EU policy context for river restoration and improvement of ecological water quality

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EU LIFE Programme integrated project
"Implementation of River Basin Management Plans of Latvia towards good surface water status"

Water Framework Directive 2000/60/EC

- Legal framework for the protection and management of all inland surface waters, transitional waters, coastal waters and groundwater
- Aimed to achieve **good status**, or good potential, by 2015, with limited possibilities to extend that deadline until 2027.
- water body to be classified in **good ecological status -** its hydromorphological condition must be such that the biological quality elements **deviate only slightly from reference conditions**. Hydromorphological supporting quality elements, namely: **hydrological regime; river continuity; and morphological conditions.**
- This implies the removal of all barriers that hinder the possibility for the river to achieve good status.

Water Framework Directive 2000/60/EC

- Yet, barriers may in some cases be compatible with good status. For example, biological quality elements upstream or downstream of a dam & obstacle are only slightly affected if a fish pass is installed.
- WFD also recognizes the need to maintain some barriers that serve specific purposes (Article 4(3)), including in particular inland navigation, flood defence, electricity generation or agriculture
  - the concerned water bodies can be designated as '**heavily modified water bodies**', and the alternative objective of 'good ecological potential' is set; mitigation measures to be implemented

Status of river water bodies in EU (2nd RBMP)

