# Sediment management in EU water policies, and recent developments

Sednet Conference 2025, 07 October 2025

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*Sustainable Freshwater Management*
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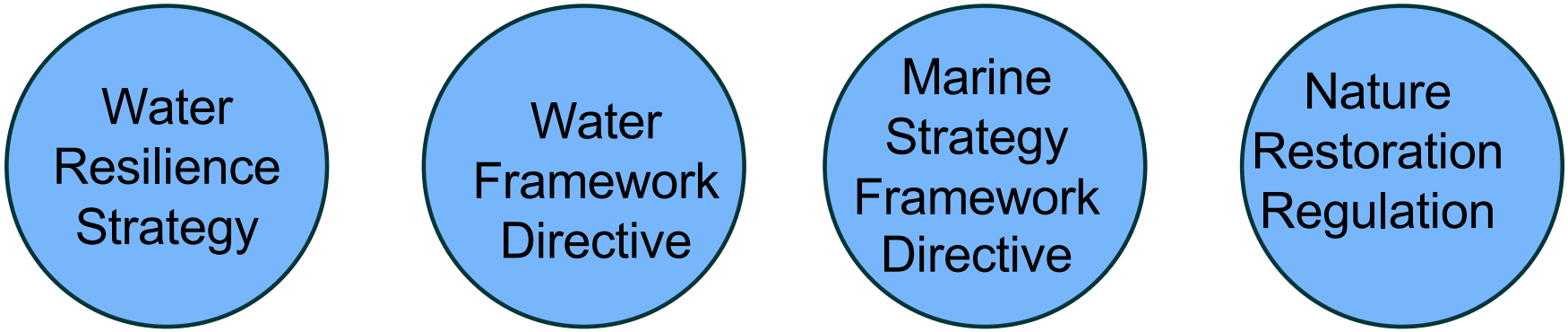
Sediment management and recent developments, in :




