



IGB

Leibniz Institute of Freshwater Ecology
and Inland Fisheries

EU CALL FOR EVIDENCE

European Water Resilience Strategy – Tackling the implementation and enforcement deficit

IGB Feedback

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Introduction, background and focus

The Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB) is Germany's largest research centre for freshwaters. Our research findings help to tackle environmental changes and to develop strategies for sustainable water management – true to our guiding principle “Research for the future of our freshwaters”. Based on our research and expertise, we comment on the EU Call for Evidence on the planned European Water Resilience Strategy (EWRS).

Europe's freshwaters are both important strategic resources for humans and valuable habitats for nature. They provide a wide variety of ecosystem services and play a major role in climate change adaptation and mitigation. However, at the same time, these aquatic ecosystems are threatened by ongoing man-made climate change and other constantly increasing human pressures. To tackle these stressors and resulting challenges, the EU wants to develop a European Water Resilience Strategy (EWRS) “to ensure that water sources are properly managed, scarcity is addressed, and that we enhance the competitive innovative edge of our water industry and take a circular economy approach.”

1 The basis: no water resilience without ecosystem resilience

From a science-based point of view, it has to be underlined that the fundamental basis for water resilience is, first of all, the resilience of freshwater ecosystems. Their proper functioning is required for further planning and taking actions with sustainable impact. **Without resilient aquatic ecosystems, no overall water resilience will be achievable.** That is why the specific objective of this initiative, “Restore and protect the water cycle”, plays a major role.

Freshwaters that are rich in biodiversity provide extensive ecosystem services and are also more resilient towards negative impacts. In addition, restored water bodies make a greater contribution to mitigating climate change effects in their catchment. Therefore, water body restoration is an important strategic, long-term investment that should not be neglected in the legislative and executive branches, even in challenging times in terms of economic issues and security policy.

2 Suitable legislation already exists: the practical implementation and enforcement deficit in restoration and pollution prevention

While initiatives for sustainable freshwater use and protection such as the EWRS are to be welcomed in general, it has to be emphasised that suitable European legislation already exists, especially the Water Framework Directive (WFD) and its daughter directives. **The real**

problem is not the lack of legislation or initiatives, but the European-wide implementation and enforcement deficit despite the legally binding character.

At present, less than 40 percent of water bodies in Europe achieve a very good or good ecological status or the corresponding potential, as required by the WFD. By 2027, all water bodies subject to the reporting requirements should have reached this target. This is obviously utopian and clearly reveals that during two decades, there has been a major deficit in the practical implementation of improvement measures. The reasons for this are well known for quite some time: Above all, there is a lack of money, personnel and land, in a context of strong conflicts of interest with other policy areas such as agriculture, industry, transport, and energy. **Therefore, the implementation and enforcement of the WFD should be strengthened and not weakened.**

A quick and efficient implementation is also crucial for the Nature Restoration Law (NRL) adopted in 2024, which foresees 25,000 km of restored free-flowing river stretches in Europe. The NRL and the WFD are targeted investments with geopolitical relevance: water and water bodies are strategic resources and river restoration is an important part of future-oriented, sustainable water management.

3 Water quality: Another implementation and enforcement issue

The implementation and enforcement deficit described above also exists in pollution prevention. Only 29 percent of all surface water bodies in the EU are in good chemical status.

The pollution of aquatic ecosystems with high loads of nutrients and inorganic salts occurs despite already existing broad scientific evidence and mechanistic understanding for adequate targets and necessary management measures. In the case of **nitrogen**, emissions from agriculture into Europe's freshwaters are still far too high, and still severely impair the majority of inland water bodies. The goals of the Nitrates Directive are important, but the still existing problems lie mainly in its practical implementation deficit in the Member States.

Another pollution issue are **persistent, mobile, and toxic substances** in surface water and groundwater bodies. Recent advances in analytical techniques reveal the presence of so-far overlooked highly mobile organic compounds in the aquatic environment, many of which are persistent and potentially toxic, or can be transformed into metabolites and / or by-products with potentially hazardous properties. These compounds may not be removed completely during drinking water production and should, therefore, not even enter drinking water resources such as surface waters or groundwater. Strategies are required for a more timely and flexible adjustment of both the surface water and groundwater watch lists as well as the list of priority substances – but observers fear that during the currently running trilogue process on the list of priority substances polluting European freshwaters, the standards could even be weakened.

The recently adopted **Urban Wastewater Treatment Directive (UWWTD)** is a step in the right direction to increase the sustainability of wastewater management and enhance the respective infrastructure and technologies, especially with perspective to the environmental goals

of the EU. However, the decisive factor will again be, how effectively the member states translate the directive into practical sustainable action.

Key to avoiding new and mitigating existent pollution is eliminating the emission of contaminants already at the source – or at least to minimise the emissions significantly where no other practical options exist (yet). This includes significantly decreased production of critical compounds and their substitution by less problematic compounds. The focus should always be on the precautionary principle and the direct avoidance of emissions in all processes instead of costly end-of-pipe technologies, which may not remove all contaminants. The latter should be addressed with more **consequent polluter-pays-approaches in all relevant fields**.

4 Water quantity: regulation of amounts, implementation and enforcement of transparent decision and distribution rules

There are often strong challenging conflicts between water protection and use, but also competition between user interests. Due to climate change and increasing temperatures, water consumption is projected to increase while water availability decreases at the same time. Less water can also result in higher concentrations of problematic pollutants since there is less dilution in surface water bodies. Proper management and sustainable use need an evidence-based decision and distribution scheme balancing and cascading who is allowed to use which amount of water under which circumstances in what way at what time. The non-negotiable basis in this calculation should be the basic quantitative needs of the aquatic ecosystems (see section 1). This ecological need has to be defined individually for the respective concrete case.

