



Sediment in EU environmental policies

Joint SedNet-Navigating a Changing Climate online Workshop

11 February 2021

Jeanne Boughaba

Sediment as integral component of river basins and aquatic ecosystems

Support essential fonctions

- Development of the river bed and morphodynamics
- Habitats for aquatic species
- Connection to groundwater bodies and coastal zones
- Integral and dynamic component of aquatic ecosystems



Provide key ecosystem services

- Nature protection : habitat, food, floodplain ecosystems, ...
- Maintenance of river channel and coastline integrity : prevent erosion, maintain navigation channels, reducing impacts of floods, ...
- Climate change mitigation and adaptation

Sediment management relevant for EU environmental legislation

- **Water Framework Directive 2000/60/EC**
- Floods Directive 2007/60/EC
- Nature Protection Directives: Habitats Directive 92/43/EEC and Birds Directive 2009/147/EC
- Marine Strategy Framework Directive 2008/56/EC
- Biodiversity strategy for 2030

EU Water Framework Directive (WFD)

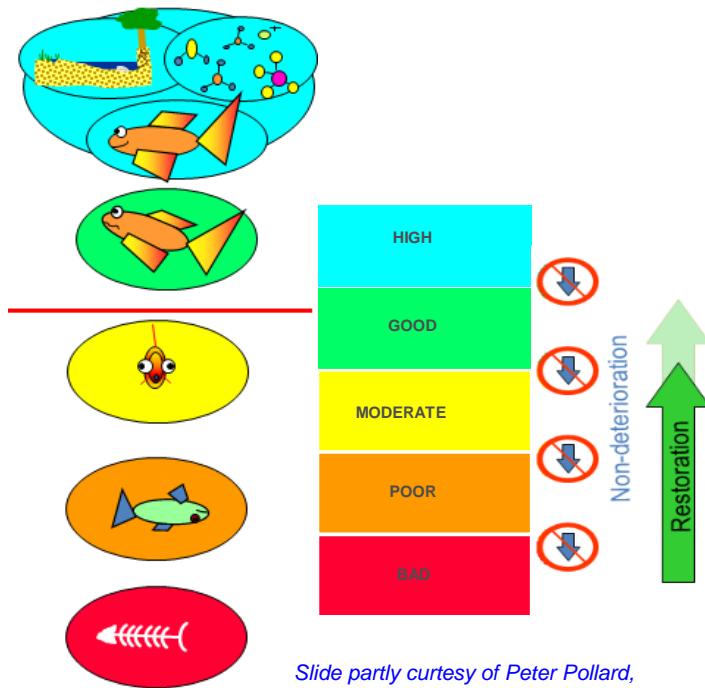
The River Basin concept

- **Aim** : reach good status / potential of all waters in the EU by 2027 the latest
- **Holistic approach**: Protection and sustainable management of all surface and groundwater, including transitional and coastal waters
- Covering **all pressures and impacts**
- Water management at **river basin level**
- **River Basin Management Plans**:
Basic instrument to implement WFD



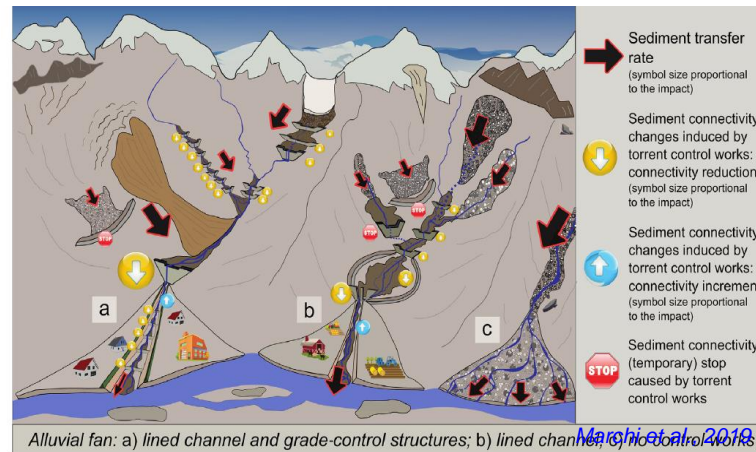
Water Framework Directive (WFD) Sediment related criteria?

