

24. März 2026

**Stellungnahme zum
Leibniz-Institut für Gewässerökologie und Binnenfischerei
im Forschungsverbund Berlin (IGB)**

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Vorbemerkung

Die Einrichtungen der Forschung und der wissenschaftlichen Infrastruktur, die sich in der Leibniz-Gemeinschaft zusammengeschlossen haben, werden von Bund und Ländern wegen ihrer überregionalen Bedeutung und eines gesamtstaatlichen wissenschaftspolitischen Interesses gemeinsam außerhalb einer Hochschule gefördert. Turnusmäßig, spätestens alle sieben Jahre, überprüfen Bund und Länder, ob die Voraussetzungen für die gemeinsame Förderung einer Leibniz-Einrichtung noch erfüllt sind.¹

Die wesentliche Grundlage für die Überprüfung in der Gemeinsamen Wissenschaftskonferenz ist regelmäßig eine unabhängige Evaluierung durch den Senat der Leibniz-Gemeinschaft. Die Stellungnahmen des Senats bereitet der Senatsausschuss Evaluierung vor. Für die Bewertung einer Einrichtung setzt der Ausschuss Bewertungsgruppen mit unabhängigen, fachlich einschlägigen Sachverständigen ein.

Vor diesem Hintergrund besuchte eine Bewertungsgruppe am 11. und 12. Juni 2025 das IGB in Berlin. Ihr stand eine vom IGB erstellte Evaluierungsunterlage zur Verfügung. Die wesentlichen Aussagen dieser Unterlage sind in der Darstellung (Anlage A dieser Stellungnahme) zusammengefasst. Die Bewertungsgruppe erstellte im Anschluss an den Besuch den Bewertungsbericht (Anlage B). Das IGB nahm dazu Stellung (Anlage C). Der Senat der Leibniz-Gemeinschaft verabschiedete am 24. März 2026 auf dieser Grundlage die vorliegende Stellungnahme. Der Senat dankt den Mitgliedern der Bewertungsgruppe und des Senatsausschusses Evaluierung für ihre Arbeit.

1. Beurteilung und Empfehlungen

Der Senat schließt sich den Beurteilungen und Empfehlungen der Bewertungsgruppe an.

Das Leibniz-Institut für Gewässerökologie und Binnenfischerei im Forschungsverbund Berlin (IGB) betreibt grundlagen- und anwendungsorientierte Forschung zu Strukturen und Dynamiken aquatischer Ökosysteme. Unter Einbeziehung verschiedener wissenschaftlicher Disziplinen wie Hydrologie, Limnologie, Ökologie und Fischereiforschung befasst es sich mit stehenden und fließenden Binnengewässern sowie deren nachhaltiger Bewirtschaftung.

Die **Leistungen** der fünf fachwissenschaftlichen Abteilungen des IGB werden zweimal als „sehr gut bis exzellent“ und dreimal als „sehr gut“ bewertet. In vier übergreifenden Programmbereichen werden die dort vertretenen Expertisen interdisziplinär gebündelt. In der Forschung nutzt das IGB innovative Ansätze und hat in den vergangenen Jahren eine Reihe wichtiger Ergebnisse vorgelegt. Zu nennen ist u. a. eine große Breite von Beiträgen zur Biodiversität in Binnengewässern und zu den Einflüssen des Klimawandels auf Gewässer. Die Resultate werden strategisch überzeugend publiziert und auch international stark wahrgenommen. Die Arbeiten stützen sich nicht zuletzt auf die hervorragenden Infrastrukturen des IGB. Dazu zählen wichtige Messstationen in Seen und Flüssen, Fischhaltungsanlagen und Labore. Mit dem IGB-LakeLab im Stechlinsee verfügt das Institut über eine einzigartige Versuchsanlage zur Erforschung ökologischer Vorgänge in Seen. Wie empfohlen, erhöhte sich deren externe Nutzung,

¹ Ausführungsvereinbarung zum GWK-Abkommen über die gemeinsame Förderung der Mitgliedseinrichtungen der Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz e. V.

dafür sollte aber in der Fachgemeinschaft noch stärker geworben werden. Die umfangreichen Forschungsdaten des Instituts stehen über Informationsplattformen auch extern zur Verfügung; diese Angebote wurden in den vergangenen Jahren erweitert. Sehr erfolgreich ist das IGB außerdem bei der Kommunikation seiner Arbeitsergebnisse an relevante gesellschaftliche Akteure und eine breitere Öffentlichkeit. Internationale Beachtung fanden beispielsweise die Einschätzungen zum Fischsterben in der Oder 2022.

Nachdem 2016 der damalige Direktor des IGB Präsident des Österreichischen Wissenschaftsfonds wurde und die geplante Nachfolge die Stelle aus gesundheitlichen Gründen nicht antreten konnte, stand das IGB über mehrere Jahre hinweg unter kommissarischer Leitung. Erst im Januar 2020 nahm ein neuer Direktor seine Tätigkeit auf. Unter seiner Federführung wurden wichtige **Veränderungen** vorangetrieben: Die Abteilungsstruktur wurde sinnvoll angepasst und die Infrastrukturen schlüssig in Kompetenz- und Technologieplattformen (CTP) gebündelt. Außerdem wurden die drei übergreifenden Programmbereiche neu zugeschnitten. Seit 2025 baut das IGB einen vielversprechenden vierten Programmbereich auf („Prädiktive Ökologie im Anthropozän“); dafür erhöhten Bund und Länder die institutionelle Förderung um 2,2 M€/Jahr.

Im Anschluss an diese positive Entwicklung sollte nun das wissenschaftliche Profil des Instituts weiter geschärft werden, um auf ausgewählten Gebieten eine international führende Position zu erreichen. Dies zu gestalten, wird Aufgabe einer **neuen wissenschaftlichen Leitung** sein, denn der bisherige Direktor verließ das Institut im Oktober 2025 aus persönlichen Gründen und wird sich auf seine Professur an der KU Leuven fokussieren. Derzeit wird das IGB kommissarisch von einer Abteilungsleiterin geführt. Für die strategische Entwicklung des Instituts ist es dringlich, die IGB-Leitung gemeinsam mit der FU Berlin in einem internationalen Rekrutierungsverfahren wissenschaftlich hochrangig zu besetzen. Anschließend sollte auch geprüft werden, ob die zwei 2025 durchgeführten befristeten internen Besetzungen von Abteilungsleitungen dauerhaft Bestand haben sollen. Nachdem das IGB in der Vergangenheit mehrfach Abteilungsleitungen intern ausgeschrieben und besetzt hat, empfiehlt der Senat, auch für diese Stellen zukünftig wieder zu öffentlichen Ausschreibungen zurückzukehren.

Das IGB verfügte in den Jahren 2022–2024 über Erträge aus der institutionellen **Förderung** von ca. 15 M€/Jahr. Hinzu kamen Erträge aus Projektförderungen von jährlich knapp 8 M€. Das Institut arbeitet bisher an den **Standorten** Berlin-Friedrichshagen (Müggelsee) und Nordbrandenburg (Stechlinsee). Es ist eine ausgesprochen positive Entwicklung, dass ein gemeinsam mit der FU Berlin genutztes *Biodiversity Cooperation Building* in Berlin-Dahlem mittlerweile fertiggestellt ist. Es sollte nun wie vorgesehen zügig vom IGB genutzt werden können. Die Sicherung einer effizienten standortübergreifenden internen Kommunikation sollte weiterhin gut im Blick behalten werden.

Das **Personal** des IGB ist hochmotiviert und wird in seiner Entwicklung unterstützt. Die Förderung für die große und vielfältige Gruppe der Promovierenden wurde seit der letzten Evaluierung verbessert. Das Institut wird in seiner Absicht unterstützt, die geschaffenen Qualifizierungsangebote in einer institutseigenen *Graduate School* zu bündeln. Gute Fortschritte machte das IGB auch bei der Gleichstellung der Geschlechter. Insgesamt sind im wissenschaftlichen Bereich mittlerweile 42 % der Beschäftigten Frauen (vergangene Evaluierung: 36 %). Auf den Leitungsebenen liegt der Anteil unverändert bei nur 26 %. Die anstehenden Neubesetzungen sollten genutzt werden, um hier Verbesserungen zu erreichen.

Mit den benachbarten Universitäten in Berlin und Brandenburg hat das IGB enge und fruchtbare **Kooperationsbeziehungen** etabliert; neun Wissenschaftlerinnen und Wissenschaftler sind gemeinsam mit universitären Partnern berufen. Auch ist das Institut in wichtigen Verbundforschungsvorhaben aktiv, darunter der DFG-Sonderforschungsbereich RESIST und das *Berlin Center for Genomics in Biodiversity Research* (BeGenDiv). Es wirkt außerdem in drei Konsortien der Nationalen Forschungsdateninfrastruktur – NFDI mit.

Der **Wissenschaftliche Beirat** hat die Entwicklung der letzten Jahre eng und kompetent begleitet. Um dessen Unabhängigkeit zu sichern, sollten künftig keine Beschäftigten von eng kooperierenden Einrichtungen mehr in das Gremium berufen werden.

2. Zur Stellungnahme des IGB

Der Senat begrüßt, dass das IGB beabsichtigt, die Empfehlungen und Hinweise aus dem Bewertungsbericht bei seiner weiteren Arbeit zu berücksichtigen.

3. Förderempfehlung

Der Senat der Leibniz-Gemeinschaft empfiehlt Bund und Ländern, das IGB als Einrichtung der Forschung und der wissenschaftlichen Infrastruktur auf der Grundlage der Ausführungsvereinbarung WGL weiter zu fördern.

Annex A: Status report

Leibniz Institute of Freshwater Ecology and Inland Fisheries, Berlin (IGB)

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1. Key data, structure and tasks

Key data

Year established:	1992
Admission to joint funding by Federal and <i>Länder</i> Governments:	1992
Admission to the Leibniz Association:	2000
Last statement by the Leibniz Senate:	2019
Legal form:	registered non-profit association (<i>eingetragener Verein, e. V.</i>)
Responsible department at <i>Länder</i> level:	Berlin Senate Administration for Science, Health and Care (SenWGP)
Responsible department at Federal level:	Federal Ministry of Education and Research (BMBF)

Total budget (2024)

15.5 M€ institutional funding
9.1 M€ revenue from project grants
0.4 M€ revenue from services

Number of staff (2024)

145 individuals in “research and scientific services”
61 individuals in “science supporting staff (laboratories, technical support etc.)”
34 individuals in “science supporting staff (administration)”

Mission and structure

Statutory mission

“Through interdisciplinary research, the Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB) seeks to find scientific insight about the structure and dynamics of aquatic ecosystems, taking into account abiotic gradients and drivers, the components of the food web from bacteria to fish, and the interaction with the terrestrial environment and the atmosphere. To this end the institute carries out both fundamental and more applied sustainability and conservation oriented hydrological, limnological, ecological and fisheries research on inland waters of various types. [...]” (IGB Order of Statutes, §2 (1))

Organisation:

Disciplinary research at IGB is organised in five **research departments** (see appendix 1). Four **programme areas** encompass the institute’s research activities and results across all five departments according to overarching themes.

2. Overall concept and core results

Overall concept

Research at IGB focuses on the structure and functioning of freshwater systems, their ecosystem services and their sustainable management. This involves disciplines ranging from hydrology, physics, geography, ecology and evolution to socio-ecology, from molecular biology to the study of entire ecosystems and catchments, and from microbial ecology to fish behaviour. The institute promotes research across disciplines, spatio-temporal scales and levels of ecological organisation; it performs both basic and application-oriented research.

IGB's general **objectives** include (1) an improved understanding of freshwater systems and their biota through research, (2) the provision of scientific knowledge for the sustainable management of such systems, (3) the development and maintenance of state-of-the-art research infrastructure for freshwater research, (4) the qualification of future generations of researchers in the field and (5) the dissemination of knowledge about freshwater systems and biodiversity to societal actors and the public.

There are five disciplinary **research departments** at IGB (see also chapter 7):

- Department 1 – ***Ecohydrology and Biogeochemistry*** aims to understand the integrated ecohydrological processes and biogeochemical mechanisms of coupled aquatic and terrestrial ecosystems in changing natural, rural and urban environments.
- Department 2 – ***Community and Ecosystem Ecology*** studies the response of freshwater communities and ecosystems to global change.
- Department 3 – ***Plankton and Microbial Ecology*** focuses on impacts of global environmental change on the biodiversity and functioning of plankton communities and its impact on lake ecosystems.
- Department 4 – ***Fish Biology, Fisheries and Aquaculture*** seeks to understand the ecological and evolutionary processes that structure populations and communities of freshwater fishes and affect their functions and ecological services, including fisheries and aquaculture.
- Department 5 – ***Evolutionary and Integrative Ecology*** seeks to develop a synthetic eco-evolutionary understanding of freshwater organisms in the Anthropocene, focusing on evolutionary ecology and eco-evolutionary dynamics as well as synthesis across scales, disciplines and actors, including societal actors.

Each department hosts between six and nine **research groups** (35 in total) headed by a permanently employed group leader. The other group members are usually financed by external funds.

To generate new impulses for innovative ideas and interdisciplinary research and to strengthen internal cross-departmental collaboration, IGB implemented four cross-cutting **programme areas** (PA). They are organised bottom-up, with one or two spokespersons and a steering committee each:

- PA ***Biodiversity in a Changing World*** explores how freshwater life responds to multiple challenges, investigating the drivers and consequences of biodiversity loss as well as strategies for its conservation.
- PA ***Ecosystem Services for a Sustainable Future*** investigates the degradation and rehabilitation of freshwater ecosystem services, focusing on both the drivers of degradation and the mechanisms of successful management and restoration.
- PA ***Dimensions of Complexity of Aquatic Systems*** explores patterns and dynamics in freshwater systems and biota. It engages in theory testing as well as using spatial and temporal perspectives to gain a better understanding of the dynamics and functioning of aquatic systems and their biota.
- PA ***Predictive Ecology in the Anthropocene*** seeks to understand and predict responses of freshwater systems and their biota to global change caused by climate warming, land use change, invasive species and urbanization by integrating disciplinary and interdisciplinary work.

