IGB
Leibniz Institute of Freshwater Ecology and Inland Fisheries

EU CALL FOR EVIDENCE

Towards a circular, regenerative and competitive bioeconomy – No biomass without water

IGB Feedback

04 June 2025

Research for the future of our freshwaters

IGB Feedback on the new Bioeconomy Strategy: No biomass without water

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 Call for Evidence on the new EU Bioeconomy Strategy.

From a science-based point of view, political initiatives aiming at fostering a sustainable, circular and decarbonised bioeconomy and thereby uniting environmental, climate and socioeconomic goals, are necessary and have to be welcomed. Nevertheless, this is not only an opportunity, but also a big challenge: The bioeconomy is not a flanking add-on niche market, but the urgent basic prerequisite to align our actions and economic activities in the EU within the existing planetary boundaries. This implies a broad transformation process, challenging traditional and state-of-the-art practices and behaviour, and also defying economic privileges of established stakeholders. In addition to these fundamental structural challenges, there is **one major critical bottleneck to consider: Water plays a vital and irreplaceable role across all areas of the bioeconomy – as a foundational resource for ecological integrity, production systems, and sustainable development. Put simply: without water, there is no biomass.**

The pressure on this valuable resource is increasing sharply in Europe. This is closely linked to climate and environmental changes, both human-made, and growing interest in even more water use, which is also resulting in further pollution. Therefore, water, water body management, and water use practices have to be made more sustainable and integrated hand in hand with related catchment and land management. The key economic sectors named by the EU – including agriculture, forestry, fisheries, biomanufacturing, biotechnology industries and services – rely on water from our natural freshwater ecosystems such as rivers, lakes and groundwater. No technical infrastructure can replace the services that these ecosystems provide. Therefore, these freshwater ecosystems need protection, sustainable management and restoration – the latter, because with a near-natural structure and rich biodiversity, they provide further extensive ecosystem services and are also more resilient towards harmful impacts. In addition, restored water bodies contribute to mitigating climate change effects in their catchment.

Consequently, protecting and strengthening of freshwater ecosystems should be an indispensable and integral part of the EU Bioeconomy Strategy. **Actually, suitable EU legislation to protect and positively develop water bodies and water resources already exists, but suffers from a broad implementation and enforcement deficit.** This includes, for example, the Water Framework Directive, the Nitrates Directive and the Urban Waste Water Treatment Directive, and can also be anticipated concerning the Nature Restoration Regulation, that already faces political resistance in the EU member states. The enforcement

and implementation deficit in these areas should be urgently addressed, as the IGB has already underlined in its feedback within the Call for Evidence on the European Water Resilience Strategy.

At the same time, environmentally harmful subsidies and practices, e.g. under the Common Agricultural Policy, must be urgently reduced – also against the interest of influential agricultural stakeholders. For the overall strategy analysis, the Water-Energy-Food Nexus concept should be considered and applied, acknowledging that agriculture and food production is one of the largest consumer of freshwater resources in Europe and worldwide, with an expected increasing demand due to anthropogenic climate change and accelerated global warming – and in addition, water is needed to produce most energy forms. The desired sustainable growth in bioeconomy will not be reached by producing new legislation and strategies alone, but needs consequent practical action. This explicitely includes the willingness of economic stakeholders to embrace change towards more sustainable practices.

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