

# Restoring rivers and removing barriers

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# Europe

**1,2 mil.** barriers<sup>1</sup>

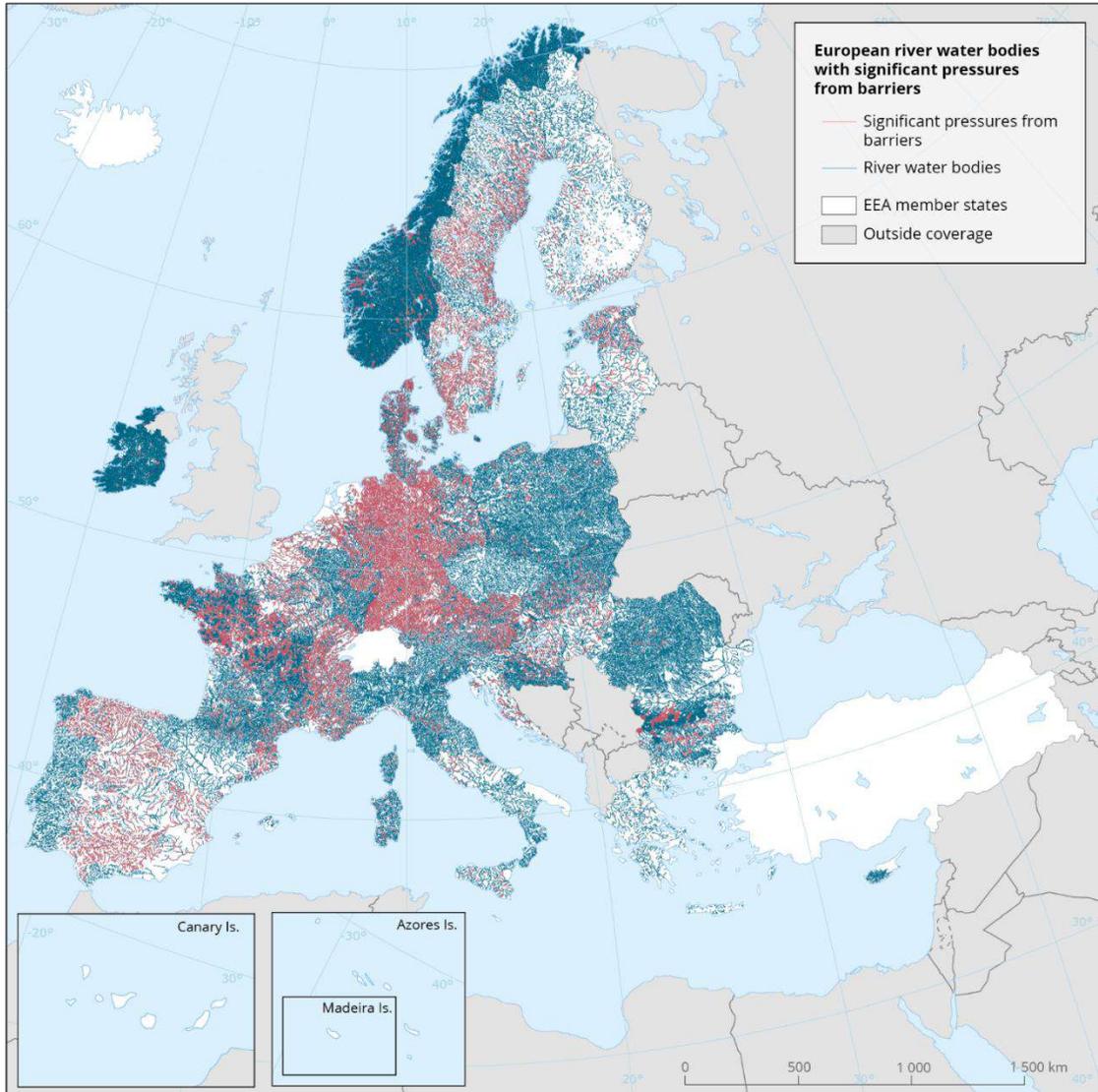
**200.000 km** impoundments<sup>2</sup>

Ca 13% no socio-economic use but negative ecological impact (**156.000**)

Min. **11.000+** obsolete barriers

**93%** decline  
of migratory fish populations since 1970<sup>3</sup>

**Failure to achieve GES in WFD 2000/60/EC,  
fresh water biodiversity loss**



Reference data: @ESRI

Zdroj: EEA

<sup>1</sup> de Leaniz, C. G. et al, 2021

<sup>2</sup>Parasiewicz, P. et al., 2023

<sup>3</sup>Deinet et. al (2020)



Small HPP (Hron river)



Malina river



Photo: Skymove, s.r.o.

Dams, weirs ,sluices, culverts

Longitudinal barriers

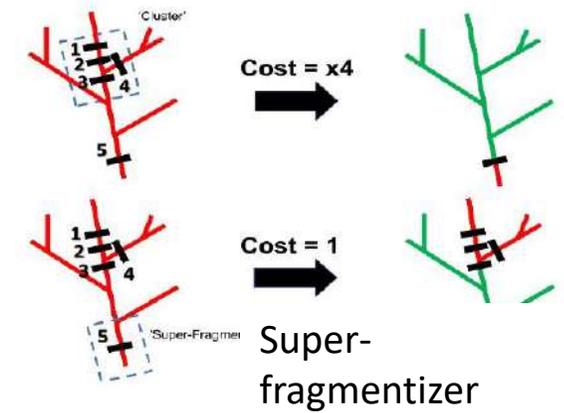
Lateral barriers

Hymo alterations

# Impacts

- Loss of habitats and free flowing rivers
- Fragmentation 68% barriers < 2 m, 0,1 % > 15 m
- Fish migration – upstream, downstream
- Continuity of biota, sediments, nutrients
- Water regime change
- Water and sediment quality
- Eutrophisation
- Temperature, Oxygen regime
- Flood protection?
- Investments needed (old dams)
- Socio-economic impacts

Climate change



# Solutions

Nature restoration law , Biodiversity strategy 2030

**25.000 km** Free flowing rivers

Dam removal

Mitigation

Mapping, esp. obsolete

Priorities

Barriers in people`s minds



The removal works of a weir at Starohorský potok, Slovakia in autumn of 2023  
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YEAR	NUMBER OF REMOVED BARRIERS	NUMBER OF COUNTRIES
2020	101	11
2021	239	17
2022	325	16
2023	487	15

Mouchlianitis F.A. (2024). Dam Removal Progress 2023. World Fish Migration Foundation



Co-funded by  
the European Union

## Our contribution 2023-2032

Implementation of RBMP in Slovakia in selected sub-basins

**15 barriers** removed/modified

**13,6 km** side-arms

**3 268 ha** biotopes

[www.livingrivers.sk](http://www.livingrivers.sk)



