



IGB

Leibniz Institute of Freshwater Ecology
and Inland Fisheries

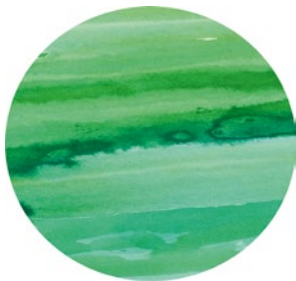
**Research for the future
of our freshwaters**



Freshwaters are ...

Hugely diverse ecosystems

A single drop of water may contain many thousands of microorganisms such as fungi, protozoa, algae and bacteria. Besides contributing to the self-purification of water bodies, these microorganisms also provide food for other organisms.

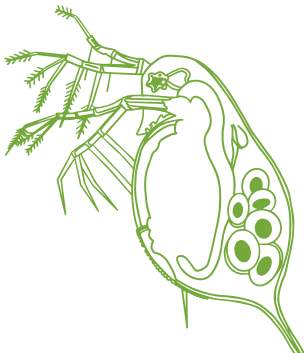


A play of colours

The colour of freshwater bodies depends on the materials, substances and organisms they contain: nutrient-rich waters often look greenish due to higher levels of algae, while nutrient-poor waters tend to be blue.

Resting zones

The resting eggs of water fleas such as *Daphnia* can stay dormant in lake sediment for decades, enabling them to survive adverse environmental conditions. Some can even be resurrected centuries later.



The realm of giants

Inland waters are home to some of the largest fish species in the world. The European sturgeon can grow up to five metres in length. This large migratory fish, which was on the verge of extinction, is now being reintroduced with the scientific support of IGB.



Lifelines

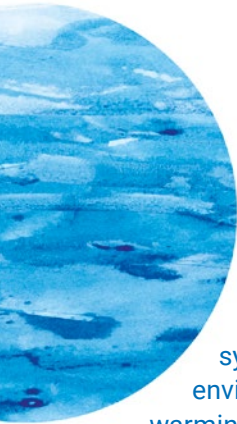
Restoring rivers and floodplains enhances natural resilience to drought and flooding, benefiting humans, water quality and biodiversity alike.



Stepping stones

Ponds, pools and backwaters provide crucial refuges and connectivity between ecosystems, enabling aquatic organisms to avoid disturbance and colonise or re-colonise habitats.

Our mission



Freshwater systems host a fascinating diversity of life and provide important ecosystem services to our societies. But rivers, lakes, wetlands and small water bodies are also among the ecosystems most affected by anthropogenic environmental changes such as global warming, urbanisation, regulation, pollution and eutrophication.

“Research for the future of our freshwaters” is therefore our mission. IGB is Germany’s largest and one of the leading international centres for freshwater research. It is also one of the oldest institutions in this field. Through innovative research on the structure and functioning of

freshwaters, their biodiversity, ecosystem services and responses to global change, we make a relevant contribution to a better understanding of these ecosystems and to sustainable freshwater management.

Our programme areas



What kind of ecological and evolutionary changes are aquatic organisms experiencing? What are the drivers and consequences of changing and dwindling biodiversity? How can aquatic resources and ecosystems be protected and used in a more sustainable way? And what mechanisms shape water bodies and increase their resilience? In our programme areas, we want to find answers to these questions.

Aquatic Biodiversity in the Anthropocene

The diversity of genes, species, communities and habitats is rapidly decreasing due to human impacts. This threatens the stability and resilience of global ecosystems and thus our human well-being. We document the changes and look for ways to preserve biodiversity in lakes, rivers, wetlands and small water bodies.





Aquatic Ecosystem Services and Sustainability

Inland waters and floodplains provide important productive, regulating and cultural ecosystem services for our society, and are therefore often subject to particularly high pressure of use. We are developing concepts for multifunctional management that supports resilience to environmental change while serving multiple societal goals. These include nature-based solutions and more sustainable fisheries.



Dimensions of Complexity of Aquatic Systems

In water bodies, we observe dynamic chemical, hydrological, physical, and biological processes. They are closely interconnected with the surrounding landscape, atmosphere, and various aquatic organisms and their traits. We investigate how this interplay responds to natural events or human interventions, how sudden changes arise, and how to prevent them.

Structure and numbers*



5 RESEARCH DEPARTMENTS

- (Dept. 1) Ecohydrology and Biogeochemistry
- (Dept. 2) Community and Ecosystem Ecology
- (Dept. 3) Plankton and Microbial Ecology
- (Dept. 4) Fish Biology, Fisheries and Aquaculture
- (Dept. 5) Evolutionary and Integrative Ecology



3

**PROGRAMME
AREAS**



4

LOCATIONS
in Berlin and
Brandenburg



397

**INSTITUTE
MEMBERS**
32% with
an international
background



10

**JOINT
PROFESSORSHIPS**
with 4 universities



**€ 23.1 MILLION
TOTAL BUDGET**
35% external
funding



65%

**OF SCIENTIFIC
ARTICLES**
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Müggelseedamm 310, 12587 Berlin

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FRESHWATER NEWS

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