



IGB

Leibniz Institute of Freshwater Ecology
and Inland Fisheries

IGB FEEDBACK

EU Ports Strategy: Better consideration of environmental impacts

23 July 2025

EU Ports Strategy: Better consideration of environmental impacts

The Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB) is Germany's largest and one of the leading international research centres for inland waters. We study the fundamental processes in freshwaters and their communities, including their biodiversity, ecosystem services and responses to global change. Our research findings help to tackle global environmental changes and to develop measures conducive to sustainable freshwater management – true to our guiding principle “Research for the future of our freshwaters”. Based on our research expertise, we are providing feedback in the Call for Evidence for the planned EU Ports Strategy.

Fully recognise environmental aspects: Ports affect the ecosystems that they themselves use

The EU Ports Strategy is intended to set out the current and future challenges facing Europe's ports. In the information available to date on the priorities of the planned EU Ports Strategy, the focus is on the economy, energy and security. An integration of legally binding EU nature conservation laws and strategies is not yet recognisable. No reference is made to the Marine Strategy Framework Directive, the Water Framework Directive or the Natura 2000 Directive and, accordingly, there is no indication of how the new EU Ports Strategy will contribute to achieving these environmental goals.

It is striking that the few environmental aspects mentioned in the EU information document are described one-sidedly as a challenge for port infrastructure, operation and navigability. Among other things, it is stated

that “upstream pollution” could “impact the operation of docks”.

This view lacks a crucial reflection: Ports themselves are often massive stressors and disruptive factors for the very sea and river systems whose ecosystem services they themselves use – and on which they are dependent:

- Many harbours are located at or in estuaries - these are particularly important but also **sensitive habitats**, which must be taken into account for the expansion and maintenance in accordance with European law.

- Harbours lead to **habitat fragmentation and constitute migration barriers** for migratory species, especially migratory fish. In addition to physical barriers caused by hydraulic structures, there is also a **sink effect**: the increased sedimentation results in excessive fertilisation leading to algal and bacterial blooms. The resulting oxygen depletion creates waterbodies that are hostile to life and no longer passable.
- At the same time, the deposition of fines requires **intensive maintenance** in sediment management, e.g. continuous dredging and disposal of fine sediments, again associated with the resulting environmental pollution and high costs.
- Harbours lead to **considerable pollutant emissions into water, soil and air**, e.g. through oil, fuel and cargo losses, contaminated ballast water, local industry, but also light and noise pollution.
- Increasingly critical, also in the context of climate change, are the **warming effects** caused by wide open areas of stagnant water and by metallic sheet pile walls that heat up strongly seasonally as a result of solar radiation.
- Warming and damming lead to **increased evaporation and reduced water availability**.
- Ports are key **gateways for invasive species**, which can enter new distribution areas through ballast water or adhering to ship surfaces, for example, and cause massive ecological and economic damage in coastal and inland waters.
- **Ecological upgrading of existing port areas** (e.g. habitat diversity for wintering grounds and nursery areas for aquatic life) and the **integration of nature-based solutions** would therefore be required as early as the conceptualization and planning phase of infrastructure projects are important.
- **Existing canal systems are preferable as a reliable alternative to river routes for transport** when connecting inland ports as intermediate distributors for goods. However, even for these, they should only be expanded or maintained if the potential demand is proven.
- Where possible, **natural rivers should not be further converted into shipping lanes, but rather developed ecologically**, as [they provide significantly more ecosystem services for humans and nature in a near-natural form](#), e.g. natural water retention, flood protection, drinking water resources and fishing resources.
- **If the EU Ports Strategy is to make ports in Europe more resilient, this must include the resilience of the aquatic ecosystems that the ports rely on and that are surrounding them.** The desired 'long-term competitiveness' is also dependent on whether the utilisation of ecosystems is sustainable.

Taking different conditions into account: seaports, estuary ports, inland ports

Marine ports and those in the lower reaches of estuaries can be important cornerstones for reliable international trade if well connected to the sea routes. However, improved direct rail links to the hinterland are important for long-term competitiveness, economic efficiency and environmental compatibility.

In contrast, **seaports in upper estuaries** cause immense expenses for their expansion and maintenance (e.g. sediment management) and massive ecological damage. As a rule, they are not profitable; in any case,

they are not sustainable. Progressive climate change will exacerbate the situation, and the new EU Ports Strategy should urgently take this into account.

Inland ports are dependent on additional site-specific factors that can rule out sustainable utilisation from the start. These include, for example, a natural seasonal or climate change-induced shortage of water, which can significantly limit the navigation. There are also often inadequate connections to climate friendly modes of transport and fitting target markets.

Investment in port and waterway infrastructure: making robust and transparent analyses of economic potential and relevance an indispensable basis for decision-making

The following applies in principle: **massive investment in infrastructure, particularly in the port and waterway sector, does not automatically lead to increased demand and creation of economic impact.**

The expansion and maintenance of port infrastructure should therefore always be based on concrete economic potential and specific relevance for security policy for the respective location and not be the result of a structural or cohesion policy that invests in quantity instead of quality.

In the case of inland ports and the associated waterway network in particular, the economic potential of infrastructure projects and their maintenance must be critically examined. Although such capital-intensive

projects are quickly regarded as prestige projects by the stakeholders involved, these projects are often not planned realistically with regards to the demand. There are often very specific economic reasons why ports and waterways are not utilised to capacity. Particularly in inland areas, traditional markets and thus the goods to be transported for them, such as bulk goods like ore or coal, have disappeared – and have not been replaced by other products, or only partially.

This can lead to massive and expensive interventions in ecosystems that cannot be justified by overriding and long-term public interests – and thus harm nature, the economy and people alike.

IMPRINT

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: <https://bsky.app/profile/igb-berlin.de>
Mastodon: <https://wisskomm.social/@LeibnizIGB>
LinkedIn: www.linkedin.com/company/leibniz-igb

Publisher

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)

Register of Associations

Forschungsverbund Berlin is entered in the Register of Associations of Amtsgericht Berlin-Charlottenburg (Berlin-Charlottenburg Local Court) under Register Number VR 12174 B.

Authors:

Jörn Gessner and Christian Wolter

Editorial team:

Johannes Graupner and Angelina Tittmann

Suggested citation

IGB (2025): EU Ports Strategy: Better consideration of environmental impacts. IGB Feedback, Leibniz Institute of Freshwater Ecology and Inland Fisheries, Berlin.

Copyright: IGB, July 2025