European Commission


# European Water Resilience Strategy

*4 June 2025*

European Commission

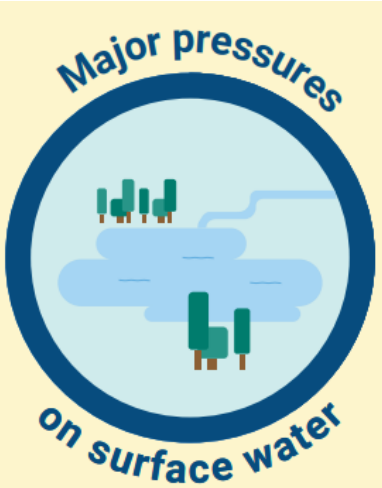
# EEA Report State of Water 2024

**37%**
of **surface waters**
are in **good** or **better**
ecological status

**29%**
of **surface waters**
are in **good**
chemical status

**91%**
of **groundwater area**
is in **good**
quantitative status

**77%**
of **groundwater area**
is in **good**
chemical status




**52%** Diffuse atmospheric pollution

**51%** Natural form and function (hydromorphology)

**35%** Diffuse pollution (excluding atmospheric)

**29%** Diffuse agricultural pollution

**18%** Point source pollution


**34%** Diffuse pollution

**32%** Diffuse agricultural pollution

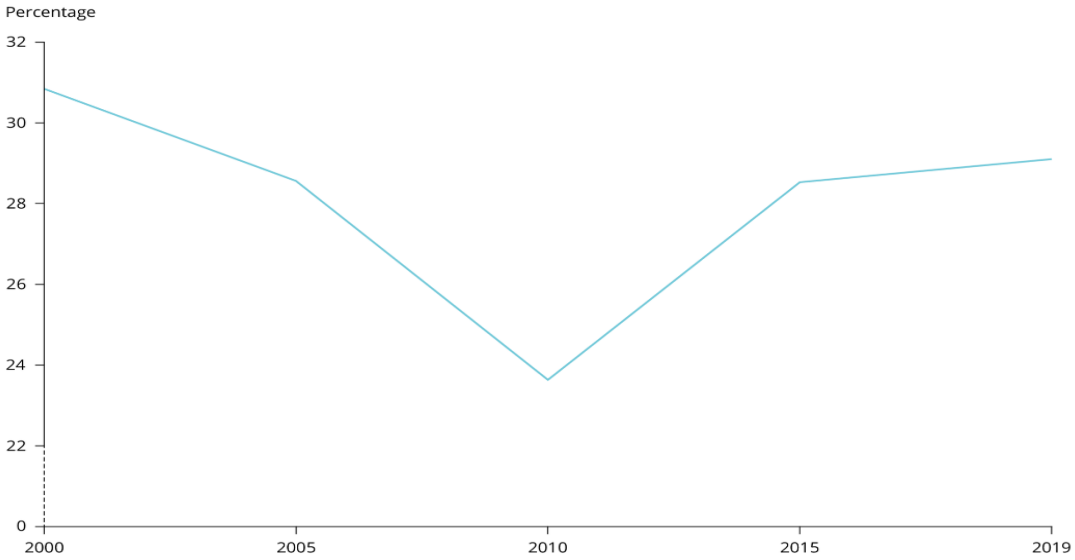
**18%** Abstraction

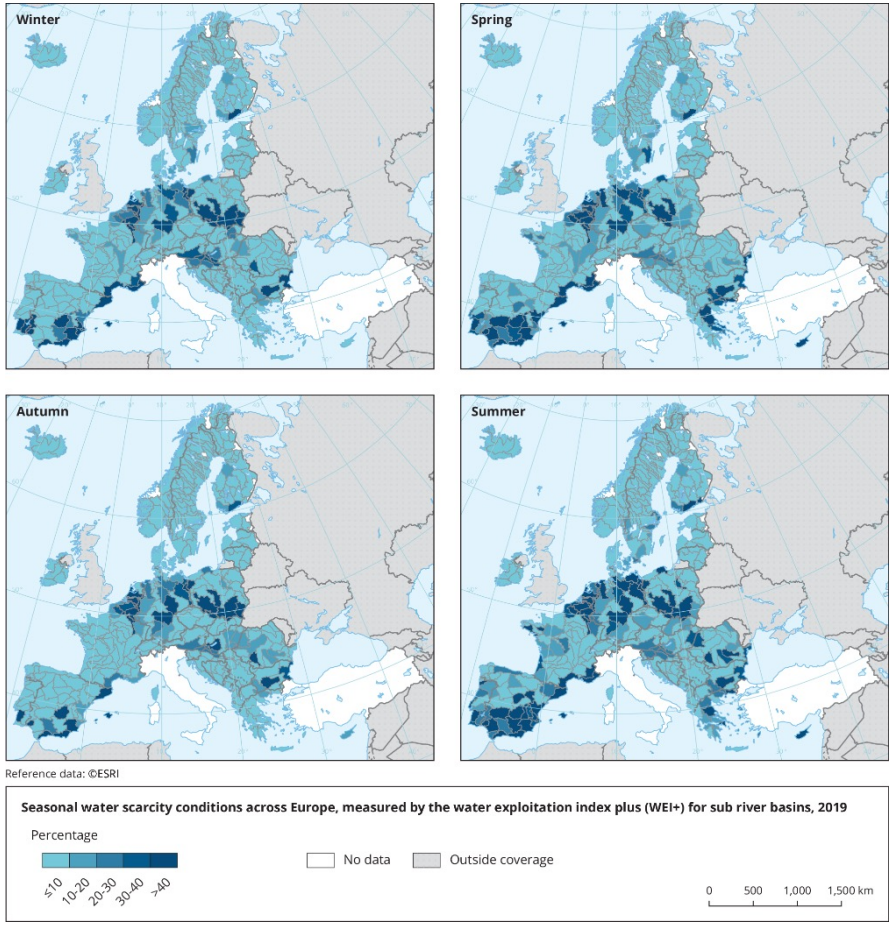
# Water scarcity on the rise in Europe

Water stress affects approximately 20 % of the European territory and 30 % of the European population on average every year.

Southern Europe, European metropoles, intensive irrigated areas and popular touristic destinations are becoming vulnerable more and more to the water scarcity.

Area affected during at least for one quarter of the year by water scarcity conditions in the EU, measured by the water exploitation index plus




Seasonal water scarcity conditions across Europe, measured by the water exploitation index plus (WEI+) for sub river basins, 2019 — European Environment Agency (europa.eu)

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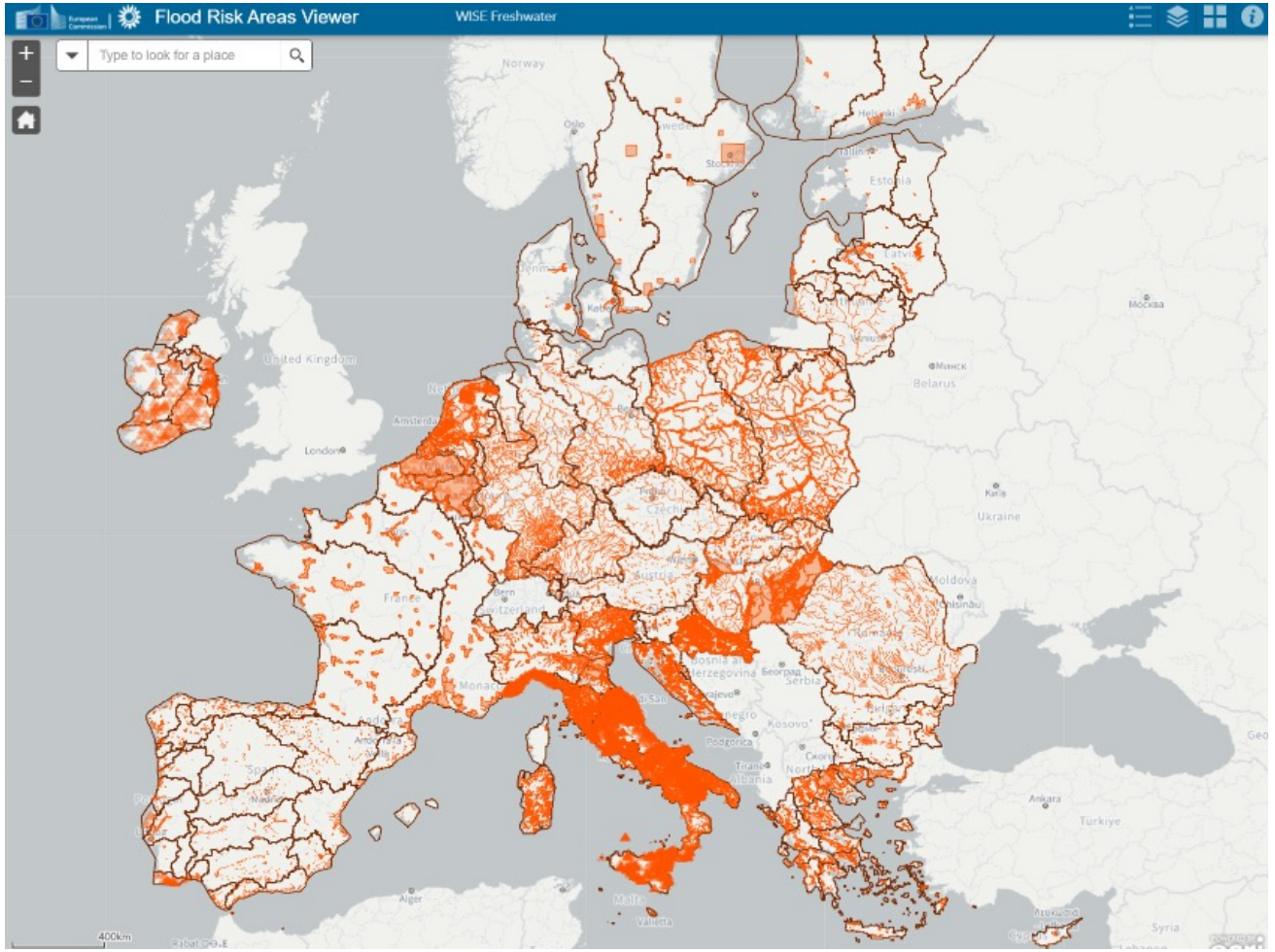
# Flood risk also on the rise