IGB's research relies on extensive **infrastructural facilities**, including the IGB LakeLab (a large-scale experimental research facility in Lake Stechlin; see chapter 3), an experimental field in Westhavelland to study the effects of artificial lighting on coupled aquatic-terrestrial ecosystems, a 3D telemetry facility in Lake Döllnsee, an ecohydrological field observatory in one of the tributaries of the River Spree, several long-term lake monitoring stations in lakes and rivers, a large-scale fish culture infrastructure at Lake Müggelsee, standardized laboratory-based experimental setups for image-based analysis of the behaviour of aquatic organisms, dedicated aquaculture facilities for research on aquaponics and animal welfare, climatized chambers for experimental work on invertebrates, phytoplankton and aquatic macrophytes, a stable-isotope lab (see chapter 3) and high-end inorganic and organic analytic chemistry facilities, and a fully developed microbial laboratory. It also has tools such as airborne and aquatic drones for remote sensing research and an underwater microscope for the in-situ analysis of plankton distribution patterns at its disposal. IGB hosts and maintains the Freshwater Information Platform (FIP), and runs the locally developed Freshwater Research and Environmental Database (FRED) as its central data repository for environmental data. Competence and Technology Platforms (CTP, see chapter 3) cluster IGB's main scientific infrastructures and competences.

Transfer at IGB follows a holistic approach that combines knowledge transfer and communications to various audiences. A central staff unit is in charge of coordinating the activities. In policy advice, IGB targets decision-makers in politics as well as authorities, businesses and practitioners. It provides science-based expert advice in policy briefs, dossiers, manuals and fact sheets as well as feedback to official consultations, and organizes background talks and dialogue events. Communication efforts in terms of public relations and media engagement include the institute's website, newsletter, press releases, social media, blogs, exhibition formats (such as two travelling exhibitions) and engagement in public events. This also involves collaboration with artists.

Results

Research

Between 2022 and 2024, IGB researchers contributed to an average of 369 publications per year, 329 of which were published in peer-reviewed journals (see Appendix 2 for details). Additionally, an average of 11 expert reviews were produced per year.

In its list of ten most important results since the last evaluation, IGB refers to the following research highlights and publications (IGB authors in bold, *papers led by IGB early career researchers):

1. Biodiversity – Habitat fragmentation, megafauna, trends and targets

***He F**, Langhans SD, Zarfl C, **Wanke R**, Tockner K, **Jähnig SC** (2021) Combined effects of life-history traits and human impact on extinction risk of freshwater megafauna. *Conservation Biology* 35, 634-653. <https://doi.org/10.1111/cobi.13590>

This article on the sensitivity of large freshwater fauna to human disturbances is presented as an example for cross-departmental research contributions on the state and loss of freshwater biodiversity, causes and pathways to conservation and remediation.

2. Global change – long-term monitoring and international collaboration

***Kraemer BM**, Pilla RM, Woolway RI, Annevill O, Ban S, Colom-Montero W, Devlin SP, Dokulil MT, Gaise EE, Hambright KD, Hessen DO, Higgins SN, Jöhnk KD, Keller W, Knoll LB, Leavitt PR, Lepori F, Luger MS, Maberly SC, Müller-Navarra DC, Paterson AM, Pierson DC, Richardson DC, Rogora M, Rusak JA, Sadro S, Salmaso N, Schmid M, Silow EA, Sommaruga R, **Stelzer JAA**, Straile D, Thiery W, Timofeyev MA, Verburg P, Weyhenmeyer GA, **Adrian R** (2021) Climate change drives widespread shifts in lake thermal habitat. *Nature Climate Change* 11, 521-529. <https://doi.org/10.1038/s41558-021-01060-3>

This study on how climate change affects shifts in thermal habitats in lakes at a global scale showcases the application of long-term datasets and international collaboration. It is also an example for IGB contributions on the impacts of climate change, invasive species, land use change and urbanisation.

3. Integrative and evolutionary ecology, eco-evolutionary dynamics and ecological genomics

***Liu C**, **Wolter C**, Xian W, **Jeschke JM** (2020) Most invasive species largely conserve their climatic niche. *Proceedings of the National Academy of Sciences of the United States of America* 117, 23643-23651. <https://doi.org/10.1073/pnas.2004289117>

This data-driven analysis of niche shifts in invasive species is an example of IGB's engagement in fields such as evolutionary ecology, eco-evolutionary dynamics, ecological genomics and the integration of knowledge in ecology.

4. Recreational fisheries – impacts and management implications

***Radinger J**, **Matern S**, **Klefoth T**, **Wolter C**, **Feldhege F**, **Monk CT**, **Arlinghaus R** (2023) Ecosystem-based management outperforms species-focused stocking for enhancing fish populations. *Science* 379, 946-951. <http://dx.doi.org/10.1126/science.adf0895>

This article, which shows that ecosystem restoration is more effective than stocking in the recovery of fish stocks in lakes, is presented as an example of IGB's transdisciplinary fisheries research and its management implications.

5. Fish cognition and behaviour – swarming, robotics, and personalities of clonal fish

***Laskowski KL, Bierbach D, Jolles JW, Doran C, Wolf M** (2022) The emergence and development of behavioral individuality in clonal fish. *Nature Communications* 13, Art. 6419. <https://doi.org/10.1038/s41467-022-34113-y>

This behavioural study on clonal fish is an example of IGB's work on fish cognition and behaviour, fostered by its technological facilities and the involvement in the Excellence Cluster *Science of Intelligence* (see chapter 6).

6. Water Security – water fluxes, contaminants and pathways to remediation

Levia DF, Creed IF, Hannah DM, Nanko K, Boyer EW, Carlyle-Moses DE, van de Giesen N, Grasso D, Guswa AJ, Hudson JE, Hudson SA, Iida S, Jackson RB, Katul GG, Kumagai T, Llorens P, Lopes Ribeiro F, Pataki DE, Peters CA, Sanchez Carretero D, Selker JS, **Tetzlaff D**, Zalewski M, Bruen M (2020) Homogenization of the terrestrial water cycle. *Nature Geoscience* 13, 656-658. <https://doi.org/10.1038/s41561-020-0641-y>

This article, which highlights the importance of diverse vegetation for water security, is an example for IGB's research contributing to mechanisms underlying water security as well as to insights concerning management and sustainable use.

Research infrastructure

IGB maintains a number of research and data infrastructures to study and understand the ecological consequences of short- and long-term environmental changes and the mechanisms and processes that drive these responses (see chapter 2). Key infrastructure such as LakeLab and FRED are open to external users. For IGB's long-term monitoring programmes at Lake Stechlin and Lake Müggelsee, continuously updated information on basic parameters is provided to the public, other data are mostly intended for internal users and their collaborators. The data provided through the institute's data platforms were accessed externally with 406 sessions in 2022, 631 in 2023, and 1232 in 2024.

Amongst its infrastructures, the institute refers to the following two on its list of most important results since the last evaluation:

7. Establishment of the IGB isotope laboratory

In 2018, IGB established an **isotope laboratory** facility, including advanced mass and laser spectrometers for laboratory and field use to analyse stable isotopes (O, H, C, N). The laboratory allows for an enhanced, integrated process understanding of sources and pathways of water and its constituents.

8. Development of the IGB LakeLab into a driver of international collaboration

The IGB **LakeLab**, which is operated by the institute since 2012, is a large-scale experimental research facility in Lake Stechlin, providing opportunities to assess the consequences of environmental change on deep lakes. It was at the core of the IGB led EU

mesocosm infrastructure projects AQUACOSM (2017–2020) and AQUACOSM-plus (2020–2024). Since the last evaluation, the external use of LakeLab has substantially increased. The infrastructure now attracts tens of international collaborators per year for joint experiments (82-149 persons per year, amounting to 31-89 % external use).

Transfer

Between 2022 and 2024, IGB published 11 policy briefs, dossiers, fact sheets and manuals in its format *IGB Outlines*. It also provided 7 feedbacks, 3 dialogues and academies, 20 policy briefings and 4 media briefings. The institute organized or contributed to 52 public events and 15 trainings for teachers. IGB's two travelling exhibitions were booked 29 times for a total of 136 weeks.

In its list of ten most important results since the last evaluation, IGB refers to the following transfer results:

9. Rapid scientific response to and advice on the Oder River disaster

IGB exemplifies the above-mentioned **holistic approach** with its reaction to the man-made environmental disaster which hit the Oder River in 2022. Within ten days, IGB researchers identified the toxic algae *Prymnesium parvum* as the cause, started a task force to study this disaster and its implications, and communicated their findings through more than 70 media interviews, 14 multilingual press releases and 2 IGB Fact Sheets. This led to citations in more than 4,000 media stories by December 2024. An IGB Policy Brief provided key recommendations for sustainable river management, informing discussions with and amongst ministries, parliaments and international stakeholders, including environmental NGOs. The *OderHive* event series in collaboration with the Berlin-based artist collective FrauVonDa// reached about 1,500 people.

10. Awareness-rising and science-based management recommendations with concrete impact on legislation

An example of IGB's efforts at raising awareness and providing management recommendations with a concrete impact on legislation is the **outcome of the BODDENHECHT project** (2019–2023) in which IGB worked with practitioners and authorities to develop management strategies for pike stocks in the Bodden lagoons. The recommendations have informed revisions to Mecklenburg-Western Pomerania's Coastal Fisheries Ordinance, due in 2026. Similarly, IGB currently develops practical regulatory measures to mitigate the adverse effects of artificial light at night (ALAN) on biodiversity on behalf of the German Federal Ministry for the Environment.

3. Changes and planning

Development since the previous evaluation

Scientific leadership positions and organisational structure

At the time of the last evaluation, IGB was under the interim leadership of one of its department heads after the former **scientific director** had left the institute in 2016. A new director was to

take office in 2018, which was ultimately prevented by health reasons. Thus, the interim period continued until January 2020, when the current director took office. He was jointly appointed to a W3 professorship at FU Berlin and retains a 20 % professorship at his previous university in Leuven, Belgium.

Under his leadership, the **organisational structure** of IGB was stepwise changed in 2021 and 2022 with the goal to improve the conceptual design of the departments, to integrate new topics of special interest, to further strengthen interdepartmental and interdisciplinary cooperation, and to cluster technical expertise and existing infrastructures.

In this process, the **research departments** were restructured as follows:

- 2021: The former departments *Ecohydrology* and *Chemical Analytics and Biogeochemistry* were merged into today's department ***Ecohydrology and Biogeochemistry*** (headed by the former head of the department *Ecohydrology* who holds a joint W3 professorship at HU Berlin; the former head of the *Chemical Analytics and Biogeochemistry* department retired in 2018 and the department was under interim leadership until 2021).
- 2022: The former department *Ecosystem Research* was split into the two new departments ***Community and Ecosystem Ecology*** (headed by a former research group leader who was appointed to a W2 professorship at HU Berlin in 2020 through the *Leibniz Programme for Women Professors*) and ***Evolutionary and Integrative Ecology*** (headed by a former research group leader who holds a joint W3 professorship at FU Berlin). The former department head retired in 2021.
- 2022 The former departments *Biology and Ecology of Fishes* and *Ecophysiology and Aquaculture* were merged, bringing together all expertise on fish biology in the new department ***Fish Biology, Fisheries and Aquaculture*** (headed by the former head of the department *Biology and Ecology of Fishes* who holds a joint W3 professorship at HU Berlin and, until his retirement in 2024, the former head of the *Ecophysiology and Aquaculture department*).
- 2022: The name of the former department *Experimental Limnology* was changed into ***Plankton and Microbial Ecology*** (still headed by the same researcher who holds a joint W3 professorship at TU Berlin) to better reflect the ongoing research activities.

Since the last evaluation, a total of thirteen **research groups** were discontinued upon the retirement or departure of the respective group leaders. Seven new groups were created.

Three major research topics covering both disciplinary and interdisciplinary research at IGB were defined in 2021 and implemented as cross-cutting **programme areas** in 2022, with a fourth added in 2025 (see below). They replace the institute's previous cross-cutting research domains.

Research infrastructure

In 2020 IGB began to establish **Competence and Technology Platforms** (CTP) to organise its scientific infrastructures. There are currently 6 CTP; while some are closely linked to one specific department, each has a steering committee consisting of people from different departments.

Several investments were made in **new infrastructure** as well as major **upgrades of existing infrastructure**. They were financed partly by BMBF, partly from IGB's own investment fund. The investment fund provided an average of 760 k€ per year in the past seven years.

The **greenhouse facility** used for aquaponics is currently being upgraded with a new experimental installation consisting of 12 independent water circuits and culture units that enables both replicated aquaponics experiments as well as controlled ecological research in mesocosms. Final works on the aquaculture units are taking place in 2025.

Knowledge transfer and communications

In 2016, IGB began restructuring the units responsible for knowledge transfer and communications by establishing the so-called Science-Society Interface (SSI) initiative in order to build a strong, cohesive team for press and public relations and knowledge and technology transfer, and to create innovative, target group-specific formats. To ensure greater external clarity and recognition, the newly established unit was later renamed "Communications and Knowledge Transfer (COM/KT)".

Strategic work planning for the coming years

The following **changes in scientific leadership** are foreseen at IGB in the coming years:

- In October 2025 the current **scientific director** is stepping down from his position and leaving IGB for family reasons. The institute plans to initiate a procedure for selecting his successor soon and to appoint an interim acting director in the meanwhile.
- In August 2025 the **head of the department *Evolutionary and Integrative Ecology*** is stepping down from his position because of personal reasons but will remain at IGB as a research group leader in this department. The former deputy head of the department is to take over as an acting head of department. The procedure for a new permanent head of department will be guided by the interim director in close consultation with the SAB.
- As the retirement of the **head of the department *Plankton and Microbial Ecology*** is expected in October 2025, an internal procedure for the appointment of a successor has been started, involving three members of the Scientific Advisory Board.
- Besides several new **research group leaders** that will be hired to implement positions mentioned in IGB's supported application for an increase in its core budget through a *permanent extraordinary item of expenditure of a scientific-strategic nature* (STB; see below), three additional group leader positions linked to the implementation of the *Programme Area on Predictive Ecology* are to be hired in the period 2025–2027, heading groups on *evolutionary ecology*, *ecohydrological modelling* and *experimental ecology*.
- An IGB researcher and group leader is to be appointed as a **joint W2-professor on *eco-evolutionary dynamics*** with the University of Potsdam. This is aligned with an application in the Leibniz Programme for Women Professors.
- A **joint W2-professorship with TU Berlin on *aquatic ecology*** in combination with a research group leadership at IGB is currently being negotiated. It is planned to align this with an application in the Leibniz Programme for Women Professors.

In the coming years, IGB is looking to further consolidate its adjusted **organisational structure**. The research strategy is to remain largely unchanged, with special attention given to the stimulation of exchange amongst the researchers, further internationalisation and an increased gender balance and diversity.