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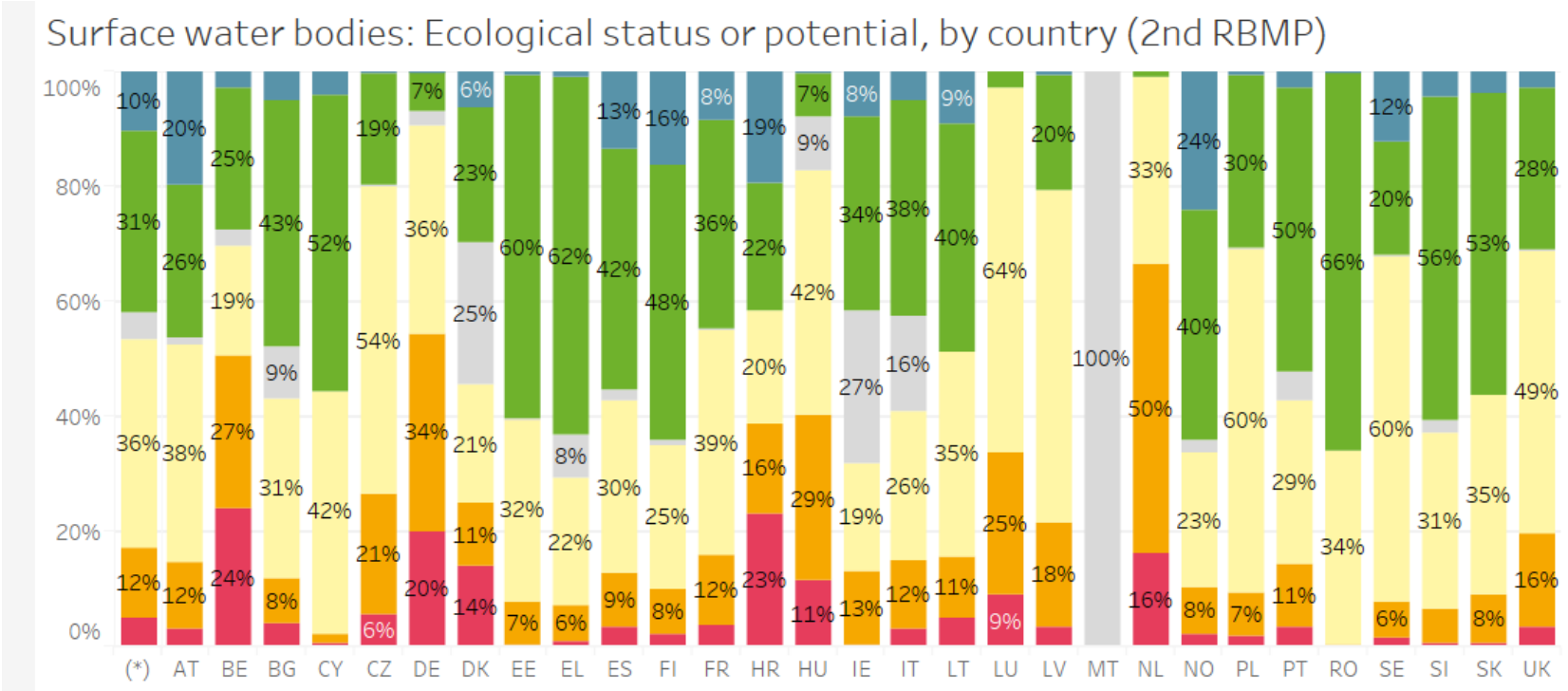
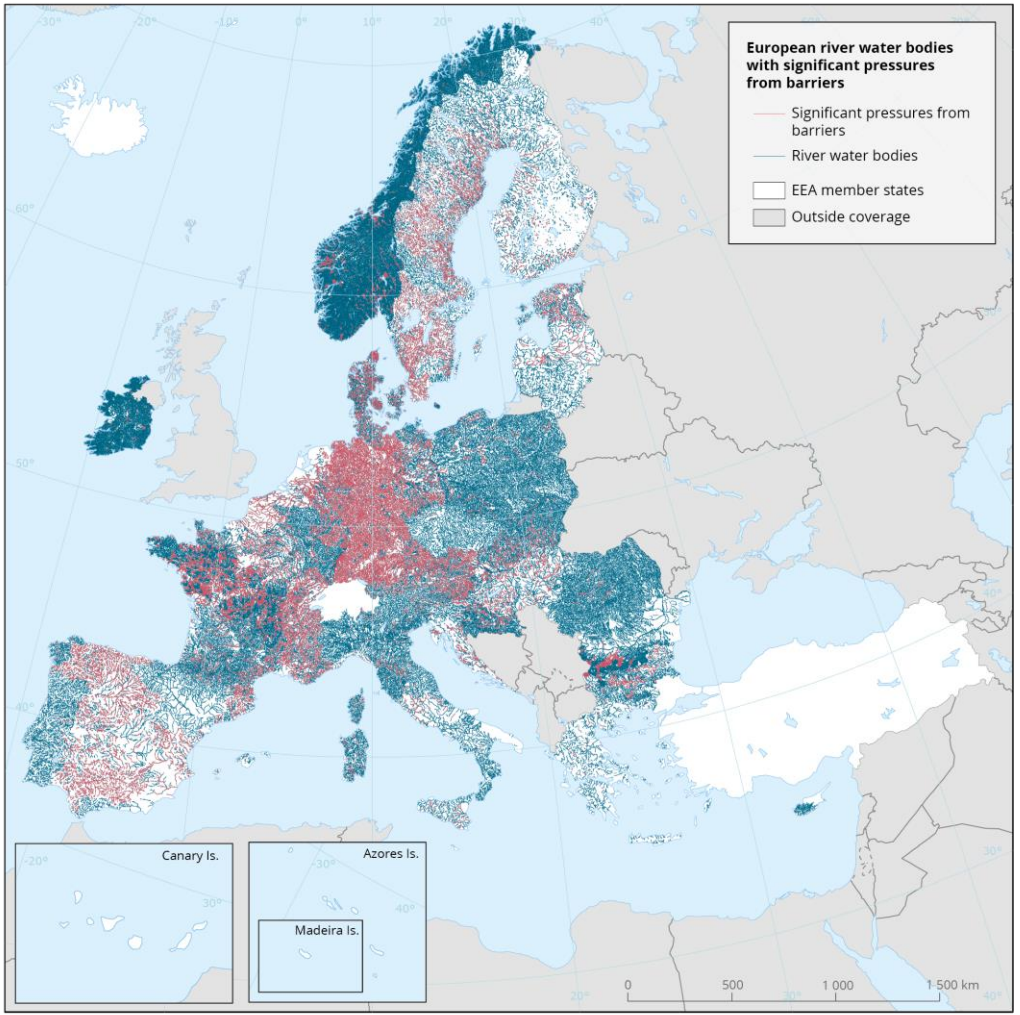