EC and EEA FLOOD RISK AREAS VIEWER: https://discomap.eea.europa.eu/floodsviewer/

European Commission

President
**Ursula von der Leyen**

***Press release of 4 June 2025***

"***Water is life.*** *Water resilience is* ***key for our citizens, farmers, environment, and businesses****.*

*The Commission's Water Resilience Strategy charts a path toward a* ***sustainable, resilient, smart, and competitive water-economy****.*

***We must act now to protect this scarce resource.***"

**Jessika Roswall**
Commissioner for Environment, Water Resilience and a Competitive Circular Economy

***Press release of 4 June 2025***

*"**Water is not just a resource, it is a lifeline.** But extreme weather is putting water under huge stress. Already today 30% of Europe's land faces water scarcity every year.*
*Water is a shared resource and therefore **a shared responsibility**, we all have to start using water more efficiently. With the EU Water Resilience Strategy we give Member States the necessary toolbox to fix our broken water cycle, to become a water-smart economy and to ensure clean and affordable water for everybody.*



***Our future depends on how well we start managing our water today**."*

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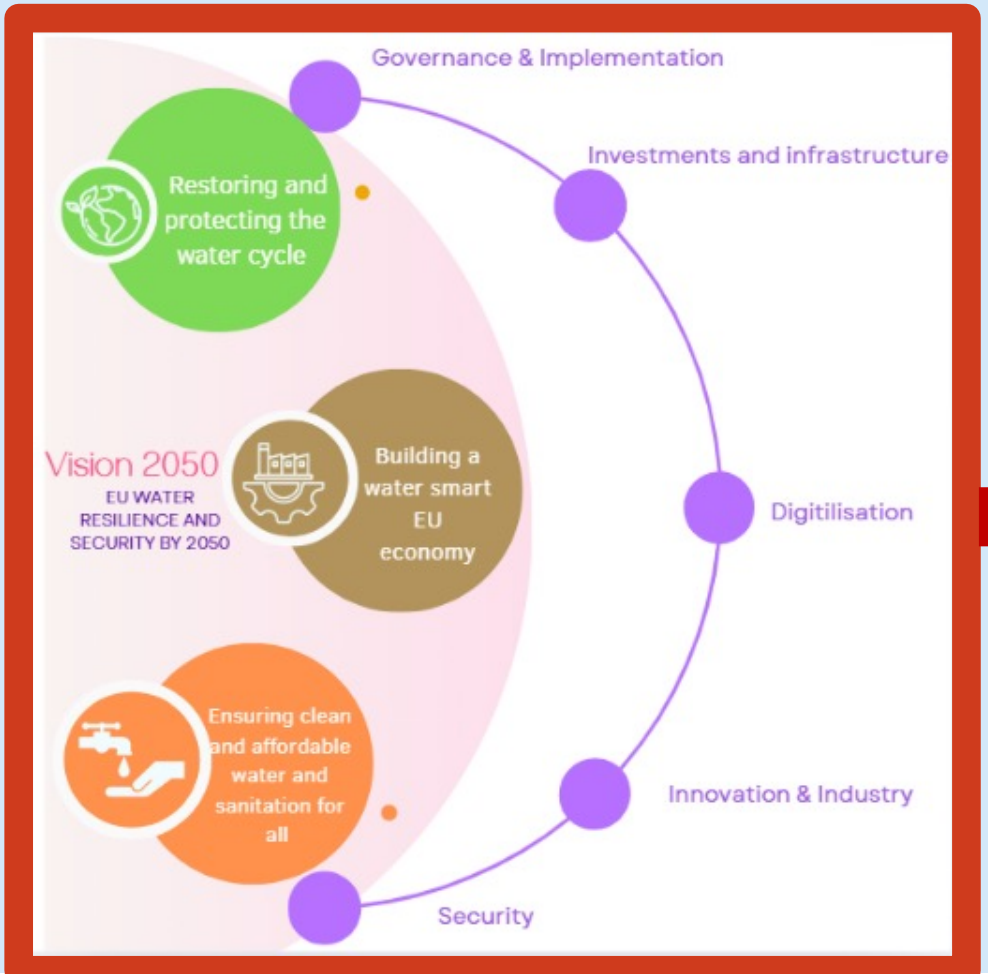
# European Water Resilience Strategy