As a key guiding principle for **research development** in the coming years, the institute will in the course of 2025–2027 build up a new focus on the topic of **Predictive Ecology in the Anthropocene**. This is made possible by a permanent increase of IGB's institutional funding by roughly 2.2 M€ per year starting in 2025 (*permanent extraordinary item of expenditure of a scientific-strategic nature* – STB). The institute's goal is to complement its existing strengths in integrative research, long-term monitoring and large-scale experimentation with additional capacities to pursue a predictive ecology on how freshwater ecosystems and their biota respond to global change. A new overarching programme area on this has already been prepared in 2024 and was initiated in 2025 (see chapter 2). Similarly, the hiring of new people in this framework started in 2024 (own funding; *spatial ecology, complex systems modelling and computational ecology*) and will be further implemented in the period 2025–2027. IGB will develop expertise along the five complementary pillars of (i) *spatial modelling*, (ii) *ecosystem modelling*, (iii) *computational ecology*, (iv) *mechanistic modelling*, and (v) *social-ecological coupling*. In total, IGB plans to hire 10 - 12 additional research group leaders to head new groups in all five departments. Three positions were already filled in 2024 (own contribution: *spatial ecology, complex systems modelling and computational ecology*), and for five positions the procedure is started in 2025 (*fish eco-physiology, fish movement ecology, ecosystem modelling, fluvial modelling, ecosystem-climate feedback*). IGB will also create six additional science support positions in data handling, GIS, remote sensing, eco-informatics, artificial intelligence and modelling. The institute expects an eventual extension of its CTP portfolio with CTPs on modelling, automated data collection and remote sensing.

In terms of future investments into the maintenance and upgrades of its key **research infrastructures**, IGB plans to put its focus on the automatization of data collection through permanent probes, further investment in artificial-intelligence based image analysis to identify and measure aquatic biota, and environmental DNA based monitoring. The institute aims to establish experimental ponds for experiments on fish behaviour quantified through telemetry, extend the aquaponics experimental units with beds for plant growth and adapt them so that they can also be used for coupled open-water-littoral zone ecological experiments, and to develop its remote sensing infrastructure. They also plan to establish a modelling, genomics data analysis and data mining hub in a new Biodiversity Cooperation Building, which is to open in Berlin-Dahlem in 2025 (see chapter 4).

4. Controlling and quality management

Facilities, equipment and funding

Funding

In the years 2022–2024, IGB's **institutional funding** amounted to an average of 15.1 M€ per year (65 % of the annual budget of 23.4 M€). In 2024, IGB transferred 405 k€ *Selbstbewirtschaftungsmittel* (self-management funds from institutional funding provided by Federal and

Länder governments for ongoing operations) for equipment investments and operations and 2,190 k€ for construction to the following year. It intends to use these funds for experimental setups, major building maintenance projects and the finalisation of the new research building in Berlin-Dahlem.

Between 2022 and 2024, **revenues from project grants** amounted to an average of 7.8 M€ per year (33 % of the budget). The majority of these came from the Federal and *Länder* governments (∅ 2.6 M€), the DFG (∅ 2.6 M€), and the EU (∅ 1.7 M€). The institute intends to limit the level of project funding at approximately one third of the total budget given the indirect costs for science supporting staff and infrastructure caused by third-party funded projects.

An additional 0.5 M€ per year (2 % of the budget) came in as **revenue from services**. In its commissioned research, the institute focuses on topics with high transfer potential and societal relevance.

Facilities and equipment

IGB has two **main sites**: One in Berlin-Friedrichshagen on Lake Müggelsee and one in Stechlin in the State of Brandenburg on Lake Stechlin. In addition, several research groups currently reside in rented offices in Berlin-Adlershof or on the premises of the FU Berlin. IGB schedules to integrate these into a new, third main site in autumn 2025 when a new joint Biodiversity Cooperation Building is to open on the university campus in Berlin-Dahlem. Operated by FU, it will accommodate space for at least five IGB research groups and offer modern molecular biology laboratories, climate-controlled rooms and office space in a sustainable building.

Including the new building in Dahlem, IGB's **facilities** will extend to seven main buildings located on three sites with offices, laboratories and experimental space, a guest house, a number of smaller outbuildings, and experimental facilities with a total floor space of roughly 12,000 m² and land area of more than 25,000 m². Beyond the infrastructures detailed in chapter 2, IGB commands a centrally financed vehicle fleet, a central workshop and a specialised scientific library with about 30,000 media units.

IT infrastructure

IGB's local IT infrastructure consists of about 1,000 clients and 300 servers at the different sites, run by the institute's **IT team**, which also provides central IT and communication services. The corporate IT of the Forschungsverbund Berlin e. V. (see below) handles administrative applications and corporate network services.

Since the last evaluation, besides other, smaller improvements, an extensive **IT infrastructure renewal** took place in Berlin-Friedrichshagen, including a complete rewiring, the relocation of server rooms and the instalment of a modern data centre. It was financed as a large construction project ("Große Baumaßnahme") by the *Bund* (Federal Ministry of Education and Research, BMBF) and the *Land* Berlin. A similar renewal at the Stechlin site is still pending. For this, IGB has requested 2.7 M€ of bilateral funding for implementation in 2026–2028.

To improve **IT security**, IGB has undergone an external IT security audit and drafted an IT emergency plan. Based on the recommendations, the institute has installed a new back-up system, rolled out an endpoint detection and response solution and introduced an automated execution of security-related tasks. At the moment, a systematic adaptation of an information

security management system provided by the German Federal Office for Information Security (BSI) to the specific requirements of IGB is under way.

Organisational and operational structure

IGB is one of seven Berlin-based Leibniz institutes that share a Joint Administration within the non-profit association **Forschungsverbund Berlin e. V.** (FVB). The FVB is managed by its **Executive Board**, which comprises the Scientific Directors of all seven participating institutes and the Managing Director of the FVB. **Management of IGB** is carried out in cooperation between the institute's scientific director and the managing director of the FVB. Both are appointed by the FVB Board of Trustees (see below) for a time period of five years. In the day-to-day business, IGB's head of administration represents the managing director of the FVB. Together with the scientific director, she forms the **IGB Directorate**.

The **local administration** handles personnel, procurement and financial services as well as library, IT and technical services. Other services, such as third-party management, construction management, certain facility management services and larger tenders as well as central support in legal aspects, internal auditing, or financial statements are provided by the **FVB joint administration**.

Each research department at IGB is headed by a professor, who is jointly appointed with a local partner university. The **department heads** guide their department's research strategies and coordinate the scientific work in collaboration with the research group leaders involved.

Together, the IGB Directorate and department heads form the **IGB Board**, which convenes once a month and discusses all important strategic topics. The **IGB Council** additionally includes the speakers of the programme areas, the equal opportunities officer and representatives of doctoral candidates, postdoctoral researchers and technical-administrative staff, as well as the science officer, the head of the communications unit and elected members of the departments. It meets once every month to exchange information and discuss decisions prepared by the IGB Board.

Several further **committees and commissions** support and supervise central service units and advise the IGB Council and IGB Directorate on decisions and activities.

Meeting formats involving a broader circle of staff members include an annual **group leader retreat** and the **Institute's Meetings** for all staff of IGB (three times per year via video conference).

IGB's elected **works council** acts according to the *German Works Constitution Act*.

Quality Management

The institute's rules of **Good Scientific Practice** were last updated in 2024 and are in line with the respective guidelines by the DFG and the Leibniz Association. IGB has an elected ombudsperson and vice ombudsperson.

The institute keeps fish and amphibians and conducts animal testing in the context of aquaculture, ecophysiology, biodiversity and behavioural research. In terms of **animal husbandry**

and experiments, it is committed to the 3Rs principle (Replace, Reduce, Refine) and, in accordance with the *German Animal Protection Act* and the *German Animal Protection Experiment Ordinance*, has appointed an animal welfare officer and an animal welfare committee. Internal training programmes and guidelines as well as professional onboarding for new employees who work with animals are provided.

In 2019, IGB adopted an **Open Access Policy** in line with the guidelines of the Leibniz Association, expecting all scientific staff to publish their results in accordance with the principles of open access. Non-open access publications are to be made available by self-archiving. The IGB library provides advice on publishing processes and funding options. The institute takes part in the DEAL consortium and has entered into agreements to support the transition to a publish-and-read system. An Open Access Fund covers article processing charges for gold open access publications.

IGB promotes the management, preservation and long-term accessibility of **research data** in accordance with the FAIR principles. In 2020, a CTP for Research Data Management was established. In 2023, a revised data policy came into effect under which all new projects are required to create and maintain data management plans. Since 2024, a central research data management advisor supports all staff in terms of RDM and FAIR data. Through IGB's repository FRED, datasets from its long-term time series of physical, chemical and biological variables are available either upon request or openly for non-commercial purposes. Metadata from research projects should be openly shared on FRED. For the publication and sharing of geospatial data, IGB provides the platform IGB-GeoNode, while genomic and other data is typically stored in external repositories.

Quality assurance and control in IGB's **laboratory analyses and field sensors** is based on DIN and ISO standards. All chemical analytical methods, when in use, are calibrated daily with certified standards. Records are archived for at least 15 years. Data from automatic probes and data loggers at long-term monitoring stations are quality-checked before submission to the data base and all sensors serviced and calibrated at least once a year.

In IGB's **knowledge transfer and communications** activities, impact is measured through stakeholder reactions, but also through tracing research and transfer efforts to politics and legislation. IGB has guidelines, support and quality assurance workflows in place for its transfer output. It documents it as a part of scientific performance in its internal performance database.

The institute provides dedicated budgets to the departments, research groups, programme areas and scientific infrastructures. For the departments, half of the total annual budget for consumables and flexible personnel costs is allocated on the basis of the institute's rules of **performance-based budget allocation**, which are based on a point system that accounts for the number and quality of publications, the success in acquiring external grants, and teaching assignments. Similar measures are in place for the research groups. Additional performance-based incentives include the allocation of project bonuses to group leaders based on grant acquisition, the allocation of postdoctoral positions within the IGB postdoctoral guest programme, seed money to support novel ideas in internal programmes, and the co-financing of successful proposals.

Quality management by advisory board and supervisory board

As member of the FVB, the supervisory function for the institute is carried out by the **Board of Trustees** of the FVB. It is responsible for supervising all science policy, programme-related and economic matters of the FVB. The Board of Trustees comprises (a) a representative of the Berlin Senate Department for Science, Health, Care and Equality, (b) a representative of the Federal Ministry of Education and Research, (c) a representative of HU, FU and TU Berlin, (d) four scientists and (e) one to three representatives from the business sector. The board meets at least once per year. Decisions specific to each member institute are prepared by the **Institute Committee** or are devolved to the Committee for independent decision making. This committee consists of one representative each of the Berlin Senate Administration and the Federal Ministry of Education and Research, and the chairperson of the respective institute's SAB.

The **Scientific Advisory Board** (SAB) of IGB consists of six to twelve (currently nine) scientists who are appointed by the Board of Trustees for four years with the option of a one-time reappointment. The SAB advises the institute's director and the Board of Trustees concerning the scientific programmes and in matters of national and international cooperation. It convenes at least once a year and, midway between two external evaluations by the Leibniz Senate, performs an internal audit as part of its duties.

5. Human Resources

Leading scientific and administrative positions

Recruitment for IGB's **scientific director** and **department heads** follows the process for joint professorships with universities detailed in the FVB *guideline for joint appointments* as well as the *Leibniz standards for the appointments to academic management positions within the Leibniz Association*: In the case of the scientific director, the joint commission that oversees the process (with equal representation of IGB and the appointing university) also includes a representative of the FVB Executive Board and the SAB. Apart from the director and the 5 department heads, three of IGB's senior scientists who lead a research group also hold joint professorships.

The **Managing Director of the FVB** is selected in accordance with the relevant standards within the Leibniz Association and appointed by the Board of Trustees for a period of five years. The **Head of the IGB Administration** is recruited by an internal commission.

Staff with a doctoral degree

Besides the nine research groups led by jointly appointed professors (see above), 23 groups are permanently headed by **senior scientists** with a doctoral degree (two of whom hold honorary professorships).

Further permanent group leader positions are available for early career scientists after an initial postdoctoral career stage. These positions as **junior research group leaders** are openly advertised and follow a **tenure track-model** with standardised procedures, which were last revised in 2024. They typically involve a 3 + 3-year timeline with tenure decisions being based

on general evaluation criteria as well as individually tailored target agreements. Out of the four researchers who were recruited on such tenure track positions between 2018 and 2024, three are currently still active (one was evaluated negatively).

Early career researchers with a doctoral degree are mainly financed through third-party funded projects, typically for two to four years. As of 31 December 2024, there are 35 such positions at IGB, while another six early career researchers are funded externally through scholarships.

In 2021, IGB's own, internally financed **guest programme** replaced scholarships by full postdoctoral positions of 12 to 24 months, which are awarded in the three categories (i) high-profile postdoctoral researchers, (ii) early career postdoctoral researchers and (iii) postdoctoral researchers from countries in low to low-middle income categories. Since the introduction of this new system, nine such positions have been filled.

The **IGB Postdoc Society** and the institute's coordinator for career development organise career coaching activities and annual retreats for postdoctoral researchers. An annual training budget is spent as requested by them, for example on workshops on careers outside academia or professional training in proposal writing. IGB also supports excellent postdoctoral researchers who partake in competitive procedures for awards or research funding.

In the last three years, three postdoctoral researchers left IGB when they were appointed as **professors** at universities in Germany or abroad. Another researcher received a joint appointment through the *Leibniz Programme for Women Professors*. She is one of two former research group leaders at the institute who were recruited as new department heads in recent years (see chapter 3).

Doctoral Candidates

Doctoral candidates are usually either hired on 65-75 % positions for the duration of their doctoral research based on third-party funded projects (35 persons as of 31 December 2024) or receive external scholarships (26 persons as of 31 December 2024). Funding within third-party projects is usually limited to three years, including the completion of a cumulative doctoral thesis. If necessary, supervisors and candidates are encouraged to secure additional funding for 3-12 months. Most of the current scholarship holders hold contracts of at least 3 years. All doctoral candidates are equally integrated into research units.

In the period of 2022–2024, a total of 31 **doctoral theses** were completed at IGB, 5 thereof by scholarship holders. In that period, the median time until submission was 4 years (or 4.4 years until completion).

The **Rules for Doctoral Research at IGB** describe the rights and responsibilities of doctoral candidates and their scientific advisors. Each doctoral candidate is supervised by an advisory committee, consisting of the main supervisor and at least one additional supervising scientist. An additional mentor provides career support. An electronic *Doctoral Progress Help Tool* serves as a reminder and for the documentation of agreements and reports of the semi-annual progress meetings with the committee.