Biological quality elements

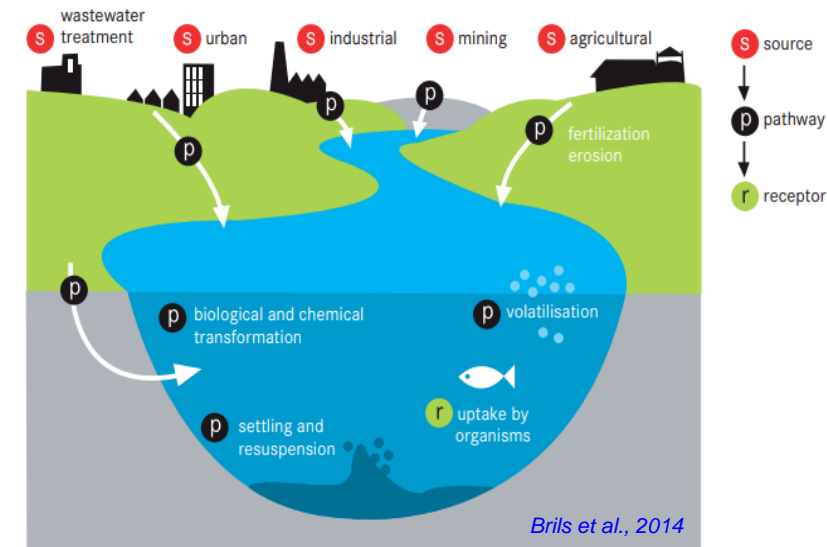


Slide partly courtesy of Peter Pollard,
Scottish Environment Protection Agency

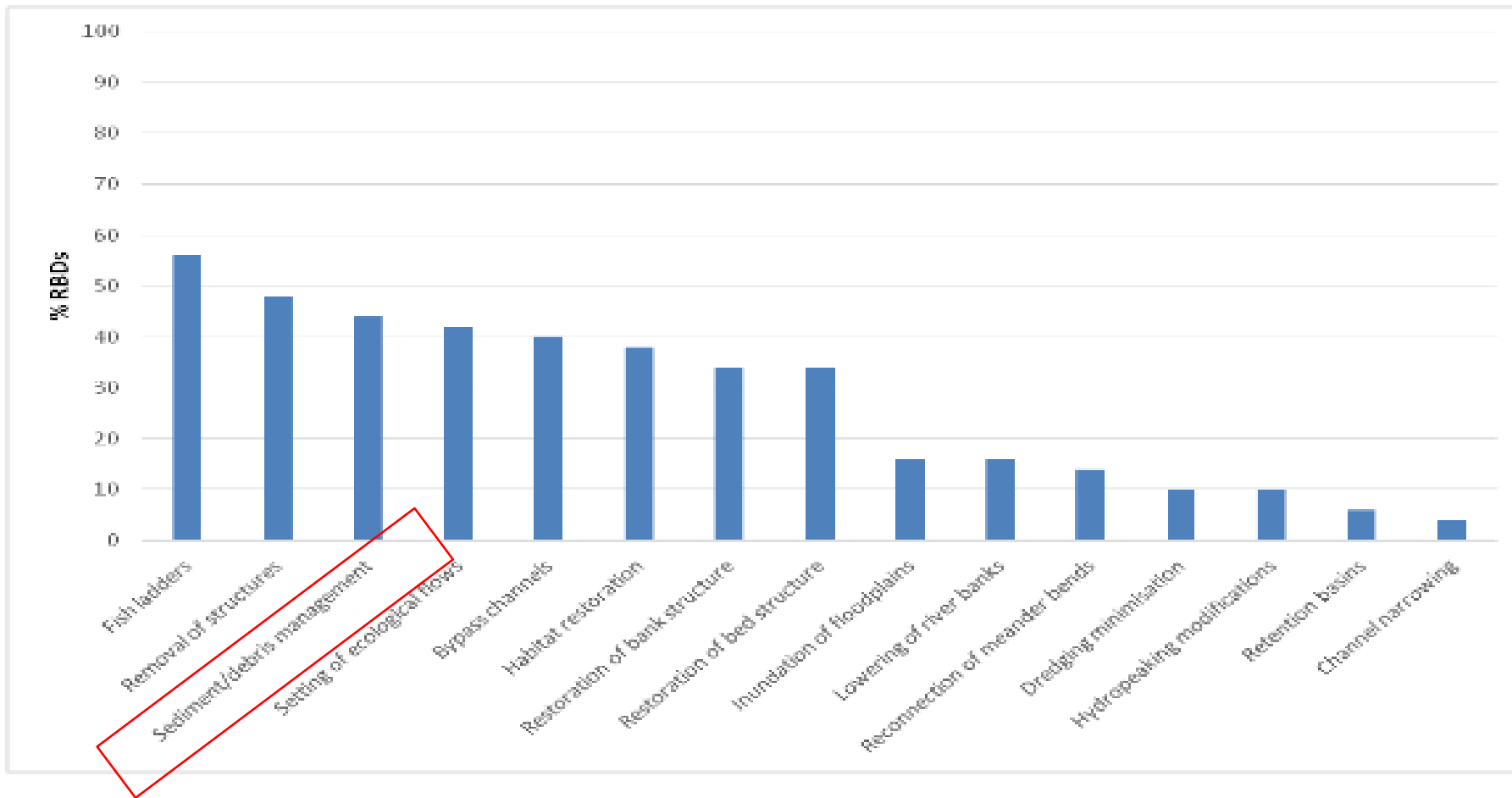
Hydromorphological quality elements