*Vision – Objectives – Actions*




**GLOBAL ACTION**

# Restoring and protecting the water cycle

*Key messages*

The EU has **very solid water legislation**

To protect water **we must act on land-restore**

We need to embrace a **Source to Sea approach**

We must curb **nutrient pollution**

We need to **clean up forever chemicals**

# Restoring and protecting the water cycle


Green, Blue, Grey water
in a context of adaptation

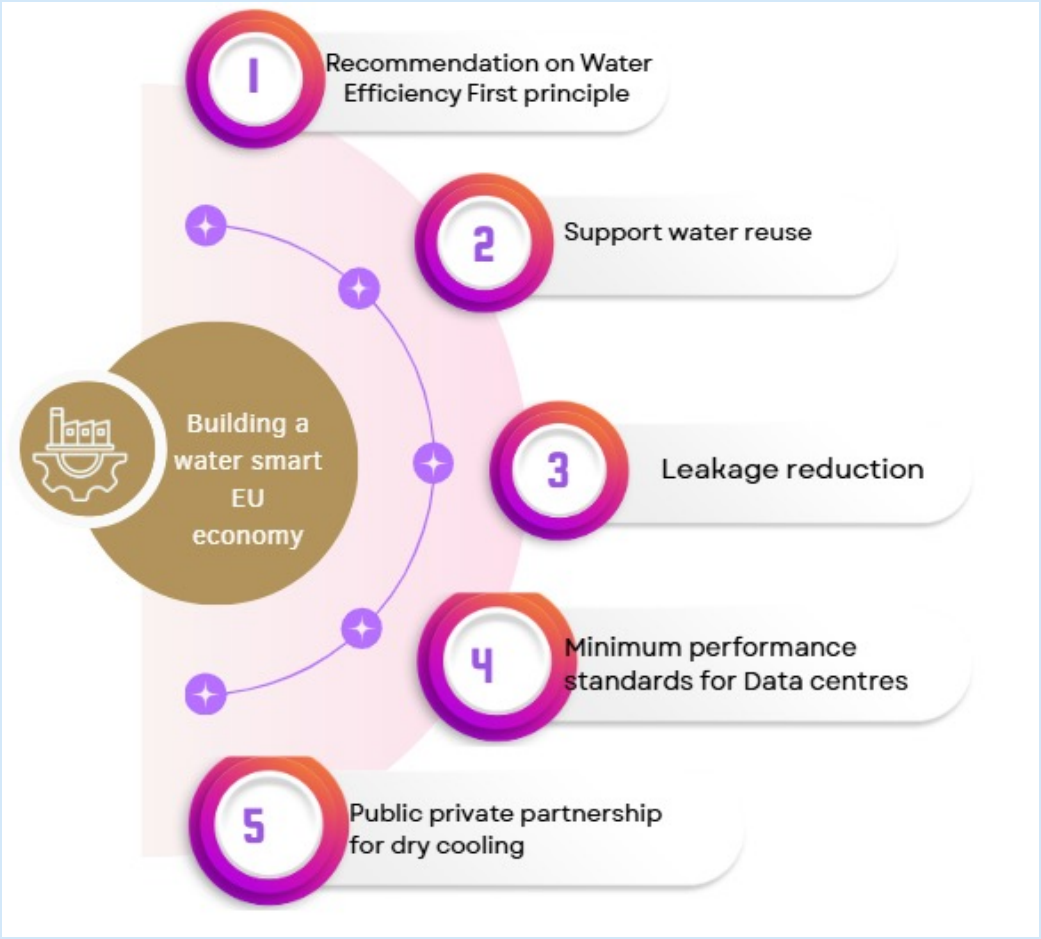
# Water smart economy

*Key messages*

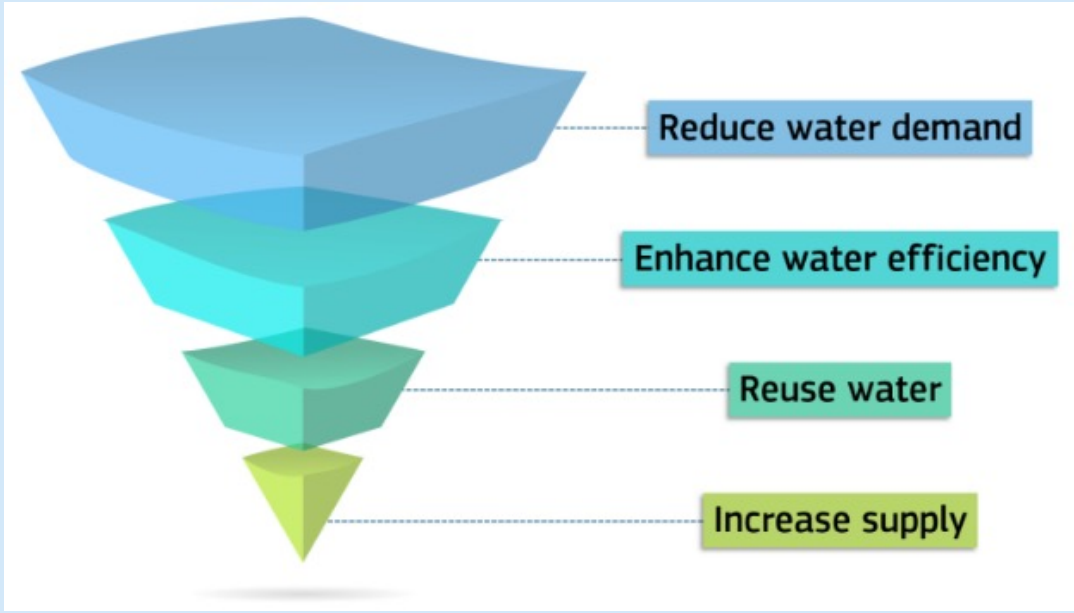
- Water resilience is essential for **competitiveness**
- Water is finite - it **must be used and reused efficiently**
- The green transition comes with **a water bill**
- **Energy and water efficiency** come hand in hand
- **Sustainable agriculture** and the food systems are key allies