IGB organises an **educational programme** for doctoral candidates, with 6-10 courses to choose from each year. These courses are recognized by IGB's partner universities. Doctoral candidates can choose to participate in any training or structured graduate programme offered by their university faculty. In addition, the doctoral students present compulsory seminars in the first and last year of their dissertation, and the institute offers advice on scientific publications, research data management and communication, and holds annual retreats for doctoral students.

The doctoral students elect **doctoral representatives** who, amongst others, serve as their spokespersons in the IGB Council. A **career development coordinator** coordinates the doctoral educational programme.

IGB stays in touch with its **alumni** through a centrally administrated LinkedIn group. Additionally, the communications team keeps an email address database including alumni, who are also encouraged to subscribe to the IGB newsletter.

Science supporting staff

Training offers for science supporting staff range from IGB-internal training formats, such as language and software courses, to in-house training organised as needed, trainer qualifications and customised individual training.

This staff group is represented in the IGB Council by elected technical-administrative **representatives** and holds staff retreats.

IGB offers **vocational training** as office management assistant, IT specialist for systems integration, biology laboratory technician, and chemistry laboratory technician. Additionally, office management assistants and IT specialists are trained in the Joint Administration of the FVB. Since the last evaluation, five vocational qualifications have been completed. There are currently three trainees (IT, biology and chemistry laboratory technicians), two of whom are to complete their training in summer 2025. New positions in office management, IT and biology will be advertised in the new training round. IGB also welcomes interns and up to seven volunteers per year who pursue their **Voluntary Ecological Year** at IGB (2022–2024: 19 persons)

Equal opportunities and work-life balance

IGB applies the cascade model and complies with the **Leibniz Equality Standards**. Overall, 42 % of the scientific staff are women; this comprises 26 % in leading positions (40 % of the department heads and 24 % of the group leaders), 43 % in non-executive positions and 57 % amongst the doctoral candidates. IGB's recruitment guide considers **gender balance** at all steps to increase the proportion of women in academic and leadership positions and a number of measures were taken to that effect since the last evaluation. A *gender equality plan* defines strategic aims and activities, focusing on gender sensitive recruitment procedures at all levels and active recruitment for leadership positions. Changes made in recent years include the annual discussion and reporting on gender quotas, an obligatory training on unbiased recruitment for senior scientists, and an Equal-opportunity Fund of 50,000 € annually to support excellent female early career researchers.

An **equal opportunities officer** and her deputy are elected at IGB every two years and are involved in matters related to the social, personal and organisational concerns of the institute's staff. As such, they are granted a general right to information, participate in important meetings and recruitment as well as tenure procedures. They also head the equal opportunity committee managing the Equal-opportunity fund. FVB has a central equal opportunities officer who supports the officers and activities at all FVB institutes.

To increase the compatibility of **family and a career**, IGB provides core working hours and flexitime, which can be individually adapted to family care needs, allows up to 40 % mobile working, arranges colloquia and events in a family-friendly manner, supports part-time employment for employees with family responsibilities, and provides a parent-child room. All information about measures are provided on the IGB intranet.

The institute has introduced a **Human Resource Strategy**, which was awarded with the HR Excellence in Research Award of the European Commission in 2015 and has been positively re-evaluated in regular 3-year cycles since then. It was also awarded the TOTAL E-QUALITY certificate in 2023.

The FVB adopted a **diversity and inclusion** strategy in 2022, whose development was led by IGB. Since 2025, IGB also has a code of conduct for collegial interactions. A conflict counselling centre with trained counsellors and confidentiality rules and processes has been in place since 2022 and offers conflict counselling in different lines of expertise.

IGB provides all communications and information in **German and English**, offers courses in both languages to all employees and assists researchers from abroad in visa acquisition. At the moment, 66 % of the doctoral students and postdoctoral researchers at the institute (72 % including scholarship holders) come from abroad.

6. Cooperation and environment

Cooperation with universities

Nine leading scientists at IGB hold joint professorships at neighbouring **universities in Berlin and Potsdam** (2 W3 and 1 W2 at FU Berlin, 2 W3 and 2 W2 at HU Berlin, 1 W3 at TU Berlin, and 1 W2 at the University of Potsdam). Additionally, one IGB researcher holds a honorary professorship at the FU Berlin and one at the Brandenburg University of Technology Cottbus-Senftenberg. Between 2018 and 2024, IGB scientists taught at a total of 16 universities, covering an average of 36 courses and lectures per year (approximately 94 hours per semester). Two major teaching commitments are the international Master's programme *Fish Biology, Fisheries and Aquaculture* at HU Berlin, which is currently being reformed to be incorporated into the new programme *Integrated Natural Resource Management*, and the Graduate Programme *Biodiversity, Evolution and Ecology* at FU Berlin.

Other **collaborative activities** with the partner universities named above include:

- the *Berlin Center for Genomics and Biodiversity Research* (BeGenDiv) with FU Berlin, the University of Potsdam, the Botanic Garden and Botanical Museum Berlin, and the Leibniz institutes IZW and MfN,

- the DFG Research Training Group *Urban Water Interfaces* (UWI) with TU Berlin,
- the *Integrative Research Institute on Transformations of Human-Environment Systems* (IRI THESys) with HU Berlin and the Leibniz institutes PIK, IAMO and ZALF,
- the *Berlin-Brandenburg Climate Change Center* (CCC), coordinated by TU Berlin, in which IGB is a partner, and
- the Excellence Cluster *Science of Intelligence* (SCIoI), coordinated by TU Berlin, in which several IGB senior scientists participate and in which the institute runs a shared lab at HU Berlin.

On a **national and international level**, IGB takes part in several graduate schools.

National and international cooperation

Within the **Leibniz Association**, IGB is partner in two Leibniz Research Alliances: *INFECTIONS in an Urbanizing World – Humans, Animals, Environments* (InfUrb), which develops an integrated research programme on how human impact and urbanisation affects infectious disease management, and *Resilient Ageing*, which focuses on the processes of ageing in both humans and other organisms. The institute also participates in 3 Leibniz Research Networks (*Biodiversity, Earth and Societies, Knowledge for Sustainable Development*) and two of the three recently introduced Leibniz Labs, and has further collaborations with more than 15 Leibniz institutes.

The institute's **national and international research and outreach alliances** include

- *Alliance for Freshwater Life* (AFL), a global initiative to halt and reverse the global decline of freshwater biodiversity through research, data synthesis, conservation, education, outreach, and policy-making. IGB is a founding institute, other partners include the International Union for Conservation of Nature, the Freshwater Biodiversity Observation Network, UNESCO and WWF.
- *Alternet – the European science policy interface on biodiversity and ecosystem services*, a network of 30 partner institutes in 21 European countries, which, originally funded by the European Union, now operates as an international non-profit organisation.
- the *Water Science Alliance* (WSA), which brings together competencies and provides a forum for cross-disciplinary exchange within the broad German water research community and where IGB and the Helmholtz Centre for Environmental Research are the institutional members.
- three *NFDI Consortia* (*NFDI4BioDiversity* of which IGB is co-applicant, *NFDI4Earth* and *NFDI4Microbiota*) where multiple stakeholders aim to provide solutions for the systematic management of research data, providing long-term data storage, backup and accessibility, and enabling provision of the data in both national and international networks.
- the *DFG Collaborative Research Centre RESIST* (SFB 1493; 2021–2028), coordinated by the University Duisburg Essen, which investigates how various pressures affect the biodiversity and functions of flowing waters, and how recovery is possible.
- the *Future Earth Global Research Network (GRN) EvolvES*, which focuses on how evolutionary theory and insights contribute to sustainability.

- the *European Sturgeon Network*, which pools expertise and resources of seven partner institutes working on the foundations for developing and conserving stable sturgeon stocks to foster restocking programmes.
- the *Global Lake Ecological Observatory Network (GLEON)*, an international research consortium where IGB's long-term monitoring datasets are integrated to study global limnological patterns and impacts of changes on lake communities and ecosystems.
- *AquaWatch*, an initiative within the Group of Earth Observations (GEO) aiming to develop and build the global capacity of Earth Observation-derived water quality data, products and information to support water resources management and decision making.
- the *Invasion Dynamics Network (InDyNet)*, an international network of more than 80 scientists studying temporal changes in biological invasions and their impacts.
- the initiative *Hi Knowledge*, bringing together researchers from different fields to develop and apply approaches that synthesize ecological data and information and openly provide them as tools.

IGB maintains more than 300 **contractual cooperation agreements** with institutions in Germany and abroad. Its research projects also involve collaborations with enterprises, professional associations or public agencies.

Institution's status in the specialist environment

IGB points to the following important institutions in its scientific environment: The **Swiss Federal Institute of Aquatic Science and Technology (Eawag)** has a focus on water and inland waters. While much bigger than IGB, it shares the ambition of producing world-class science while at the same time serving societal needs to solve current and future environmental problems relating to fresh water. It has stronger expertise in social sciences and engineering than IGB, while IGB also addresses quantitative water issues and has a stronger developed ecosystem approach. The **French Alpine Research Centre for Lake Ecosystems and Food Webs (CARRETEL)** is much smaller than IGB. It has a strong foundation in limnology and inland fish and fisheries science, as well as catchment-scale studies and analyses of long-term series. In Germany, the **Helmholtz-Centre for Environmental Research (UFZ)** is the largest environmental research centre and runs research on water resources and environment, leading to a partial overlap and frequent collaborations. However, UFZ has a stronger focus on integrated water resource management, whereas IGB invests more strongly in research on biodiversity and other aspects of freshwater community and ecosystems ecology and has expertise on fish and fisheries science, which UFZ lacks. Finally, the **Federal Institute of Hydrology (BfG)** as a federal agency within the portfolio of the German Ministry of Transport and Digital Infrastructure, follows the shared goal to improve inland water management. While it does also run research, most of its resources are allocated to assessments, consulting and other services.

7. Departments of IGB

Department 1 – Ecohydrology and Biogeochemistry

(37.7 FTE, of which 17.5 FTE Research and scientific services, 6.1 FTE Doctoral candidates, and 14.1 FTE Service staff)

Research Groups:

Landscape Ecohydrology
Biogeochemical Processes in Sediments and Lake Management
Nutrient Cycles and Chemical Analytics
Physical Limnology
Groundwater-Surface Water Interactions
Organic Contaminants
Ecohydraulics
River System Modelling

The overall goal of the department *Ecohydrology and Biogeochemistry* is a transformational understanding of the integrated ecohydrological processes and biogeochemical mechanisms of coupled aquatic and terrestrial ecosystems in changing natural, rural and urban environments. The researchers integrate their expertise in hydrology, ecohydrology, biogeochemistry, aquatic physics, environmental engineering, ecohydraulics and geography in three overarching themes that provide the framework for cross-departmental research: (i) Interactions of connected landscape-freshwater ecosystems; (ii) Physical and biogeochemical drivers; (iii) Water security in intensively managed rural and urban systems. The department integrates empirical knowledge from cross-scale field experiments and long-term observational science in aquatic and terrestrial environments, lab experiments, and modelling approaches of varying complexity and scale. This combines novel “blue sky” research with science-based applications. They apply remote sensing techniques (incl. UAVs) and analyses to quantify ecohydrological processes at the landscape scale and use a variety of tracer technologies to identify and track water sources, flow pathways, mixing processes and storage dynamics (incl. stable water isotopes, tritium, radon, fluorescent tracers, conservative geogenic and anthropogenic ions, temperature). They also study the fate of trace organic contaminants and the cycles of carbon and nutrients. The department integrates its empirical knowledge into process-based models of different complexity at different spatial scales (incl. ecohydraulic, tracer-aided ecohydrological, transport and catchment-scale water quality modelling). Since the last evaluation, it established an enhanced stable isotope laboratory facility and the ecohydrological field observatory (the Demnitzer Millcreek catchment, a UNESCO Global Network of Ecohydrology Demonstration site).

Between 2022 and 2024, this department published 190 articles in peer-reviewed journals, as well as 2 other articles and 15 individual contributions to edited volumes. Additionally, 4 monographs were published. 27 of the publications were co-authored with other departments. Third-party revenues totalled 1.1 M€ on average per year. Third-party funding mostly comes from the DFG (∅ 475 k€), and federal and *Länder* governments (∅ 444 k€). An average of 49 k€ per year came in as revenue from services. 13 doctoral degrees were completed.

Department 2 – Community and Ecosystem Ecology

(37.6 FTE, of which 22.1 FTE Research and scientific services, 4.5 FTE Doctoral candidates, and 11.0 FTE Service staff)

Research Groups:

- Aquatic Ecogeography
- Aquatic-Terrestrial Coupling and Regime Shifts
- Light Pollution and Ecophysiology
- Functional Ecology and Management of Rivers and Lake Shores
- Global Freshwater Biodiversity, Biogeography and Conservation
- Photosynthesis and Growth of Phytoplankton and Macrophytes

The department *Community and Ecosystem Ecology* aims to advance the mechanistic understanding of the structure and functioning of freshwater communities and ecosystems in both standing and running waters across temporal and spatial scales. The research aims to understand patterns of biodiversity across ecosystem boundaries, the interactions between freshwater biota and their aquatic-terrestrial environment, and ecosystem functioning and services. The researchers particularly focus on the responses of freshwater communities and ecosystems to the multiple stressors in changing environments. Together, these areas form the basis for the development of new ecological concepts and innovative approaches for sustainable management. The department runs a long-term monitoring programme in a typical eutrophic lowland river-lake system (Lake Müggelsee, Spree River) subject to multiple stressors and anthropogenic uses, analyses global river and lake data bases, conducts laboratory and field experiments, and employs spatially explicit statistical and deterministic modelling approaches. It also develops and applies social-ecological methods such as the involvement of citizen scientists and the co-design of concepts for river management and environmental education to support societal transformation processes towards sustainability.

Between 2022 and 2024, this department published 177 articles in peer-reviewed journals, as well as 2 other articles and 14 individual contributions to edited volumes. Additionally, 4 monographs were published. 53 of the publications were co-authored with other departments. Third-party revenues totalled 2.2 M€ on average per year. Third-party funding mostly comes from the EU (∅ 878 k€), federal and *Länder* governments (∅ 777 k€), the DFG (∅ 288 k€), and the Leibniz-Association (∅ 248 k€). An average of 184 k€ per year came in as revenue from services. Six doctoral degrees were completed.