Chemicals and physicochemical quality elements

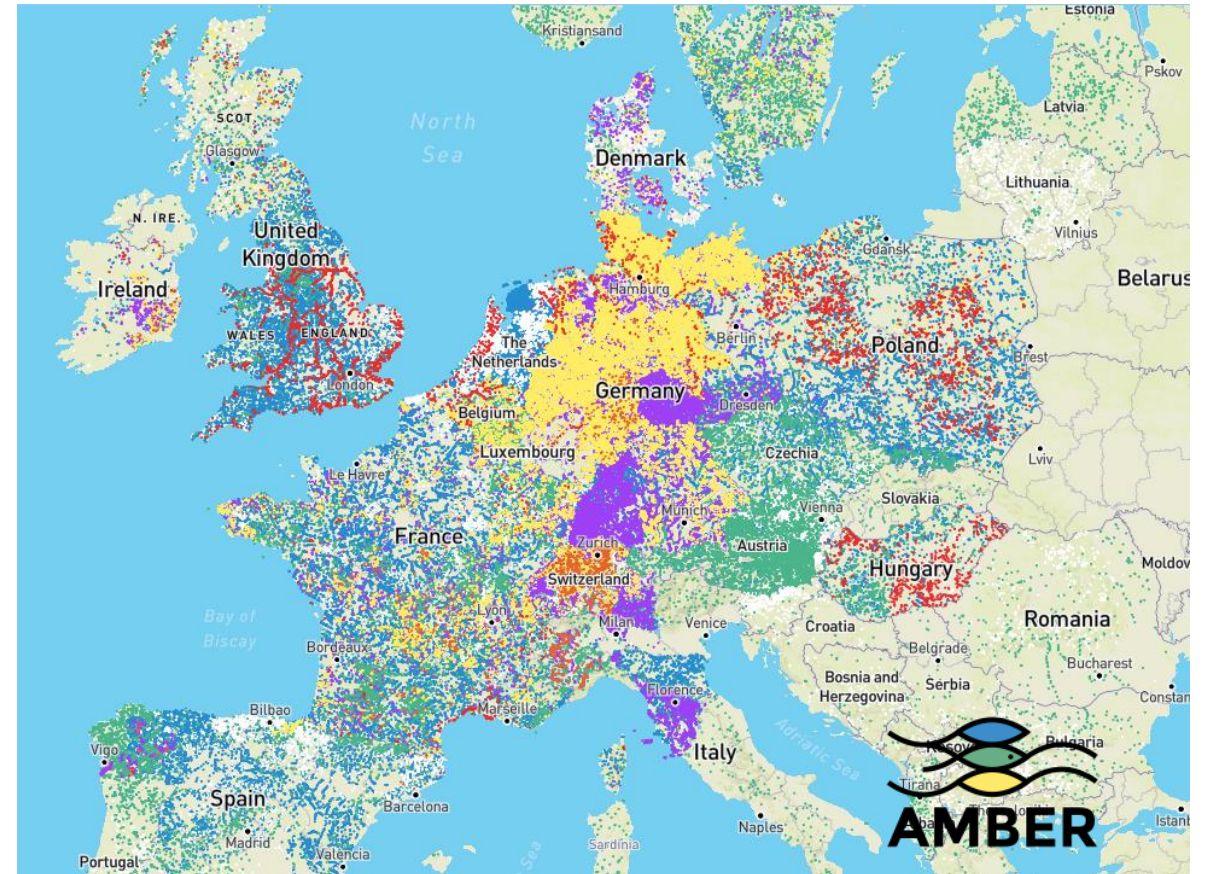


Measures related to hydromorphology in the 2nd River Basin Management Plans



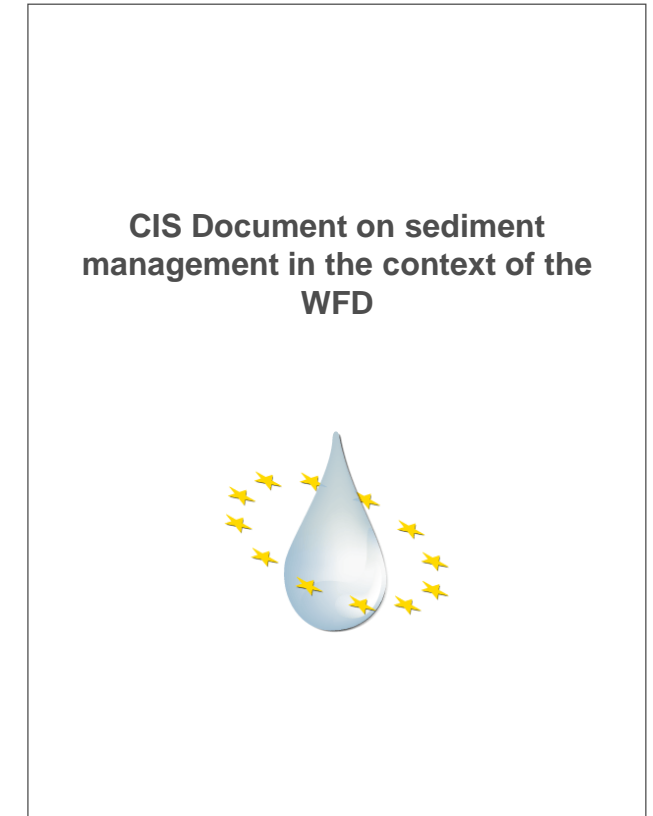
Still major challenges to be addressed

- Hydromorphological alteration : still a major pressure for aquatic ecosystem (almost 40%)
- Sediment continuity is highly disrupted : more than 1 barrier every 2 km
- But still important gaps in hydromorphological assessment and measures