EU should aim to enhance water efficiency by at least 10% by 2030

# Water smart economy




## Water Efficiency First - Hierarchy



# Securing clean and afforable water for all

*Key messages*

- Access to clean water and sanitation is **a human right**
- **Consumers play an essential role** in water resilience
- **Housing and city planning are key** components to guarantee this right
- **Pricing** should create the right incentives
- **Enhanced awareness** raising is tantamount


# Implementation and governance

*Key messages*

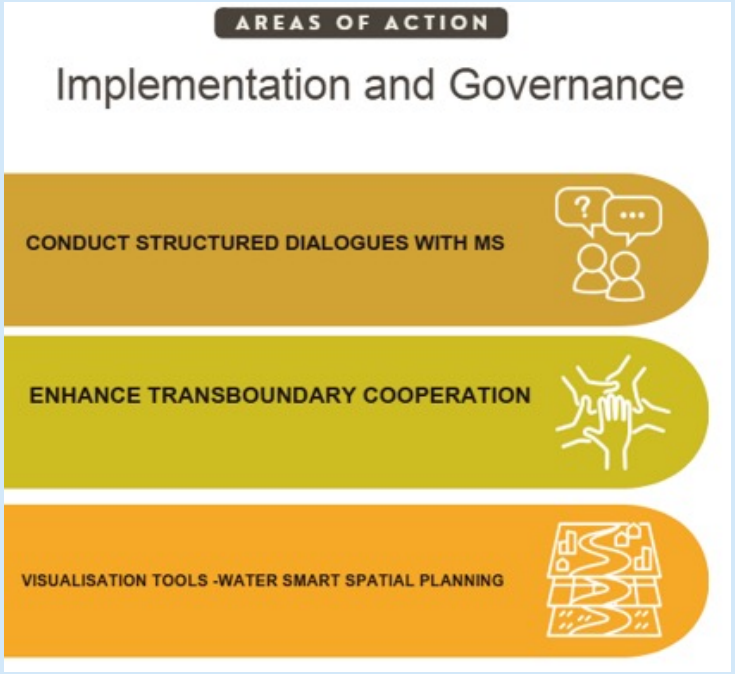
There is a crucial need to enhance **enforcement of legislation**

**Transboundary cooperation** must be improved

Citizens and all relevant actors **must be involved**

**All authorities must feel accountable** to deliver water resilience

**Water smart spatial planning** must guide the green and digital transition



# Finance, Investments and infrastructure

*Key messages*

- There is a **very significant funding gap** to implement water legislation
- Yet Member States struggle to use the available funds- **assistance**
- The **next EU budget is an opportunity** for water resilience
- **Private funding** will need to be stepped up
- The **EIB emerges as a essential ally** with its new Water Program

**AREAS OF ACTION**

Finance, investments and infrastructure

LAUNCH OF THE EIB WATER PROGRAMME AND ADVISORY FACILITY

European Investment Bank

MIDTERM REVIEW OF COHESION POLICY - WATER RESILIENCE A NEW PRIORITY

ESTABLISH A WATER RESILIENCE ACCELERATOR

**15 billion Euro in 2025-2027**

# Digitalisation

*Key messages*

- Digitalisation of the management of water holds **an incredible potenitial**
- **Managing water from the space** must become common practice
- **Real-time data collection** will make us more resilient
- Digitalisation will reduce **administrative burden**
- Digitalisation offers significant **business opportunities**

# Research, innovation, skills

*Key messages*

- **Knowledge gaps** - We know a lot about water but yet not enough
- **Innovation** in water management must be scaled up- from patents to market
- A **properly skilled work force** driving water management is essential
- There is a need to **bring closer together** industry, education and research
- There is a need for the right frame to **attrack young people** to the water sector


# Security and preparedness

*Key messages*

- Our **critical infrastructure is at risk**
- **Citizens must be empowered**, prepared and protected
- Many tools exist to protect the population but **they are not sufficiently used**
- **Knowing and addressing our weaknesses** will make us stronger
- Solidarity will be crucial but would need to embed **preparedness by design**

AREAS OF ACTION

Security and preparedness

PROTECTING CRITICAL WATER INFRASTRUCTURE

ENHANCE THE USE OF EARLY WARNING SYSTEMS

EUROPEAN CLIMATE ADAPTATION PLAN AND THE PREPAREDNESS UNION STRATEGY

# Water Resilience Strategy

Actions particularly relevant for sediment transport processes :

- **Green and Blue Corridors Initiative** to support the restoration of ecological settings and infrastructure including rivers, wetlands, and coastal restoration to restore the water cycle with a source-to-sea approach.

- Establish a "**Sponge Facility**", and, Under Cohesion for Transitions Community of Practice, organize a regular exchange with regions, cities and water authorities, to promote exchange of best practices on "**sponge landscapes**" and transboundary water cooperation identified under Interreg

- Significantly **scale up investment in nature-based solutions** in infrastructures or in conjunction with infrastructures.