Department 3 – Plankton and Microbial Ecology

(34.6 FTE, of which 17.1 FTE Research and scientific services, 4.2 FTE Doctoral candidates, and 13.3 FTE Service staff)

Research Groups:

- Ecosystem Processes
- Aquatic Microbial Ecology
- Phytoplankton Ecology
- Computational Ecology
- Zooplankton Ecology

Theoretical Ecology

The overarching goal of research in the department *Plankton and Microbial Ecology* is to generate knowledge that improves understanding of lake ecosystems, predictions of responses to global environmental change, and future freshwater management. The focus is on plankton dynamics in deep lakes, microbial biodiversity, food-web relationships and ecosystem functioning. Specific topics range from ecosystem responses to climate change, to methane dynamics and plant litter decomposition, fungal diversity patterns and roles in freshwaters, species interactions in plankton communities, consequences of microbial interactions with microplastics, antibiotic resistance, cyanobacterial blooms, metagenomic analysis of functional diversity, remote sensing and spatial community modelling. Ecosystem-scale experiments in IGB's unique large enclosure facility, the LakeLab, are a hallmark of the department's research activities. The large-scale experiments have been underpinned by new concepts and numerical models along with field surveys, lab experiments, and long-term time-series analyses, with Lake Stechlin as a flagship site. New efforts have been going into curating and analysing long-term data, both in analyses led by the department and within large, often global consortia. These engagements have led to conceptual advances and contributions to a global limnology. Interactions with stakeholders and the public include joint efforts to counter the recent rapid eutrophication of Lake Stechlin. Taking advantage of technological progress to respond to the need for temporally and spatially highly resolved data, the scientists work on new methods and protocols for plankton and microbial analyses by various omics tools, stable isotope analyses, automated imaging techniques combined with machine learning, as well as new algorithms to examine remotely sensed lake data.

Between 2022 and 2024, this department published 228 articles in peer-reviewed journals, as well as 5 other articles and 4 individual contributions to edited volumes. 42 of the publications were co-authored with other departments. Third-party revenues totalled 1.4 M€ on average per year. Third-party funding mostly comes from the DFG (∅ 735 k€), the EU (∅ 495 k€), and federal and *Länder* governments (∅ 104 k€). An average of 201 k€ per year came in as revenue from services. One doctoral degree was completed.

Department 4 – Fish Biology, Fisheries and Aquaculture

(38.5 FTE, of which 21.6 FTE Research and scientific services, 0.8 FTE Doctoral candidates, and 16.2 FTE Service staff)

Research Groups:

- Mechanisms and Functions of Group-Living
- Integrative Recreational Fisheries Management
- Food Web Ecology and Fish Communities
- Genetics and Evolution of Fish (and other Vertebrates)
- Reintroduction of the European Sturgeon to Germany
- Fish Parasitology and Immunology
- Behavioural Biology
- River Revitalisation
- Molecular Fish Physiology

The goal in the department of *Fish Biology, Fisheries and Aquaculture* is to understand the ecological and evolutionary processes that structure freshwater fish populations and communities, including their functions and services. The researchers use this knowledge to create the scientific foundation for the conservation of wild fish populations and for sustainable inland fisheries management and aquaculture. An important part of their work focuses on interactions between natural and anthropogenic factors and their effects on reproduction, development, physiology, behaviour, productivity and recreational value of freshwater fish. The methodological approaches include hypothesis-driven laboratory research, genetics and genomics, mesocosm experimentation, whole-lake experiments, comparative field studies, theoretical modelling, applied social sciences and stakeholder-informed management of freshwater systems.

Due to several retirements, the department is undergoing major reorganisation. The aim is to maintain its primary focus on the ecology and evolution of freshwater fish populations with applications in inland fish conservation, fisheries and aquaculture. The plan is to also further support and develop this work by bringing in new expertise in the areas of fish ecophysiology, fish movement ecology and aquaculture/inland fisheries.

Between 2022 and 2024, this department published 243 articles in peer-reviewed journals, as well as 30 other articles and 25 individual contributions to edited volumes. Additionally, one monograph was published. 25 of the publications were co-authored with other departments. Third-party revenues totalled 1.7 M€ on average per year. Third-party funding mostly comes from federal and *Länder* governments (∅ 1.2 M€) the DFG (∅ 264 k€), and the EU (∅ 103 k€). An average of 102 k€ per year came in as revenue from services. Nine doctoral degrees were completed.

Department 5 – Evolutionary and Integrative Ecology

(32.7 FTE, of which 19.1 FTE Research and scientific services, 8.0 FTE Doctoral candidates, and 5.6 FTE Service staff)

Research Groups:

- Ecological Novelty
- Evolving Metacommunities
- Disease Evolutionary Ecology
- Molecular Ecology and Genomics
- Eco-Evolutionary Dynamics
- Complex Systems Ecology

The department *Evolutionary and Integrative Ecology* seeks to advance the eco-evolutionary understanding of freshwater organisms in the Anthropocene. Research has two overarching themes: (1) evolutionary ecology and eco-evolutionary dynamics, and (2) integration across scales, disciplines and actors. Within these themes, the researchers address four focal topics: global change (e.g. urbanisation, biological invasions, climate change, pollution), species interactions (parasitism, predation, competition, also social-ecological interactions), spatiotemporal dynamics, and synthesis and concepts. The department applies a broad range of methods, from molecular tools, laboratory and field studies to social-ecological approaches, data mining and complex statistical analyses, mathematical models and conceptual integration.

They also develop novel tools for research, stakeholder engagement and public outreach. Model organisms include crustaceans (mainly *Daphnia* and crayfish), ciliates and other species.

Between 2022 and 2024, this department published 226 articles in peer-reviewed journals, as well as 4 other articles and 10 individual contributions to edited volumes. Additionally, one monograph was published. 41 of the publications were co-authored with other departments. Third-party revenues totalled 1.3 M€ on average per year. Third-party funding mostly comes from the DFG (∅ 816 k€) foundations (∅ 205 k€), the EU (∅ 142 k€) and federal and *Länder* governments (∅ 122 k€). Two doctoral degrees were completed.

8. Handling of recommendations from the previous evaluation

IGB responded as follows to the 9 recommendations of the last external evaluation (highlighted in italics, see also statement of the Senate of the Leibniz Association issued on 26 March 2019, pages B-3/B-4):

1) *“The **combination of public outreach with knowledge and technology transfer** in one unit has proved its worth. The so-called Science-Society Interface (SSI) does excellent work. In view of the wealth of tasks it encompasses, SSI’s provision of human resources (three individuals) is limited. Also, a long-term key position is currently financed from third-party funds. It is recommended that IGB improves the situation.”*

IGB points out that the key position of the knowledge and technology officer was made permanent on the institute’s core budget in April 2020. The Communications and Knowledge Transfer team (formerly called SSI unit) additionally has access to central staff resources from the Director’s Office for specific topics (internal communication; intranet development) and on an as-needed basis.

2) *“The **LakeLab at the Stechlin site** is a very important infrastructure and, having become fully operational, now offers excellent conditions for work in the departments and the cross-cutting research domains as well as for a raft of collaborations. The LakeLab is currently working below its potential capacity. There is still room for further cooperation with external partners.”*

In the past years, several large-scale experiments were performed in LakeLab, in particular within the EU projects AQUACOSM and AQUACOSM-plus, coordinated by IGB and with LakeLab as a key facility for international exchange (see chapter 3).

3) *“It is recommended to continue developing the principles on handling research data and to collate them in an **institute-wide data management strategy**. The objective should be to pool all related tasks in a core unit. This should be factored into proposed investments in IT.”*

In 2020, an IGB data management group was established and has subsequently developed into a Competence and Technology Platform (CTP) which involves both researchers and data-intensive technical positions from all departments. Since 2024, the CTP is supported by a central

research data management advisor. They jointly develop the strategy for enhanced data management and standardized data systems at IGB, based on the new IGB data policy (see chapter 4).

4) *“The objective of IGB’s strategic planning is to bring the individual disciplines at the institute closer together and sharpen perspectives across scales. To achieve this, the institute intends to reinforce analytics and the scientific infrastructures for collecting environmental data and is thus planning to apply for a permanent extraordinary item of expenditure of a scientific-strategic nature that contains three major investments and related staff.*

*The establishment of stable isotope analysis as well as IGB’s envisaged investments in the further development of its field infrastructure on the basis of **additional institutional funding** are expressly endorsed, whereas the introduction of molecular biodiversity analysis is currently not endorsed.”*

In 2018, additional financial support from the BMBF (4.5 M€) allowed IGB to extend the isotope lab equipment with two isotope mass spectrometers (see chapter 3), making isotope-based work possible at the institute. Further investments have been made in the development of field infrastructure and in automated data collection. Given that the recommendations on investments were thus met with other resources and that a new strategic vision has been developed since 2020, a different proposal on “Predictive Ecology in the Anthropocene”, including plans for a new programme area, was submitted in 2023 and granted in 2024. Implementation of this new programme area on Predictive Ecology, including recruitments of new group leaders and support staff, started in 2025 (see chapter 3).

Molecular work using next generation sequencing is, amongst others, supported through BeGenDiv (see chapter 6).

5) *“IGB has kept pace with developments in the field, one of the points for which it was highly praised at the last evaluation. At the time, however, it was also noted that **financial provisions** were not keeping pace with the institute’s scientific development. Even though individual measures have been introduced since then, this problem still essentially exists.*

*Furthermore, any growth in institutional funding in the last few years has been relativised by increases in costs (salaries, energy prices, water). As recommended in 2011, the institute must consult with its funders to find solutions for the existing problems. If necessary, further priorities must be set, as happened in the past, and caused the institute considerable distress. The **costs of maintaining the research infrastructures**, in particular, must be appropriately factored into IGB’s strategic financial planning.”*

IGB points to investments of approx. 11 M€ in the past seven years (including the additional BMBF funding for research infrastructure mentioned above) in novel technology and equipment as well as in continuous re-investments to run and update existing infrastructure.

As the growth in research profile in the past years was not paralleled by an equal growth in core funding, the high ratio of third-party funding compared to core budget and especially the recent strong increases of costs for personnel and energy caused challenges. The *extraordinary item of expenditure* involves a substantial increase in IGB’s core budget starting from 2025 (see

chapter 3). The challenges remain, however, and a plan has been developed to combine its implementation with a reprioritization of fund allocation to strategically important themes so as to reduce financial stress and counteract the foreseeable budgetary limitations in the future.

6) *“At present, IGB is accommodated at four sites. The resulting spatial distribution of staff poses a challenge for in-house communication. IGB should continue to keep an eye on this and, with the growing complexity, implement additional measures that ensure adequate **communication between the sites.**”*

In the past seven years, IGB has intensified internal communication measures, e.g. by implementing a new intranet and establishing regular communication formats such as a weekly newsletter to all institute staff and more frequent virtual institute meetings. Tools to facilitate online collaboration were established and IGB-wide brainstorm days introduced to allow for in person meetings. With the new site in Berlin-Dahlem, IGB reduces the spatial distribution to three main sites (see chapter 4). With its modern meeting spaces that foster personal exchange, it is expected to encourage in-person meetings with participants from other sites.

7) *“At the end of 2018, the **head of Department 6** will retire. IGB should clarify well in advance how the department’s work should be apportioned: service, research or – as has been so far – a combination of the two. This will determine how the leadership position will be designed and filled in the future.”*

The former departments *Ecohydrology* and *Chemical Analytics and Biogeochemistry* have been merged as part of the restructuring of IGB’s research departments (see chapter 3). Hence, no new head of department was recruited. Service through the chemistry and isotope lab, mainly managed by a research group leader with a profile including this specific service function, remains an important activity within the new department *Ecohydrology and Biogeochemistry*.

8) *“IGB should continue its efforts to achieve **gender parity** at the various levels of the institute hierarchy.”*

IGB has strengthened its measures to achieve gender parity and diversity at all levels (see chapter 5). Four out of six group leaders who have been appointed since 2020 are female, as is one of the two newly appointed department heads.

9) *“It is welcomed that IGB started to improve its **doctoral programme** in 2016. The general conditions now provide, amongst other things, for the creation of a three-person advisory committee and it is agreed that the partner universities in Berlin and Potsdam accept the credit points given for the courses at IGB. The revised rules now need to take effect. They should help to shorten what, in the past, was a very long doctoral period. It is positive that IGB employs a career development coordinator to support the programme.”*

IGB points to several measures taken in the past years (see chapter 5). The median duration for dissertations completed in the period 2019–2024 was 3.8 years until thesis submission and 4.3 years until completion.

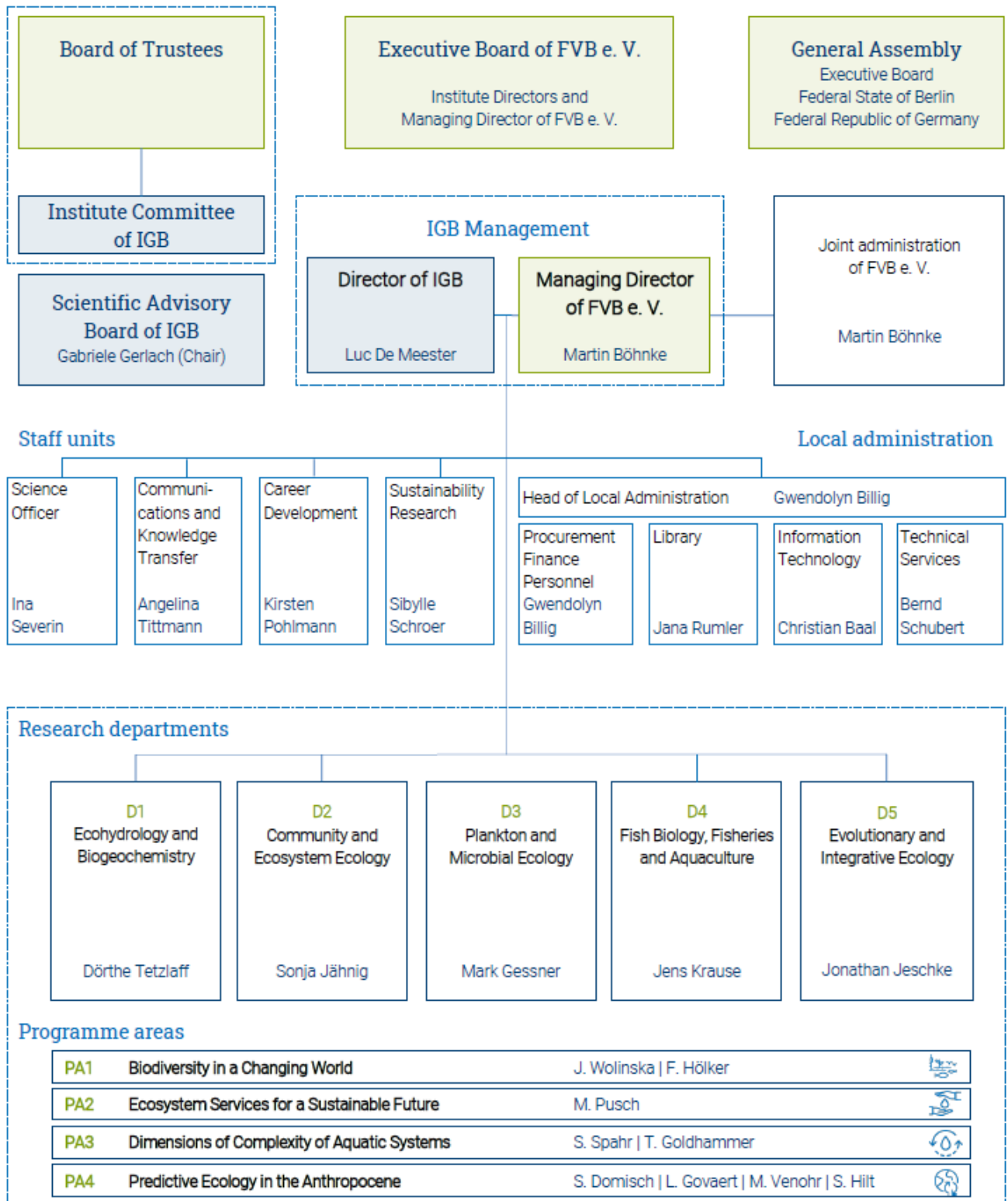
Appendix 1

Organisational Chart

Structure

of the Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB) in the Forschungsverbund Berlin e. V.