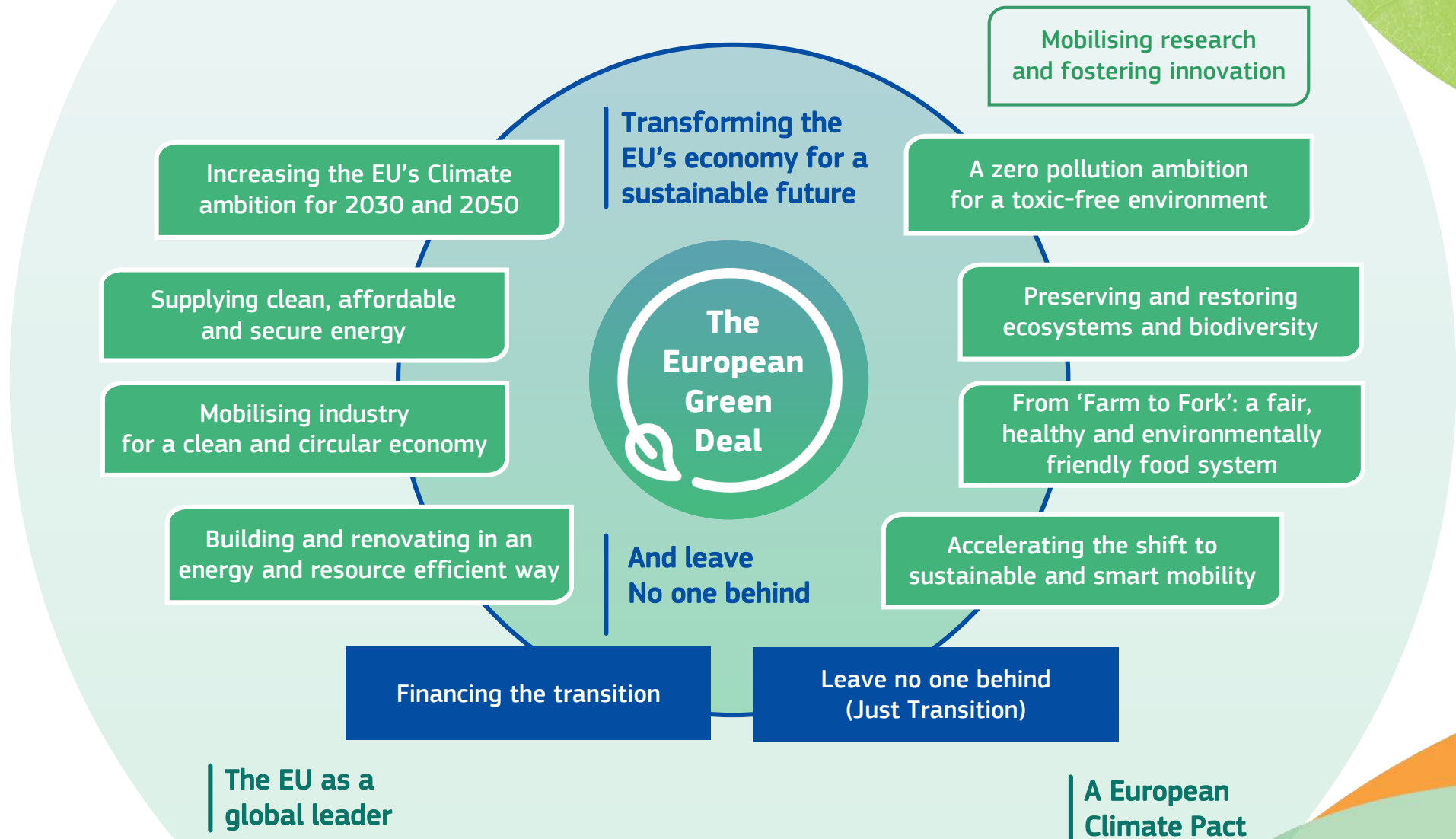


CIS document on sediment management in the context of the WFD – work ongoing

- **Deliverable:** technical document on the management of sediment in the context of the WFD
- **Aim :** provide best practices and guidance on how to manage sediment in the context of the WFD
 - Sediment management at the catchment scale
 - Tools and guidance to address pressures on quantity and quality of sediment
 - Promotes integrated approach
- **When :** adoption foreseen by end of the year



The European Green Deal



Conclusion

- **Sediments: Inherent role** for aquatic ecosystems and implementation of EU environmental legislation
- Restoring sediment functions can provide multiple benefits : **habitat creation and enhancement, ecosystem services, climate resilience, ...**
- That contribute to achieve many policies objectives for nature and water related uses
- **Integrated approach** and promoting **nature-based solutions** as key solutions to address sediment related challenges

Sediment management opportunities to address the climate change challenge

- The **two biggest climate change-related challenges** for sediment managers
 - Address impacts of climate change on sediment regime, address uncertainty
 - Addressing all sediment related uses in a consistent way
- The two biggest **opportunities** for sediment management to contribute to addressing the climate change challenge
 - Sediment restoration to increase ecosystem resilience to climate change
 - Appropriate sediment management can reduce the impacts of climate change (for ex: in relation to flood events)

Thank you