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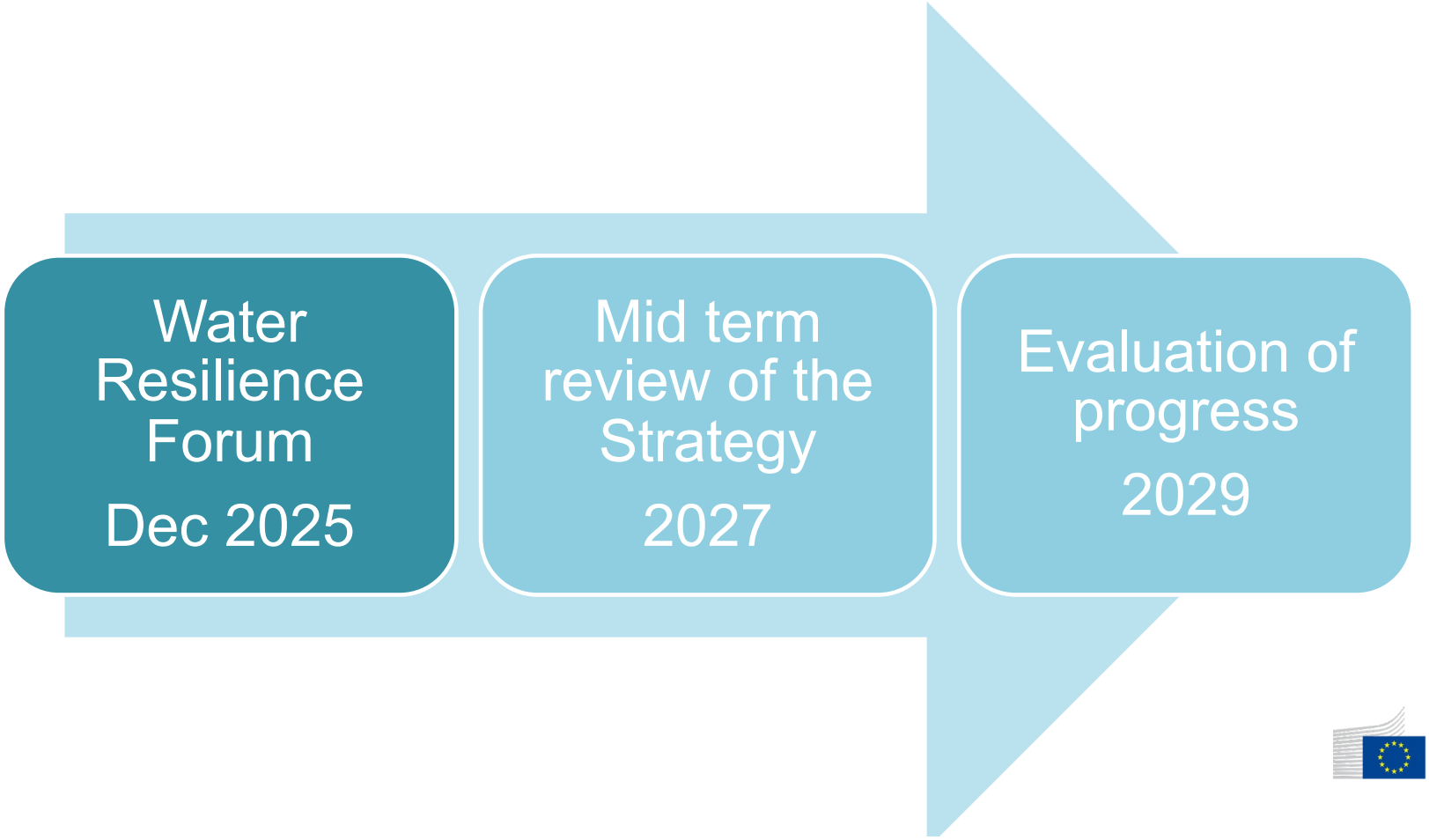
# Water Resilience Strategy

Actions particularly relevant for reducing sediment pollution :

- **Public-private initiative** to achieve a technological breakthrough in feasible and affordable methods for **the detection and remediation of PFAS** and other persistent chemicals, if the right partners are found.

- Launch an **Assistance Toolbox** for Member States to support actions **to reduce nutrients pollution**, including through enhanced modelling, interactive maps and exchanges of best practices.

# Water Resilience Strategy

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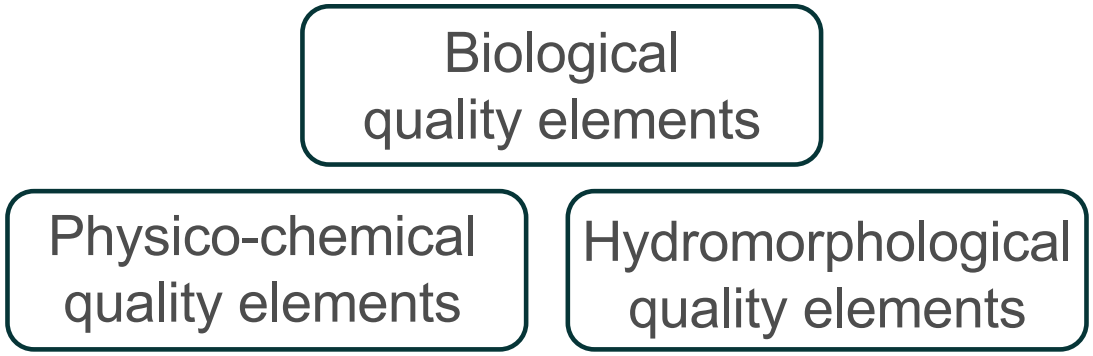
# Water Framework Directive

- The Water Framework Directive requires Member States to take necessary measures to reach **good ecological and chemical** status of rivers, lakes, transitional and coastal waters, and **prevent their deterioration.**

- **Activities such as dredging** must ensure they do not lead to failing to achieve these objectives, or comply with limited and duly justified exemption procedures, for example in the case of an overriding public interest

# Water Framework Directive

**Ecological status**




**Sediment quantity management** plays a key role in ecological status as an inherent determining parameter for hydromorphological quality elements, with related effects on aquatic habitats and hence on biological quality elements.