STATUS AS OF 1 JANUARY 2025



Appendix 2**Publications and expert reviews**

	Period		
	2022	2023	2024
Total number of publications	378	349	381
Monographs	2	2	5
Individual contributions to edited volumes	27	27	10
Articles in peer-reviewed journals	318	307	362
Articles in other journals	27	12	4
Working and discussion papers	3	1	0
Editorship of edited volumes	1	0	0
Expert reviews	2022	2023	2024
Number of expert reviews	13	9	11

Appendix 3 Revenue and Expenditure

Revenue		2022			2023			2024 ¹		
		k€	%	%	k€	%	%	k€	%	%
Total revenue (sum of I., II. and III.; excluding DFG fees)		24,191			24,842			26,395		
I.	Revenue (sum of I.1., I.2. and I.3)	22,245	100		23,122	100		24,982	100	
1.	<u>REVENUE FROM INSTITUTIONAL FUNDING (EXCLUDING CONSTRUCTION PROJECTS AND ACQUISITION OF PROPERTY)</u>	14,572	66		15,359	66		15,462	62	
1.1	Institutional funding (excluding construction projects and acquisition of property) by Federal and <i>Länder</i> governments according to AV-WGL	14,572			14,859			15,462		
1.2	Institutional funding (excluding construction projects and acquisition of property) not received in accordance with AV-WGL	0			500 ²			0		
2.	<u>REVENUE FROM PROJECT GRANTS</u>	6,868	31	100	7,381	32	100	9,104	36	100
2.1	DFG	2,298		33	2,400		33	3,037		33
2.2	Leibniz Association (competitive procedure)	266		4	302		4	381		4
2.3	Federal, <i>Länder</i> governments	2,352		34	2,596		35	2,917		32
2.4	EU	1,419		21	1,649		22	2,054		23
2.5	Industry	5		0	0		0	0		0
2.6	Foundations	316		5	314		4	503		6
2.7	Other Sources	212		3	121		2	214		2
3	<u>REVENUE FROM SERVICES</u>	805	4		382	2		416	2	
3.1	Revenue from commissioned work and services	368			382			416		
3.2	Revenue from conferences (SIL 2022)	437			0			0		
II.	Miscellaneous revenue	1,445			330			1,363		
	Miscellaneous revenue (e.g. reimbursements, rental income)	222			215			64		
	Funds drawn from reserves	1,223			115			1,299		
III.	Revenue for construction projects (institutional funding by Federal and <i>Länder</i> governments, EU structural funds, etc.)	500			1,390			50		

Expenditures		k€	k€	k€
Expenditures (excluding DFG fees)		24,191	24,842	26,395
<u>INSTITUTIONAL FUNDING</u>				
1.	Personnel	15,828	16,558	18,432
2.	Material expenses	5,117	4,639	5,666
3.	Equipment investments	911	1,312	588
4.	Construction projects	1,801	1,715	1,128
5.	Membership fees	535	618	581

DFG fees (2.5% of the revenue from institutional funding)	363	370	392
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¹ Preliminary data

² Special funding of the initial equipment of the Biodiversity Cooperation Building

Appendix 4

Staff

(Basic financing and third-party funding / proportion of women (as of: 31 December 2024)³

	Full time equivalents		Persons		Women		foreigners
	Total	third-party funding	Total	temporary contracts	Total	temporary contracts	Total
	Number	Percent	Number	Percent	Number	Percent	Number
Research and scientific services	120.7	54.3	145	77.9	61	90.2	81
1 st level (scientific directors)	1.0	0	1	0	0	-	1
2 nd level (department heads)	5.0	0	5	0	2	0	0
3 rd level (group leaders)	24.8	4.0	26	0	4	0	5
Junior research group leaders	3.0	33.3	3	100	3	100	2
Scientists in non-executive positions	63.4	70.1	75	100	32	100	48
Doctoral candidates	23.6	80.9	35 ⁴	100	20	100	25
Science supporting staff (laboratories, technical support etc.)	54.6	20.9	61				
Laboratory and support (E9 to E12)	31.0	17.9	34				
Laboratory and technical (E5 to E8)	4.8	12.2	5				
Project coordination/communication (E13)	3.0	96.7	4				
Library (E9 to E12)	1.0	0	1				
Information technology - IT (E9 to E12)	2.7	63.0	3				
Technical service, incl. infrastructure (E9 to E12)	8.0	6.3	9				
Technical service, incl. infrastructure (E5 to E8)	4.2	4.8	5				
Science supporting staff (administration)	40.2	0.1	34				
Head of the administration	1.0	0	1				
Staff positions (E12 and E13)	6.7	0	7				
Internal administration (financial administration, personnel etc.) (E9 to E12)	6.2	0	7				
Internal administration (financial administration, personnel etc.) (E5 to E8)	5.8	0	7				
Information technology – IT (E7 to E12)	5.0	0	5				
Building service (E9 to E12)	2.0	0	2				
Building service (E5 to E8)	2.3	0	3				
Building service (E1 to E4)	1.4	0	2				
FVB joint admin. (proportional mean value)	9.9	0.3					
Student assistants and paid interns	7.2	58.1	24				
Trainees	3.0	0	3				
Scholarship recipients at the institution	31.0	100	31		13		28
Doctoral candidates	25.0	100	25		11		24
Postdoctoral researchers	6.0	100	6		2		4

³ Including (temporary) employment disability and part-time retirement⁴ Plus 4 persons finalising their doctoral theses on research positions

Annex B: Evaluation Report

Leibniz Institute of Freshwater Ecology and Inland Fisheries, Berlin (IGB)

Contents

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Appendix:

Members of review board

1. Summary and main recommendations

The Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB) conducts basic and application-oriented research on standing and flowing freshwater ecosystems. Bringing together a broad scope of disciplinary expertise, the institute promotes a deeper understanding of the structures and functioning of such systems as well as their sustainable management. IGB also runs major related infrastructure facilities and targets societal actors and the general public with its dissemination of knowledge.

IGB is organised into five disciplinary research departments, containing a total of 35 research groups. Three of the departments were rated 'very good', and two 'very good to excellent'. Cross-cutting, interdisciplinary programme areas serve as an effective tool to connect the scientists and their work across departments and research groups.

Research at the institute is driven by innovative approaches. Its results are strategically published and widely recognised in the national and international scientific community. Amongst others, IGB produced influential works on the behaviour of clonal fish, the state and loss of freshwater biodiversity and the effects of climate change on lake habitats. These works are based on the institute's numerous high-end research infrastructure facilities and several monitoring stations for short- and long-term observation in lakes and rivers. The data generated by this infrastructure is gathered and, to a large extent, made available to external users through IGB's digital information platforms and databases. Research results are successfully communicated to stakeholders and the general public, and the institute interacts closely with actors outside the scientific community in the area of co-creation.

IGB's former scientific director left the institute in 2016, so that the previous evaluation was performed under interim leadership. His designated successor was due to take up office in 2018, but was ultimately prevented by ill health. Consequently, the position was only filled in January 2020, when another internationally renowned researcher took up office as the new scientific director. His leadership sparked a fruitful redesign of IGB's organisational structure. The institute's departments were reconfigured, the research infrastructure was grouped into Competence and Technology Platforms (CTPs), and a set of (initially three) programme areas was put in place to connect the scientists and their work across departments. Starting from 2025, with the help of a permanent increase of 2.2 M€ per year in institutional funding, IGB is setting up a fourth programme area on *Predictive Ecology in the Anthropocene*. This new focus, which will be strengthened by 10–12 additional scientists across the institute's departments, has high potential to foster additional innovative projects.

In October 2025, after years of successful restructuring and dynamic development, the current scientific director is leaving the institute for personal reasons. Upon his departure, an interim acting director will take up office until a successor can be appointed. Consequently, IGB is once more facing a period of change in terms of scientific leadership. This also extends to the replacement of two of the five department heads and the upcoming recruitment of additional research group leaders to fully implement the new programme area.

IGB currently mainly operates at Lake Müggelsee in Berlin-Friedrichshagen and Lake Stechlin in Brandenburg. It is beneficial that when a joint Biodiversity Cooperation Building opens on the Freie Universität Berlin campus in Dahlem, which is expected to take place in 2025, any

additional office rentals in Berlin can be terminated. The new building offers advantageous working conditions and also includes additional social gathering spaces – a highly welcome asset given the space constraints of the existing premises.

Cooperation is especially close with the universities in Berlin and Potsdam. A total of nine leading scientists at IGB currently hold joint appointments in the region. The institute takes part in important collaborative research activities with various partners, including an Excellence Cluster, a DFG-funded Collaborative Research Centre and several NFDI consortia.

Special consideration should be given to the following main recommendations in the evaluation report (highlighted in **bold face** in the text):

Overall concept, activities and results (chapter 2)

1. At the time of the previous evaluation, it was recommended that IGB brings in more collaborative projects to increase the utilization of its **LakeLab**. In the meantime, particularly the extension of the large EU network AQUACOSM into AQUACOSM-plus has led to some increase in external usage and made the facility much more visible in the international research landscape. Still, IGB should be more proactive in approaching potential cooperation partners and continue to work towards a higher rate of use.

Changes and planning (chapter 3)

2. IGB and its supervisory board plan once more to advertise the position of **scientific director** in conjunction with a joint appointment to a professorship at Freie Universität Berlin. It is of the utmost importance that they proceed with the advertisement without delay and ensure that the recruitment process is concluded as quickly as possible.
3. Since the previous evaluation, IGB has made significant progress in terms of organisational as well as scientific development. The revised organisational framework ensures ample freedom for the development of research ideas within the individual groups, fostering high-quality scientific work. The programme areas define suitable topics to further strengthen cross-departmental collaboration. IGB should continue on this path with the goal of **sharpening its profile** to take on a leading international position in selected research fields. Together with the institute, the new director should develop a clear vision of how to achieve this.
4. In October 2025, there will be a change of leadership in **Department 3** due to the upcoming retirement of the head of department. The leadership position was advertised internally at IGB. After assessing the candidates, it was decided that two of the department's current research group leaders will be appointed as co-chairs. As planned by the institute, this should be re-evaluated in due course. The decision on any permanent solution should be made under the new scientific director.
5. In August 2025, the head of **Department 5** is stepping down from his position and will continue his work at the institute as a research group leader. For the time being, another experienced scientist will take over the interim leadership. IGB and its boards are currently assessing the feasibility of a rotational model where the research group leaders would take turns heading the department. Irrespective of how the position is filled, here too, the decision on any permanent solution should be taken under the new scientific director.

Controlling and quality management (chapter 4)

6. IGB provides very good working conditions for its highly motivated staff. As recommended during the previous evaluation, the institute has addressed the **communication and information circulation challenges** associated with its distribution over several sites. Improvements were made, for example, by setting up a comprehensive onboarding scheme to help familiarise new employees with the institutional structures. The institute should continue to implement and test measures to ensure that all staff members are well connected and informed across the different sites, which will soon also include the new premises in Dahlem.
7. The **Scientific Advisory Board** has closely accompanied IGB's development over the past years and provides the institute with valuable guidance. To ensure the independence of the board, however, individuals from collaborating institutions should not be members.

Human resources (chapter 5)

8. In the past, **department heads** were regularly recruited through open international calls. Since the last evaluation, IGB has made exceptions to this practice in favour of internal appointments for the leadership of two newly formed departments in 2021 and is doing so once more to appoint new heads of Department 3 and 5. This was also due to the fact that the appointments consistently involved highly accomplished scientists who already held university professorships. Moreover, the specific administrative rules which apply in Berlin make joint appointments more difficult here than elsewhere in Germany. Nevertheless, the regular practice for appointments on future department head positions should once more be open recruitment processes as part of joint appointment procedures, in accordance with common standards within the Leibniz Association.
9. IGB's efforts to provide all of its doctoral candidates with comparable conditions and transparent structures have already yielded visible improvements. The institute is encouraged to follow up on its previous initiative to consolidate and coordinate its training instruments and educational measures within the framework of an overarching IGB **graduate school**.
10. The measures taken since the last evaluation have helped raise the overall percentage of female scientists at IGB from 36 % to 42 %. However, with only 26 % of **leadership positions occupied by women**, there is still much room for improvement. It is noted with approval that, in the meantime, the institute has drawn up a gender equality plan. IGB should proceed on this path, prioritising strategic, proactive measures to raise the number of female scientists in leadership positions.

2. Overall concept and results

Overall concept

The Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB) conducts basic and application-oriented research on standing and flowing freshwater ecosystems. Bringing together a broad scope of disciplinary expertise, the institute promotes a deeper understanding of the structures and functioning of such systems as well as their sustainable management.

IGB also runs major related infrastructure facilities and targets societal actors and the general public with its dissemination of knowledge.