Consumptive water uses free of charge, as e.g. withdrawal for irrigation should be evaluated and assessed for their impacts on water retention similar to obsolete drainage systems. Non-consumptive water uses, as e.g. for renewable energy production, hydropower and especially heat pumps, should be assessed for their cumulative environmental impacts.

5 Implement holistic and efficient water resilience goals in all relevant EU policies, and stop harmful subsidies

The EU wants the EWRS “to ensure that water sources are properly managed, scarcity is addressed, and that we enhance the competitive innovative edge of our water industry and take a circular economy approach.” **It has to be underlined that Europe will only be able to solve its water issues and become water-resilient if all policy fields mandatorily contribute to this overarching goal.** The interests of e.g. the agriculture, industry, transport, or energy sector have been very influential and often overruled environmental and water policy. Water management affects several policy areas in parallel and requires a concerted action and management beyond administrative and legal silos, which is why water law alone is not sufficient to solve the problems. Water resilience issues must be considered and assessed in all relevant EU policies. Frankly speaking, political support or prioritisation of ecologically adverse water

uses need to be stopped. **Misguided incentives such as some instruments in the Common Agricultural Policy (pollution) or the Renewable Energy Directive (prioritisation of hydro-power ignoring its harmful ecological effects) should be urgently reassessed by legislators.**

6 Paper doesn't blush – avoid an EWRS paper tiger, choose smart and brave approaches

As a summary of the deficits described above: Among the five action areas of the planned EWRS, „Governance and implementation“ plays a central role. After many years of detailed diagnosis, the focus should now be on tackling the specific practical problems.

It has to be checked carefully how it can be ensured that the planned “holistic multi-annual cross-sectoral plan with milestones in 2030 or 2040 to achieve a water resilient Europe” can really lead into practical sustainable action and become a real boost for water resilience and does not just produce more documents, coordination and communication requirements and reporting duties where the effort is not in proportion to the positive effects. Complex and lengthy approval and implementation processes aiming at more water resilience should be made more efficient and standardised as far as possible, without losing sight of the special conditions of the respective areas. Similar to renewables legislation, special acceleration laws could support quicker implementation of mitigation and rehabilitation measures.

In addition to adapting the procedural regulations, this also requires a cultural change towards more progressive, pragmatic administrative action. A constructive culture of failure instead of the sole primacy of absolute legal certainty would create valuable knowledge on water resilience approaches and help improve future implementations. Conflicts of goals and interests could be defused or even resolved if projects were to focus more on multifunctional approaches with synergy effects that cover several objectives and interests simultaneously with a stronger emphasis on nature-based solutions, and dialogue orientation helps to better integrate specialist and practical knowledge of concerned stakeholders.

Further reading

[IGB Policy Brief \(2025\): River revitalisation as crisis prevention and public service](#)

[IGB Feedback \(2024\): Nitrates – updated rules on the use of certain fertilising materials from livestock manure \(Renure\)](#)

[IGB Feedback \(2023\): Protecting waters from pollution caused by nitrates from agricultural sources](#)

[IGB Feedback \(2022\): Nutrients – Action plan for better management](#)

[IGB Feedback \(2022\): Microplastics pollution – measures to reduce its impact on the environment](#)

[IGB Feedback \(2022\): Renewable energy projects – permit-granting processes & powerpurchase agreements](#)

[IGB Feedback \(2021\): Possible revision of the lists of pollutants affecting surface and groundwaters, and the corresponding regulatory standards in the Environmental Quality Standards \(EQS\), Groundwater Directive \(GWD\) and Water Framework Directive \(WFD\)](#)

[IGB Feedback \(2021\): Revision of the Urban Waste Water Treatment Directive \(UWWTD\)](#)

[IGB Feedback \(2021\): The EU Nature Restoration Plan and the binding EU nature restoration targets](#)

[IGB Feedback \(2021\): Feedback on the revision of the TEN-T regulations](#)

[IGB Feedback \(2021\): Feedback on the roadmap for the NAIADES III action plan \(2021-2027\)](#)

[IGB Feedback \(2020\): EU Roadmap for the EU Biodiversity Strategy to 2030](#)

[IGB Policy Brief \(2019\): Strengths and weaknesses of the Water Framework Directive](#)

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Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB)

in the Forschungsverbund Berlin e. V.

Müggelseedamm 310

12587 Berlin, Germany

www.igb-berlin.de/en

Phone: +49 30 64181-500

Email: info@igb-berlin.de

Bluesky: [@leibnizigb.bsky.social](https://bsky.app/profile/leibnizigb.bsky.social)

Mastodon: <https://wiskomm.social/@LeibnizIGB>

LinkedIn: www.linkedin.com/company/leibniz-igb

Newsletter: www.igb-berlin.de/en/newsletter

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Forschungsverbund Berlin e. V.

Rudower Chaussee 17, 12489 Berlin

Email: info@fv-berlin.de

Phone: +49 30 6392-3330

Responsible according to the German Press Law: Professor Luc De Meester, Martin Böhnke

Responsible Institute: Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB)

Responsible authors (in alphabetical order)

Tobias Goldhammer, Sonja Jähnig, Jörg Lewandowski, Stephanie Spahr, Markus Venohr, Christian Wolter

Editorial team

Johannes Graupner

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