41% in EU in good quality 21% - LV 49 % - LT 61 % - EE 64% - FI; 32% SE

Status of water bodies in EU

- Hydromorphological pressures were found to be among the main reasons for failing to reach good ecological status in the second river basin management plans (RBMPs), acting as significant pressures for 34 % of European surface water bodies in 29 countries (EU-28 and Norway).
- Of those 34 % surface water bodies, 20 % failed to reach good ecological status because of the presence of barriers



Nature Directives (Birds & Habitats)

- To ensure that the species and habitat types they protect are maintained, or restored, to a **favourable conservation status**
- According to EEA, there are 20 types of rivers (e.g. 3210 Fennoscandian natural rivers) and lakes, 4 types of alluvial meadows (6450 Northern boreal alluvial meadows), 8 types of alluvial/riparian forests

Freswater habitat status

Current selection: 2013-2018, Freshwater habitats, overall assessment.

Habitats	Regions										
	ALP	ATL	BLS	BOR	CON	MAC	MED	PAN	MATL	STE	M
3110 - Oligotrophic waters (Littorelletalia uniflorae)	FV	U2		U1	U1		U1				
3120 - Oligotrophic waters of West Med. with Isoetes spp.		U2					U2				
3130 - Oligo to mesotrophic waters (Littorelletea/Isoeto-Nano)	U1	U2	FV	U1	U2	U1	U2	U2		FV	
3140 - Hard oligo-mesotrophic waters with benthic Chara spp.	U1	U2	FV	U1	U2		U2	U1		FV	
3150 - Natural euthrophic lakes Magnopotamion/ Hydrochachition	U2	U2	U1	U1	U2	XX	U2	U1		FV	
3160 - Natural dystrophic lakes and ponds	FV	U2		U1	U1	FV	U2	U1		FV	
3170 - Mediterranean temporary ponds	XX	U1			U2	U2	U2				
3180 - Turloughs	U1	U1		U1	FV		XX				
3190 - Lakes of gypsum karst	FV	U2		XX	U2						
31A0 - Transylvanian hot-spring lotus beds								U2			
3210 - Fennoscandian natural rivers	FV			U1	U1						
3220 - Alpine rivers & herbaceous veg. along their banks	U1	XX		FV	U1	FV	XX				
3230 - Alpine rivers & ligneous veg. with Myricaria germanica	U2				U2		U1				
3240 - Alpine rivers & ligneous vegetation with Salix eleagnos	U1	U2			U1		U2				
3250 - Constantly flowing Med. rivers with Glaucium flavum	XX				U2		U2				
3260 - Water courses of plain to montane level (Ranunculion..)	U1	U2	U1	U2	U1		U1	U1		FV	
3270 - Rivers with muddy banks (Chenopodion rubri & Bidention)	U1	U2	FV	U1	U1		U1	FV		FV	