Research at the institute is organised into five disciplinary **research departments** focusing on *Ecology and Biogeochemistry* (Department 1), *Community and Ecosystem Ecology* (Department 2), *Plankton and Microbial Ecology* (Department 3), *Fish Biology, Fisheries and Aquaculture* (Department 4), and *Evolutionary and Integrative Ecology* (Department 5).

They currently host a total of 35 **research groups**. Each research group is headed by a permanently employed or tenure track group leader (see chapter 5). The other scientific group members, including early career researchers, are usually financed through external funds, while technical support in the departments is typically financed centrally.

Cross-cutting, interdisciplinary **programme areas** connect the scientists and their work across departments and research groups.

Results

Research

The scientific work carried out at IGB is driven by innovative approaches and is of a very good, and sometimes excellent, standard. In recent years, the institute's influential publications have included works on the behaviour of clonal fish, the state and loss of freshwater biodiversity and the effects of climate change on lake habitats (see chapter 7). Research results are published strategically and are widely recognised in the national and international scientific community.

Infrastructure

IGB's research is based on its numerous high-end **research infrastructure facilities**, many of which are also available for external use. It is welcome that IGB has organised these into six Competence and Technology Platforms (CTPs) to increase their overall accessibility and visibility. Beyond the facilities at the institute's main site at Lake Müggelsee, which also include an excellent new isotope laboratory facility set up in 2018, IGB runs a unique, large-scale experimental facility in Lake Stechlin (LakeLab) and several monitoring stations for short- and long-term observation in lakes and rivers.

At the time of the previous evaluation, it was recommended that IGB brings in more collaborative projects to increase the utilization of its LakeLab. In the meantime, particularly the extension of the large EU network AQUACOSM into AQUACOSM-plus has led to some increase in external usage and made the facility much more visible in the international research landscape. Still, IGB should be more proactive in approaching potential cooperation partners and continue to work towards a higher rate of use.

Finally, IGB has also increased its portfolio in terms of **research data** infrastructure, making research data available in intuitive ways to the freshwater research community worldwide. Noteworthy instruments include the institute's long-standing Freshwater Research and Environmental Database (FRED) and Freshwater Information Platform (FIP) as well as innovative recent additions like GeoFRESH, an advanced query tool for the global hydrographic network. IGB is also commended for its strong commitment to sustainable research data management in the context of the Nationale Forschungsdateninfrastruktur (NFDI, see chapter 6).

Transfer

Communication of research insights to stakeholders and the general public is very successful. The ground-breaking work in the context of the Oder River disaster, for example, received international scientific acclaim as well as broad attention in terms of general media coverage; it also sparked important advisory activities on sustainable river management for national and international stakeholders. IGB's research activities regarding the European Sturgeon and its reintroduction to local ecosystems gained high visibility among the general public, too.

Interaction with actors outside of the scientific community is expertly integrated into research projects. There is a high awareness of the merits of **co-creative research design**, be it in the area of fisheries management, wastewater treatment (for example with respect to the Tesla Gigafactory Berlin-Brandenburg) or understanding urban light pollution.

The institute commands a well-organised staff unit for Communications and Knowledge Transfer. As recommended during the previous evaluation, the unit was strengthened with a permanent position for a Knowledge Transfer Officer, who acts as a central contact person for stakeholders.

3. Changes and planning

Development since the previous evaluation

IGB's former scientific director left the institute in 2016, so the previous evaluation was performed under interim leadership. His designated successor was due to take up office in 2018, but was ultimately prevented by ill health, and the position was only filled in January 2020, when another internationally renowned researcher took up office as the new scientific director. He has left a very positive mark and has orchestrated substantial updates to the institute's **organisational structure**:

In 2021 and 2022, the configuration of IGB's research departments was changed, which led to suitable adjustments in the institute's overall scientific focus areas. In two cases, former departments were integrated into other departments on the occasion of their heads' retirement, pooling competences and research topics in a meaningful way. The former department of *Ecosystem Research* was split into two new departments when its head retired in 2021. IGB promoted experienced researchers who already held professorships at cooperating universities to head the two new departments.

Furthermore, three cross-cutting programme areas were set up in 2022: i) *Biodiversity in a Changing World*, ii) *Ecosystem Services for a Sustainable Future* and iii) *Dimensions of Complexity in Aquatic Systems*. They replace the previous research domains and have proved effective as an integrative tool that fosters interdisciplinary work across IGB's departments.

Starting in 2025, IGB has secured a permanent increase of approximately 2.2 M€ per year in institutional funding to set up a new, fourth programme area on Predictive Ecology in the Anthropocene. Moving beyond the predictive power of climate models by targeting the predictive power of ecosystems is a timely and strategically promising decision. The new focus has the potential to foster highly innovative research. It is strengthened by approx. 10-12 scientists (who will head additional research groups) as well as six new positions in science support across all

five departments. The hiring process has already begun. Within the new programme area, IGB also seeks to expand its activities in the area of social ecology. To this end, the institute is encouraged in its plans to incorporate social science expertise through collaborations with other institutions. The scientific landscape in Berlin offers good opportunities to do this.

Strategic work planning for the coming years

In October 2025, IGB's current scientific director is leaving the institute for personal reasons. Upon his departure, an interim acting director will take up office. **IGB and its supervisory board plan once more to advertise the position of scientific director in conjunction with a joint appointment to a professorship at Freie Universität Berlin. It is of the utmost importance that they proceed with the advertisement without delay and ensure that the recruitment process is concluded as quickly as possible.**

Since the previous evaluation, IGB has made significant progress in terms of organisational as well as scientific development. The revised organisational framework ensures ample freedom for the development of research ideas within the individual groups, fostering high-quality scientific work. The programme areas define suitable topics to further strengthen cross-departmental collaboration. IGB should continue on this path with the goal of sharpening its profile to take on a leading international position in selected research fields. Together with the institute, the new director should develop a clear vision of how to achieve this.

IGB is facing further **changes in scientific leadership** in the upcoming months. Plans for handling this have been made in close consultation with the supervisory and advisory board:

In October 2025, there will be a change of leadership in Department 3 due to the upcoming retirement of the head of department. The leadership position was advertised internally at IGB. After assessing the candidates, it was decided that two of the department's current research group leaders will be appointed as co-chairs. As planned by the institute, this should be re-evaluated in due course. The decision on any permanent solution should be made under the new scientific director.

In August 2025, the head of Department 5 is stepping down from his position and will continue his work at the institute as a research group leader. For the time being, another experienced scientist will take over the interim leadership. IGB and its boards are currently assessing the feasibility of a rotational model where the research group leaders would take turns heading the department. Irrespective of how the position is filled, here too, the decision on any permanent solution should be taken under the new scientific director.

4. Controlling and quality management

Facilities, equipment and funding

Funding

In the years 2022–2024, IGB had an average annual budget of 23.4 M€. The institute's **revenue from institutional funding** amounted to an average of 15.1 M€ (Ø 2015–2017: 13.3 M€),

accounting for 65 % of the budget. Starting in 2025, the above-mentioned permanent 2.2 M€ increase to finance a fourth programme area will be added to the institutional funding.

On top of its institutional funding, IGB has been very successful in securing **project grants** from prestigious sources. An average annual revenue of 7.8 M€ (33 %) was generated from project grants. While the overall share of this revenue type within IGB's budget remains unchanged since the previous evaluation, the institute managed to significantly increase the portion of grants in its portfolio that are obtained through highly competitive procedures. Notably, an average of 2.6 M€ came from the DFG (Ø 2015–2017: 1.6 M€) and an average of 1.7 M€ from the EU (Ø 2015–2017: 1.3 M€).

An additional 0.5 M€ (2 % of the overall budget) was generated as **revenue from services**.

Facilities, equipment, and IT infrastructure

IGB's two **main sites** are a building complex on the shore of Lake Müggelsee in Berlin-Friedrichshagen and another at Lake Stechlin in Brandenburg. It is positive to note that the long-awaited opening of a third main site, the joint **Biodiversity Cooperation Building** operated by FU Berlin on the university grounds in Dahlem, is expected to take place later in 2025. This will allow IGB to give up its rented offices in Berlin-Adlershof and on the campus of FU Berlin. Apart from modern research facilities and office spaces, the new building will also provide much-needed additional space for meetings and social activities. This is a highly welcome development.

There are excellent, well-run and generously funded **research infrastructure facilities**, which are now effectively clustered in Competence and Technology Platforms (CTPs, see chapter 2). Since the previous evaluation, which emphasised the high importance of maintaining the infrastructure, investments of approximately 11 M€ have been made by Germany's Federal Ministry of Research, Technology and Space (BMBF) and from the institute's own investment funds to implement new facilities as well as upgrades to existing ones.

IGB's IT team runs the local **IT infrastructure** in an expert manner, aided by the Corporate IT of the non-profit association Forschungsverbund Berlin e. V. (FVB), which handles administrative applications and corporate network services. After an extensive infrastructure upgrade in Berlin-Friedrichshagen, the Stechlin site should be targeted next, as planned.

The institute is commended for its systematic efforts to improve **IT security**. Based on an external audit, an IT emergency plan has been drafted and additional security measures have been put in place since the last evaluation. IGB should continue on this path to maintain a good protection level against potential threats.

Organisational and operational structure

The **organisational and operational structure** is set up in a way that allows for ample scientific freedom within the departments and, at the same time, provides common overarching structures for strategic decision-making. Each of the five department heads steers and coordinates their department's research activities in collaboration with the research group leaders involved. Together, the directorate and department heads form the IGB Board, which convenes monthly to discuss strategic matters. The IGB Council, which meets once a month to discuss

decisions prepared by the board and which offers a broader forum for information exchange, also includes the spokespersons of the programme areas and representatives of IGB's various status groups. Several further committees, commissions and meeting formats complement these main structures appropriately.

IGB provides very good working conditions for its highly motivated staff. As recommended during the previous evaluation, the institute has addressed the communication and information circulation challenges associated with its distribution over several sites. Improvements were made, for example, by setting up a comprehensive onboarding scheme to help familiarise new employees with the institutional structures. The institute should continue to implement and test measures to ensure that all staff members are well connected and informed across the different sites, which will soon also include the new premises in Dahlem.

Quality management

The institute has suitable **quality control measures** in place. In terms of good scientific practice, IGB adheres to the DFG and Leibniz guidelines and has two elected ombudspersons. Research infrastructures and laboratories are operated according to certified standards and animal facilities are run excellently and overseen by an animal welfare officer and committee.

In terms of **Open Science**, IGB put forward an Open Access Policy in 2019 and also encourages its researchers to make their research data available in accordance with the FAIR principles. The institute's own repository, FRED, for example, provides a wealth of datasets for non-commercial purposes. IGB should continue to encourage its researchers to share their data with the broader research community whenever possible.

It is commendable that the institute pays close attention to the factors used to assign **performance-based funding** to its departments and research groups. Currently, the point system takes account of the number and quality of publications, grant acquisition, and teaching assignments. Ongoing efforts to also consider other factors, such as knowledge transfer activities, are appreciated.

Quality management by advisory boards and supervisory board

IGB is one of seven Berlin-based Leibniz-institutes within the non-profit association Forschungsverbund Berlin e. V. (FVB) that share a Joint Administration (see chapter 5) and **supervisory board** (Board of Trustees), which is supported by a dedicated Institute Committee in matters specific to IGB.

IGB's **Scientific Advisory Board (SAB)** is also highly committed. **The SAB has closely accompanied IGB's development over the past years and provides the institute with valuable guidance. To ensure the independence of the board, however, individuals from collaborating institutions should not be members.**

5. Human resources

Leading scientific and administrative positions

IGB is managed by the institute's scientific director in collaboration with the managing director of the FVB, who is head of the Joint Administration of the FVB. In addition, IGB has its own local head of administration, who forms the **IGB Directorate** together with the scientific director. It is welcomed that IGB, in consultation with its supervisory board, plans to appoint a deputy scientific director in the future from among the department heads.

The **scientific director** and the five **department heads**, all of whom also lead a research group, are jointly appointed with universities. The processes are conducted by joint appointment commissions, which, in the case of the scientific director, include representatives of the FVB Executive Board and the SAB.

In the past, department heads were regularly recruited through open international calls. Since the last evaluation, IGB has made exceptions to this practice in favour of internal appointments for the leadership of two newly formed departments in 2021 and is doing so once more to appoint new heads of Department 3 and 5. This was also due to the fact that the appointments consistently involved highly accomplished scientists who already held university professorships. Moreover, the specific administrative rules which apply in Berlin make joint appointments more difficult here than elsewhere in Germany. Nevertheless, the regular practice for appointments on future department head positions should once more be open recruitment processes as part of joint appointment procedures, in accordance with common standards within the Leibniz Association (*Standards for the appointments to academic management positions within the Leibniz Association*).

Staff with a doctoral degree

Apart from the above-mentioned groups, which are led by the scientific director or department heads, most of the remaining research groups at IGB are headed by **permanently employed senior scientists**. At the time of the evaluation, there were 26 such groups. Three of their leaders are jointly appointed professors at universities, another two hold honorary professorships.

Additionally, the institute openly advertises junior group leadership positions based on a **tenure track model** to advanced postdoctoral researchers, following standardised procedures on a 3 + 3-year timeline. This is an excellent approach for preparing particularly promising candidates for future academic leadership roles. Four such positions were filled between 2018 and 2024, one of which has since been terminated following a negative evaluation.

Otherwise, positions for **postdoctoral researchers** are mostly financed through third-party-funded projects and, occasionally, scholarships. A number of changes have been made in recent years to implement and update structures which support early career researchers in this phase. An internally financed guest programme, for example, was set up in 2021 and has since allowed 9 postdoctoral researchers to work at IGB for one to two years. A dedicated "Postdoc Society" cooperates with the institute's coordinator for career development in organising events and trainings. Furthermore, it is promising that, at the time of the evaluation visit, a policy guide was being drawn up for the systematic support of early career researchers at this

career stage. This will ensure that all postdoctoral scholars are well aware of the existing support options. Since the previous evaluation, four former postdocs from IGB have been appointed to professorships at universities. One of them stayed at IGB as she received a joint appointment within the *Leibniz Programme for Women Professors*.

Doctoral candidates

As of December 2024, there were as many as 60 **doctoral candidates** at IGB, 35 of whom had been hired based on third-party-funded projects on 65-75 % positions, while the remaining 25 received external scholarships, mostly from China. In the 2022–2024 period, 31 doctoral degrees were completed at IGB, with a median of 4 years to submission (or 4.4 years to completion).