The normative definitions for good status or certain biological quality elements within WFD annex V also directly mention **sediment quality**

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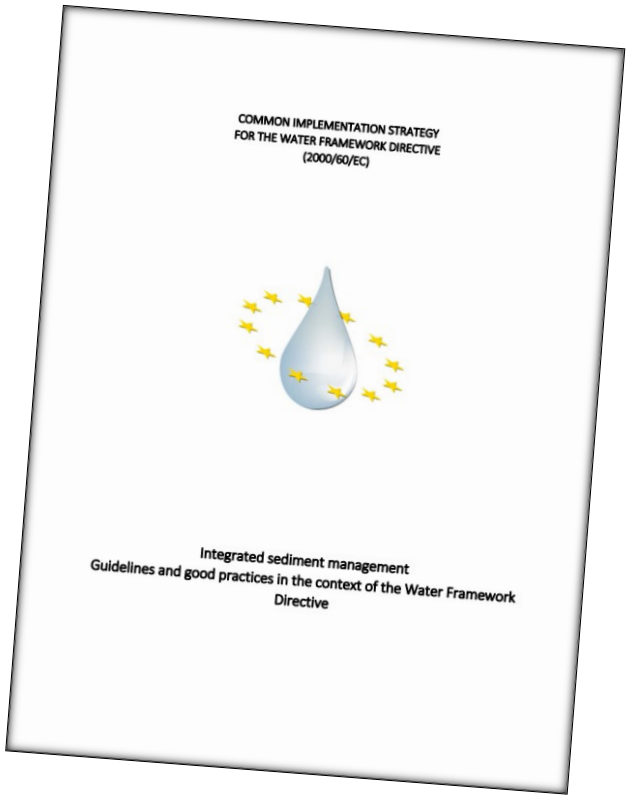
# CIS document on integrated sediment management in the context of the WFD

- Technical document on the management of sediment in the context of the WFD, published in 2022
- **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

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# Water Framework Directive

## Chemical status

- **Good chemical status** for water bodies means that concentrations do not exceed any of the Environmental Quality Standards (EQSs) included in the EQS Directive 2008/105/EC (revised by Directive 2013/39/EU).

- **There are currently no standards at EU level for priority substances in sediment but the recent revision of the list of surface and groundwater pollutants (WFD, EQSD and GWD) for which political agreement was reached on 23 September 2025** introduces:

**a) standards at EU-level for certain substances in sediments**

**b) Two new exemptions from the principle of non-deterioration**

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# Revision of WFD, EQSD and GWD

Two additional exemptions included

- One exemption allowing for temporary deterioration.

- This will require an ex-ante assessment ex post verification of the fact that the the deterioration would not be detectable after one year or, for biological quality elements, after three years;

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# Revision of WFD, EQSD and GWD

Two additional exemptions included

- One exemption allowing for the deterioration of the chemical status of water bodies caused by the relocation of polluted water or **sediments**. When applied, there should be a prior authorisation ensuring that :

- all possible steps to treat the water are applied prior to relocation;
- the receiving water body is in bad chemical status for most of the relocated pollutants (and in particular the most persistent and bioaccumulative)
- The receiving water body is not expected to deteriorate its ecological status as a result of the relocation;
- bodies of water used for drinking water are not affected
- no better environmental options are available, for reasons of technical feasibility or disproportionate cost.

# Marine Strategy Framework Directive

11 Descriptors in the MSFD…

- Biodiversity
- Non-indigenous species
- Commercial fish & shellfish population
- Marine food webs
- Eutrophication
- Sea-floor integrity
- Hydrographical conditions
- Contaminants (in environment)
- Contaminants (in seafood)
- Marine litter
- Energy & underwater noise

…to determine good environmental status (GES)

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# Marine Strategy Framework Directive

**Descriptor 8: Contaminants**

*"Contaminants are at a level not giving rise to pollution effects."*

**D8C1:** Concentrations of chemical contaminants in water, biota or **sediments**

- For the contaminants identified under the WFD, Members States must apply the WFD Environmental Quality Standards (EQS) thresholds.
- When no EQS has been set under the WFD for a specified matrix, as well as for additional contaminants, the **threshold values should be established by Member States through regional or subregional cooperation.**

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# Marine Strategy Framework Directive

## Descriptor 10: Litter

*" Properties and quantities of marine litter do not cause harm to the coastal and marine environment"*

## Descriptor 7: Hydrographical Conditions

*"Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems"*

## Descriptor 6: Sea-floor Integrity

*"Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected"*

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# Marine Strategy Framework Directive

Revision of MSFD planned for 2027, to :

- Improve coherence with WFD and other EU water law
- Reduce reporting requirements to focus on delivering results
- Improve data management and governance

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# Nature Restoration Regulation

**Specific restoration targets**

- Protected Habitat Types
- Habitats of protected species
- Marine Habitats
- Urban ecosystems
- River connectivity
- Pollinators
- Agro-ecosystems
- Forest ecosystems
- 3 billion additional trees by 2030



Published in June 2024

# Nature Restoration Regulation

**Specific restoration targets**

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**NRR Article 9**



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# Nature Restoration Regulation

