, © FAO (UN), © TurkStat Source: European Commission – Eurostat/GISCO
ESRI, 2003, EEA data service based on various data providers

Improvement of ecological status 2015

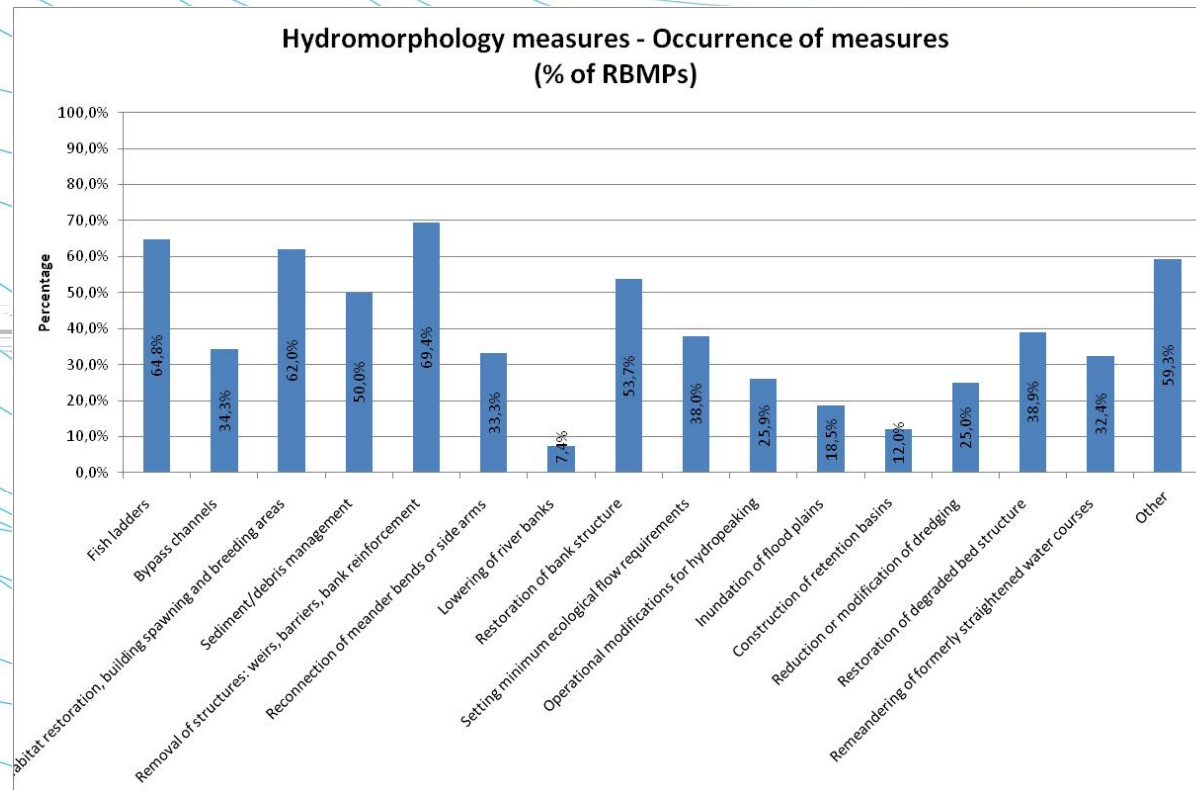
- Rivers and lakes – 55 % less than good 2009; 38 % less than good 2015 (17 %)
- Transitional and coastal waters - 53 % less than good 2009; 40 % less than good 2015 (13 %)

Hydromorphological alterations

- Strong link to water use
- 1st group of pressures – related with water quantity:
 - ✓ Water abstractions, water flow regulations, water transfers (channels)
- Water use
- 2nd group – related with morphology:
 - ✓ River management, physical alteration, barriers, dredging, transitional and coastal management etc.
- Measures – very expensive

Programme of measures

- Basic measures – previous water directives, eg. Urban Waste Water Directive, Nitrate Directive
- Supplementary measures – mainly hydromorphological measures – WFD is the 1st piece of EU legislation focused on hydromorphology



Main challenges

Water quantity pressures:

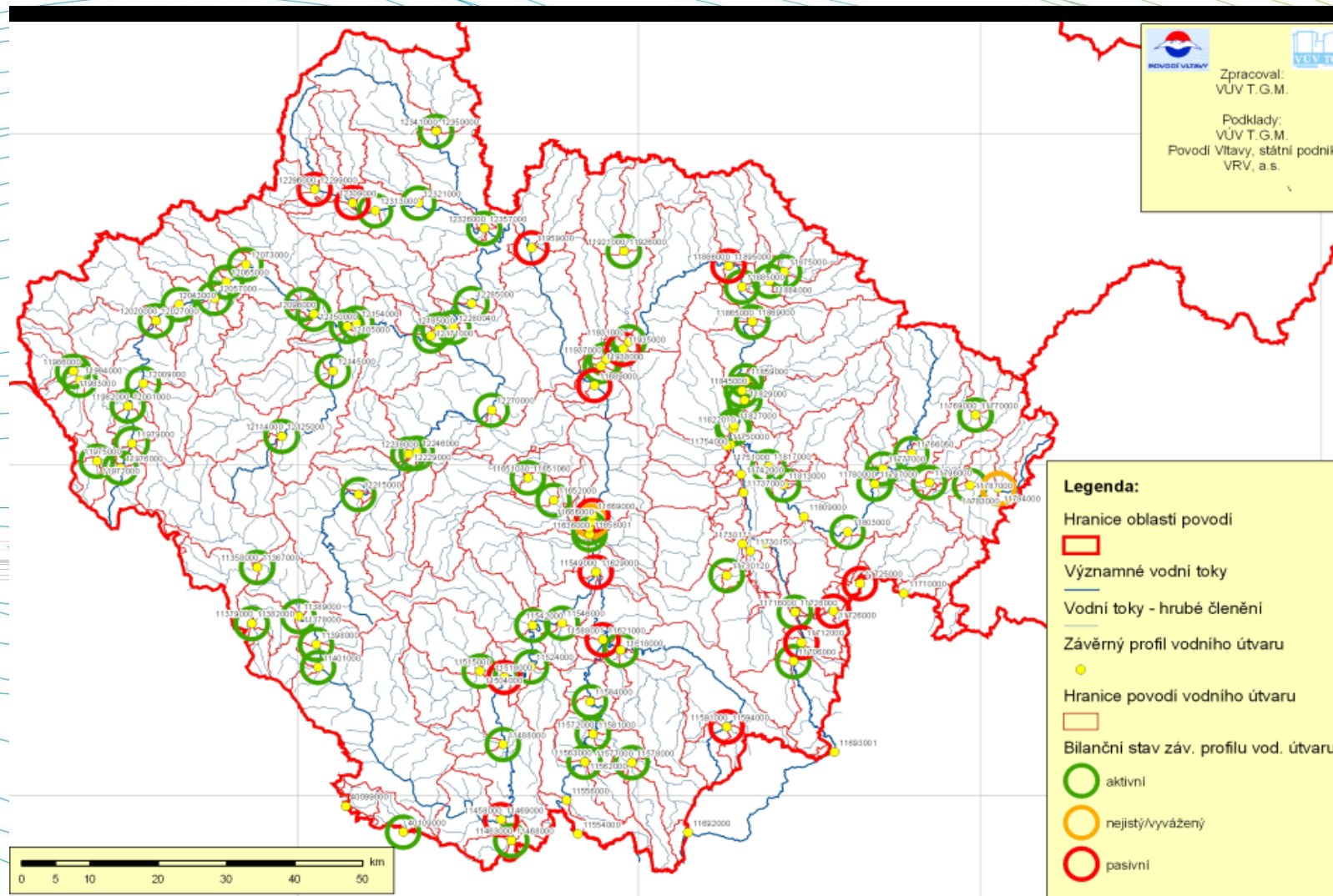
- If possible, minimize negative impacts to surface water ecosystems and save necessary water use (e.g. water consumptions, hydropower, navigation...)
- Include requests from climate change, water scarcity and droughts, floods

Morphological pressures

- Improve knowledge about impacts of morphological alterations to biological elements
- Improve cost and benefit analysis
- Programme of morphological measures should be focused on most significant morphological alterations and most effective measures

Example from CR

Assessment of water use and ecological flow requirements



Thank you for your attention