As recommended during the previous evaluation, IGB has continued to take measures in order to improve its **doctoral programme**. Overall, the diverse group of doctoral students finds supportive, inspiring working conditions at the institute. IGB's *Rules for Doctoral Research* lay down suitable guidelines for doctoral supervision, which is always performed by an advisory committee, and an electronic support tool has been introduced to help structure and document the overall process. A career development coordinator is in charge of the institute's dedicated educational programme, and elected representatives are involved in the IGB Council.

At a large, multi-disciplinary research institution such as IGB, doctoral candidates face significant differences in terms of backgrounds, university affiliation, funding, individual working contexts and supervision arrangements. **IGB's efforts to provide all of its doctoral candidates with comparable conditions and transparent structures have already yielded visible improvements. The institute is encouraged to follow up on its previous initiative to consolidate and coordinate its training instruments and educational measures within the framework of an overarching IGB graduate school.**

Science supporting staff

IGB offers good working conditions and ample resources for the development of its **science supporting staff**. A technical-administrative representative is elected and takes part in IGB Council meetings. When hiring support staff as well, it is important to ensure smooth procedures to avoid vacancies.

It is noteworthy that the institute regularly offers **vocational training** in a number of fields ranging from training for office management assistants and IT specialists to training for biology and chemistry laboratory technicians. Since the last evaluation, a total of five qualifications were completed. Currently there are three trainees at IGB.

Equal opportunities and work-life balance

The institute complies with the *Leibniz Equality Standards* and applies the cascade model to monitor and steer its path towards **gender equality**. An elected equal opportunities officer heads the equal opportunity committee at the institute, which commands its own budget and cooperates with the relevant support structures at FVB. **The measures taken since the last evaluation have helped raise the overall percentage of female scientists at IGB from 36 % to 42 %. However, with only 26 % of leadership positions occupied by women,**

there is still much room for improvement. It is noted with approval that, in the meantime, the institute has drawn up a gender equality plan. IGB should proceed on this path, prioritising strategic, proactive measures to raise the number of female scientists in leadership positions.

IGB does a good job of providing a welcoming climate to its impressively **international staff** (66 % of the current early career researchers at the institute and 23 % of the group leaders come from abroad). Communication at the institute, for example, is bilingual, and supported by language courses that are offered in both German and English.

6. Cooperation and environment

There are currently nine joint appointments of leading scientists at IGB to professorships at neighbouring **universities** (3 x FU Berlin, 4 x HU Berlin, 1 x TU Berlin, and 1 x University of Potsdam). An additional appointment of another group head to a professorship is under way with funding from the Leibniz Programme for Women Professors (University of Potsdam), and the appointment of one more professorship at TU Berlin upon the retirement of the previous holder is currently being negotiated. The institute organises its research collaboration with university partners around shared fields of interest. Consequently, it teams up with FU Berlin for work on biodiversity (as exemplified in the new Biodiversity Cooperation Building and the *Berlin Center for Genomics in Biodiversity Research – BeGenDiv*), with HU Berlin for fish biology and fisheries, as well as ecology, and with TU Berlin for limnology. IGB also regularly takes on responsibility for university teaching and is currently involved in a master's programme at HU Berlin and a graduate programme at FU Berlin. Furthermore, it is involved in several national and international graduate schools (including the coordination of the European Training Network HypoTRAIN and DFG-funded graduate schools at TU Berlin and the University of Hamburg).

IGB participates in numerous important collaborative research activities with various partners in **Berlin and Germany**. It is, for example, part of the Excellence Cluster *Science of Intelligence – SCIOI* in Berlin and the DFG Collaborative Research Centre *RESIST* (SFB 1493, coordinated by the University of Duisburg-Essen). In its joint projects with collaborative partners, IGB makes good use of complementary expertise. For example, it regularly collaborates with the Helmholtz-Centre for Environmental Research (UFZ), combining IGB's resources in fisheries science and behavioural ecology with UFZ's strong background in integrated water resources. IGB is also commended for its very active role in the *Nationale Forschungsdateninfrastruktur – NFDI*, participating in a total of three consortia (*NFDI4BioDiversity*, where the institute is a co-applicant, *NFDI4Earth*, and *NFDI4Microbiota*).

The institute is also very well connected and integrated in the **Leibniz Association**, where it participates in two Leibniz Research Alliances, three Leibniz Research Networks, and two of the three recently introduced Leibniz Labs.

In the **international** research community, too, IGB commands a broad network of collaborators and cooperation partners. Through a growing number of projects with partners in the Global South, it also contributes to capacity building within the community. For example, it is very

involved in the Future Earth Global Research Network EvolvES, which aims to provide an evolutionary framework for biodiversity science.

7. Departments of IGB

Department 1 – Ecohydrology and Biogeochemistry

(37.7 FTE, of whom 17.5 FTE research and scientific services staff, 6.1 FTE doctoral candidates, and 14.1 FTE service staff)

Department 1 was created in 2021 by merging the two formerly separate departments of *Ecohydrology* and *Chemical Analytics & Biogeochemistry* after the head of the latter retired. It approaches ecohydrological processes and biogeochemical mechanisms in an integrated way. It explores how environmental changes affect coupled aquatic and terrestrial ecosystems, considering interactions between the ecosystems, physical and biogeochemical drivers as well as water security in intensively managed systems.

With excellent research infrastructure, ample technical support and very involved leadership, the department facilitates highly innovative scientific projects and provides a supportive, fruitful environment for researchers at all career levels. The individual projects are well interconnected, both within the department itself and the institute as a whole. In the ongoing POUNDER project funded within the Leibniz Competition, for example, researchers from departments 1, 3 and 5 work together to explore the effects of pollution in urban ponds. At the moment, a particular focus in this department is on modelling and hydrology. To maintain a good disciplinary balance within the department, biogeochemical aspects should also be strengthened again in the future. Published results, for example on the importance of diverse vegetation for water security, are visible nationally and internationally. However, the full potential of cutting-edge infrastructure, like the department's enhanced stable isotope facility, is not yet reflected in the current publications.

Department 1 implements co-design with stakeholders in its projects and is also very successful at communicating results to the relevant target groups – for example in terms of wastewater treatment at the Tesla Gigafactory Berlin-Brandenburg and results relating to river pollution.

The department is rated 'very good'.

Department 2 – Community and Ecosystem Ecology

(37.6 FTE, of whom 22.1 FTE research and scientific services staff, 4.5 FTE doctoral candidates, and 11.0 FTE service staff)

Department 2 is one of two new departments that evolved from IGB's former department *Ecosystem Research* in 2022 after its head retired. Leadership was assigned to a former research group leader. In order to better understand the structure and functioning of freshwater communities and ecosystems, it investigates patterns of biodiversity across ecosystem boundaries, interaction between freshwater biota and their environments, and ecosystem functioning and services.

This department, which successfully integrates a broad range of scientific expertise and research fields, boasts a particularly high degree of cross-system interaction. Recent thematic

additions hold much promise for future development. The projects on community ecology and innovative approaches in terms of multiple stressors, for example, are particularly impressive. Such works, which are also connected to the department's prominent role in the Collaborative Research Centre *RESIST* (see chapter 6), have been well integrated with the already existing research scope and should lead to additional publication output in the future. Through its research infrastructure, the department provides open access to its valuable datasets to the entire research community. Excellent products like the GeoFRESH online platform for high-resolution geospatial queries of the global hydrographic network could be used to an even greater extent if they were made more visible to potential scientific audiences. The department successfully interacts with policymakers and also reaches a more general public with its insights, be it through media coverage or citizen science projects, for example on light pollution.

The department is rated 'very good'.

Department 3 – Plankton and Microbial Ecology

(34.6 FTE, of whom 17.1 FTE research and scientific services staff, 4.2 FTE doctoral candidates, and 13.3 FTE service staff)

Department 3 – *Plankton and Microbial Ecology* (until 2022: *Experimental Limnology*) focuses on understanding lake ecosystems, the ways they change and possible responses to these changes. This involves plankton dynamics in deep lakes, microbial biodiversity, food-web relationships and ecosystem functioning in particular. The department is based at IGB's site in Neuglobsow/Brandenburg by Lake Stechlin.

The department's research activities have resulted in valuable insights into microbial dynamics within stream and lake ecosystems as well as methods development in line with ongoing technological advances. Department 3 expertly runs LakeLab, IGB's large enclosure facility, which is a very valuable and very demanding research infrastructure facility – not least because of its large size. Since the last evaluation, as recommended, the researchers have significantly increased their engagement in the international community on mesocosm in lake systems, where they now hold a prominent position, for example through their leading role in the EU-funded AQUACOSM and AQUACOSM-plus networks. They should continue to strive to exploit the full capacity of the infrastructure (see recommendation 1).

It is noteworthy that the department is very open to embracing new, experimental approaches. With recent hires, it now has a very promising setup of additional modelling and AI competences in place for future work, which also ties in very well with IGB's new programme area on predictive ecology. Department 3 will be under the joint leadership of two of its research group leaders after the current department head retires in October 2025 (see recommendation 4).

The department is rated 'very good'.

Department 4 – Fish Biology, Fisheries and Aquaculture

(38.5 FTE, of whom 21.6 FTE research and scientific services staff, 0.8 FTE doctoral candidates, and 16.2 FTE service staff)

Department 4 was created in 2022 out of the two former departments *Biology and Ecology of Fishes* and *Ecophysiology and Aquaculture* in the context of the imminent retirement of one of

the department heads. It now brings together the institute's expertise on fish biology in one unit. It aims to understand the processes that influence freshwater fish populations and communities, leading to insights for the conservation of wild fish populations as well as for fisheries management and aquaculture.

The department produces excellent and prominently published research work, for example on ecosystem-based management of fish populations. Another highlight are the insights into fish cognition stemming from the department's involvement in the Excellence Cluster *Science of Intelligence*. The researchers expertly engage suitable stakeholders and policymakers in their projects, many of which are application-oriented. In the context of flagship projects dealing with, for example, the Oder River disaster or the preservation of the European sturgeon population, their results also gain high visibility among the general public. In 2020, a group leader was awarded with the DFG's prestigious Communicator Award. Adequate aquaculture facilities with very good animal welfare measures support the research work.

Due to recent retirements of several group heads, this department is currently undergoing major reorganisation. When shaping its future profile, it is encouraged to further invest in its strengths, especially in the field of fish biology. The new appointments should also be used to bring leading female scientists into the department.

The department is rated 'very good to excellent'.

Department 5 – Evolutionary and Integrative Ecology

(32.7 FTE, of whom 19.1 FTE research and scientific services staff, 8.0 FTE doctoral candidates, and 5.6 FTE service staff)

Department 5, like Department 2, evolved out of the former *Ecosystem Research* unit in 2022. Here too, a former research group leader became the new head of department. In its work on evolutionary ecology and eco-evolutionary dynamics it pursues integration across scales, disciplines and (societal) actors.

The department has developed very well in recent years, attracting promising researchers and producing excellent results. For example, the *Hi Knowledge* initiative (which combines and presents heterogeneous data and information in a highly innovative way) is an exciting new approach to synthesising research results. The institute is encouraged to present it much more prominently as an IGB product. Department 5 is commended for its success in securing project funding from prestigious sources, including for an Emmy Noether research group on interactions between key evolutionary and community processes. It should make sure that its work on genomics in the context of the department's leading role in the *Berlin Center for Genomics in Biodiversity Research – BeGenDiv* integrates well with its focus on ecology as well as with other genomics and genetics work carried out at the institute. There is excellent knowledge transfer to stakeholders, for example relating to research results concerning invasive species. The future prospects also look very promising, as the team integrates IGB's new programme area into its scope very effectively and faces a wealth of new opportunities in connection with the joint biodiversity building on the campus of FU Berlin. From August 2025, Department 5 will be under interim leadership until a model for the succession of its current head has been implemented.

The department is rated 'very good to excellent'.

8. Handling of recommendations of the last external evaluation

The institute successfully addressed the recommendations made by the Leibniz Association Senate in 2019 (see Status Report, p. A-24ff). It should keep up its good efforts to increase the occupation rate of its unique LakeLab (recommendation 1), improve in-house communication (recommendation 6) and work towards gender parity (recommendation 10).

6 November 2025

Annex C: Statement of the Institution on the Evaluation Report

**Leibniz Institute of Freshwater Ecology and Inland Fisheries, Berlin
(IGB)**

IGB sincerely thanks the chair, co-chair, review board members and guests for their thorough evaluation and insightful recommendations, and the staff of the Leibniz Association's evaluation office for their support in the preparation of the evaluation report and the site visit.

Since the last evaluation in 2018, and especially after the interim phase 2016-2020, IGB has undergone significant structural changes, reconfiguring the departments and establishing overarching thematic programme areas as well as infrastructure-related competence and technology platforms. We are very pleased that the review board recognised this as a success and also acknowledged other improvements in our organisational and operational structure to achieve very good working conditions for all our staff members. We greatly appreciate the recognition of IGB's strong engagement in the National Research Data Infrastructure (NFDI), which underscores the institute's commitment to advancing open and sustainable research data management. All of this contributes to the positively highlighted research results and highly visible communication of these results.

With regard to the change in leadership positions, the evaluation committee concluded that future department head positions should be filled in open recruitment processes as part of joint appointment procedures. This is in line with the general practise, also at IGB. Exceptions have been made, however, to promote highly qualified internal candidates while carefully considering the institute's financial resources, particularly in light of the interim phase and the position of a scientific director to be filled within the next years.

The review board acknowledged the increased use of major IGB infrastructures such as the LakeLab and the isotope facilities. We will continue to proactively approach potential cooperation partners, fully exploiting the facilities' potential for high-quality publications to the best of our abilities.

Training of the next generation of freshwater researchers and leaders is part of IGB's mission and we will follow up on our efforts towards transparent and coordinated training and educational measures for our doctoral candidates. We also appreciate the recognition of our commitment to increasing the share of female scientists in leadership positions, which will remain a priority. Important progress has been made in recruiting excellent female scientists as group leaders within the framework of the extraordinary item of expenditure (STB: Sondertatbestand). These efforts will be expanded to encompass all leadership positions.

As stated in the report of the review board, it is of utmost importance to IGB that the process to recruit a new scientific director is concluded as quickly as possible, also to timely allow for a further sharpening of IGB's profile.

With regard to the near future, we appreciate the review board's positive assessment of our plans for the implementation of the STB and its potential to foster highly innovative research. This will play a key role in IGB's scientific development in the upcoming years. As recommended in the report of the review board, we will continue with

measures taken in response of the previous evaluation to further improve governance structures and working conditions at IGB as well as promoting innovative and impactful research.