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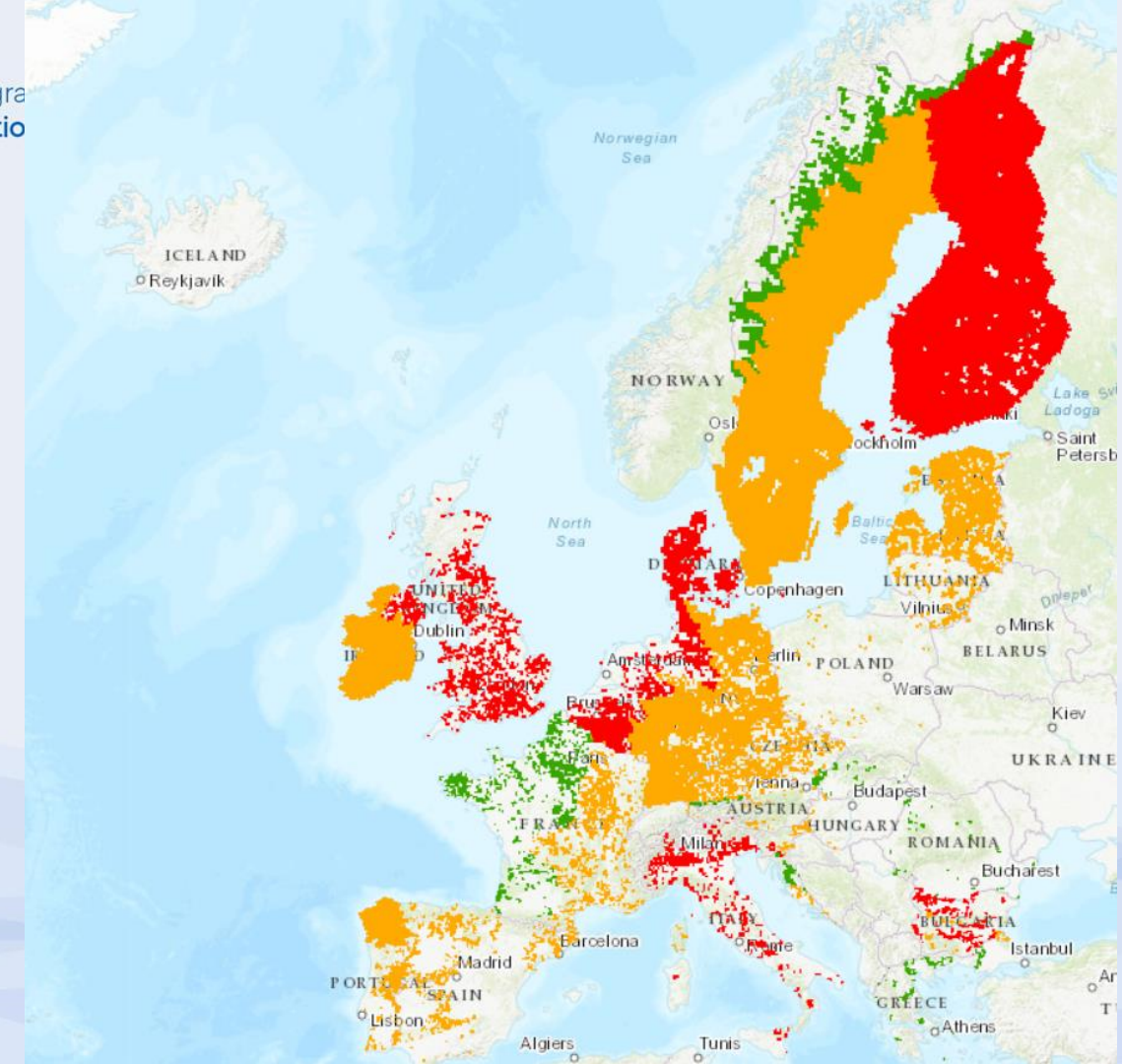
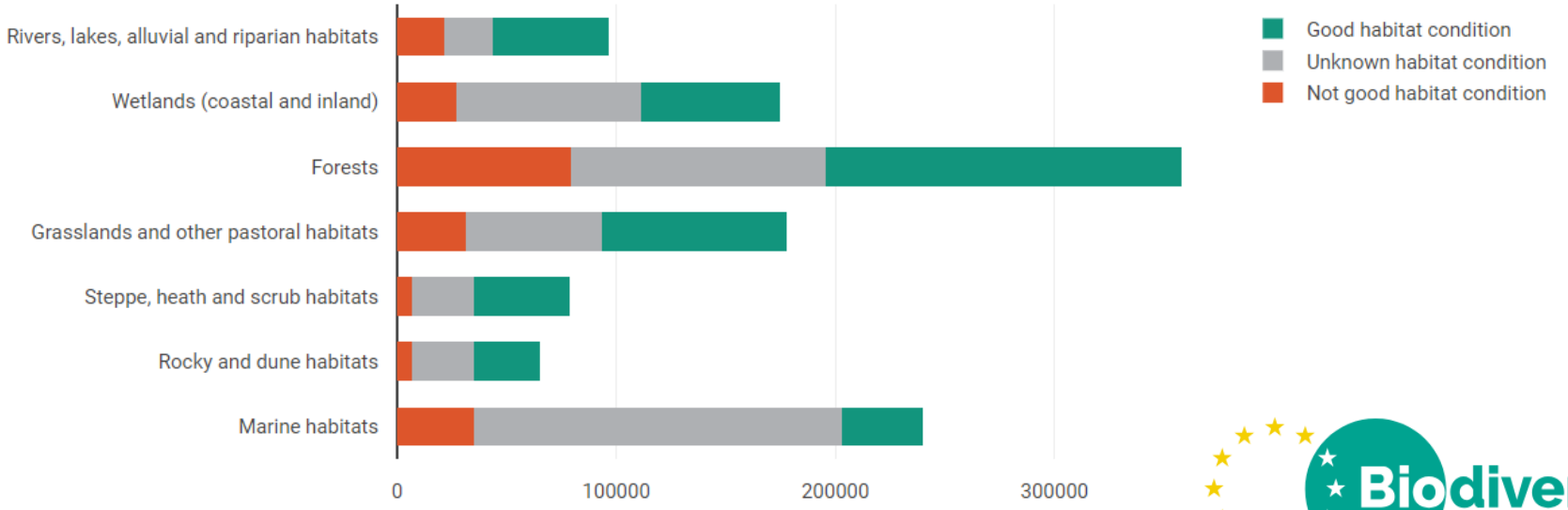
- 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation



Habitats to be restored



Biodiversity Information System for Europe

- The European Green Deal is a Communication from the European Commission published in December 2019 that informs on a commitment to tackling climate and environmental-related challenges

Biodiversity Strategy 2030
May 2020

Biodiversity Strategy 2030 for waters

- The EU's legal framework on water is ambitious but implementation is lagging behind and enforcement must be stepped up
- Greater efforts are needed to restore freshwater ecosystems and the natural functions of rivers to achieve the objectives of the Water Framework Directive
- This can be done by removing or adjusting barriers that prevent the passage of **migrating fish** and **improving the flow of water and sediments**
- **At least 25 000 km of free-flowing rivers by 2030 by removing barriers and restoring floodplains and wetlands**

EC Guidance on Barrier Removal for River Restoration, 2021

- Identifying (primarily obsolete) barriers that are feasible to remove, with a view to re-establishing the natural functions of a river system and restoring free flowing rivers
- Identifying possible funding sources for restoration at the identified sites

EC Guidance on Barrier Removal for River Restoration, 2021

- The Commission interprets 'free-flowing rivers' to mean rivers or other surface water bodies (e.g. lakes) that are not impaired by **artificial barriers** and not **disconnected** from their floodplain
- The Biodiversity Strategy calls for a focus primarily on 'obsolete barriers', namely barriers that no longer fulfil their original purpose or are no longer needed
- It mentions the need to remove or adjust barriers that prevent the passage of migrating fish (and other organisms such as benthic invertebrates) and improving the flow of water and sediments: these are legal obligations to be met by 2027 for all EU waters

Free-flowing river

supports connectivity of water, sediment, nutrients, matter and organisms within the river system and with surrounding landscapes, in all of the following four dimensions:

1. longitudinal (connectivity between up- and downstream);
2. lateral (connectivity to floodplain and riparian areas);
3. vertical (connectivity to groundwater and atmosphere); and
4. temporal (connectivity based on seasonality of fluxes).

A free-flowing river is not impacted by anthropogenic barriers and is not disconnected from its floodplain when a floodplain is present.

EC Guidance on Barrier Removal for River Restoration, 2021

- Density and demands towards river network in EU, makes it very difficult to eliminate barriers along the whole length of a river
- **The target** - to achieve **stretches of free-flowing rivers** (total absence of artificial obstacles) within a network of **fully continuous rivers** (WFD – barriers taken down or adapted to allow the achievement of good ecological status)

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Let's rivers flow!

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