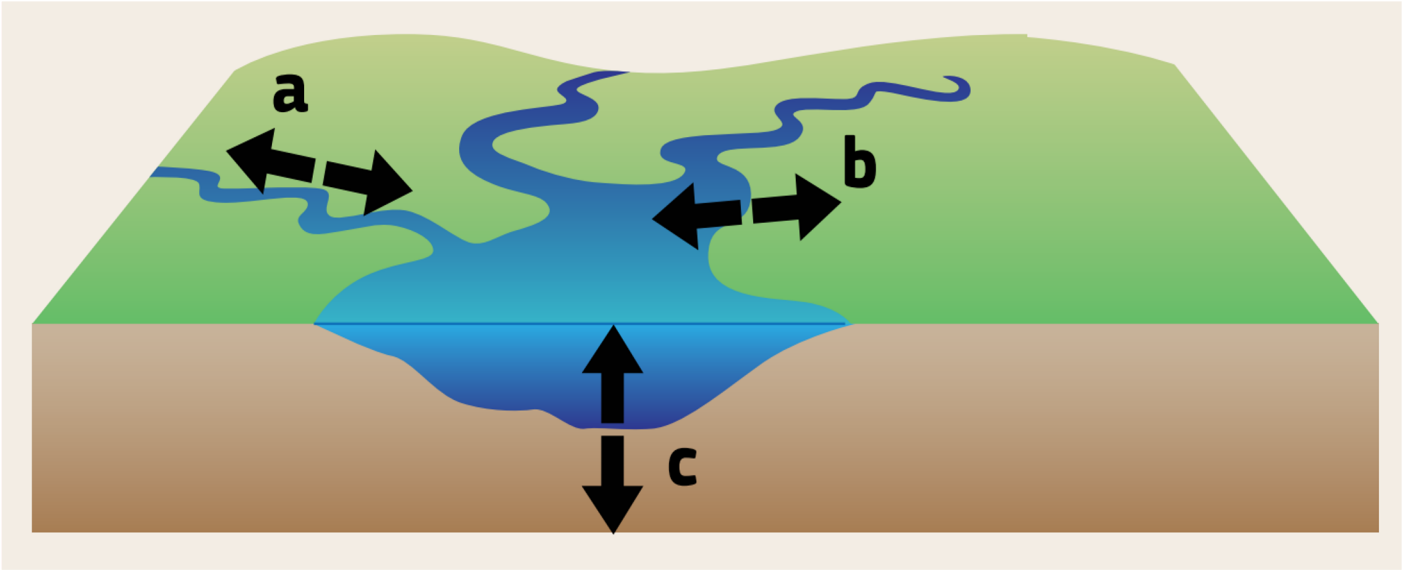
Under NRR article 9, MS must :

- Make an inventory of barriers to the connectivity of surface waters
- Identify those which need to be removed to reach the overall restoration objectives of NRR, as well as to contribute to the objective of restoring 25000 km of rivers into free-flowing rivers by 2030 in comparison to 2020
- Remove the identified barriers, primarily addressing obsolete ones
- Maintain the connectivity of restored rivers

# Nature Restoration Regulation

- **NRR article 3(22)**

« free-flowing river' means a river or a stretch of river the **longitudinal, lateral and vertical connectivity** of which is **not hindered by artificial structures** forming a barrier and the natural functions of which are largely unaffected »

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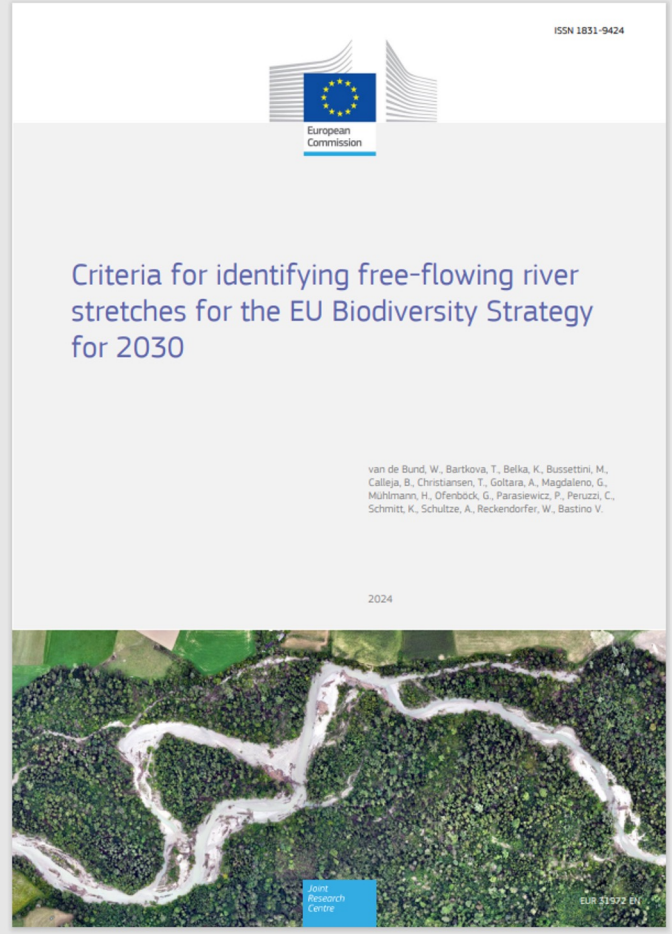
# Nature Restoration Regulation




- The Commission published a technical document in 2024 expanding over this definition to clarify, inter alia, that **sediment transport** is among the natural functions expected to be **largely unaffected** in a free-flowing river.

- This technical document is currently being updated and the updated version is expected to be endorsed by water directors by the end of 2025, as a guidance under the Common Implementation Strategy of EU Water Law.

European Commission

JRC Publications Repository - Criteria for identifying free-flowing river stretches for the EU Biodiversity Strategy for 2030

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