

Leipzig, 24 October 2019

General information about the sDiv framework

1 About iDiv

The central mission of the **German Centre for Integrative Biodiversity Research (iDiv)** Halle - Jena - Leipzig is to promote **theory-driven synthesis and data-driven theory** in biodiversity sciences and to provide the **scientific foundations for the sustainable management of biodiversity**. iDiv is one of seven **National Research Centres** with **nine Professorships, five junior research groups, the graduate school yDiv, a strong Bioinformatics, IT and Outreach unit and the Synthesis Centre for Biodiversity Sciences (sDiv)**. iDiv itself is funded by the German Research Foundation (DFG FZT 118). It is located in the city of Leipzig, jointly hosted by the Friedrich Schiller University Jena (FSU), the Martin Luther University Halle Wittenberg (MLU), the Leipzig University (UL), and the Helmholtz Centre for Environmental Research – UFZ. It is additionally supported by the Leibniz Association, the Max Planck Society, and the Free State of Saxony.

iDiv's four overarching key research questions and corresponding [research areas](#) are:

1. How can we reliably quantify and understand the state and change of biodiversity across space and time in response to natural and anthropogenic drivers? (Research area A "**Biodiversity Patterns**")
2. What are the evolutionary and ecological processes generating and maintaining biodiversity? (Research area B "**Biodiversity Processes**")
3. What is the role of biodiversity in regulating ecosystem functioning and provisioning of services to humanity (Research area C "**Biodiversity Functions**")
4. How can biodiversity be integrated in the management of our planet's resources and how can we safeguard biodiversity (Research area D "**Biodiversity and Society**")

iDiv has developed a new research field: "Integrative Biodiversity Research". Integration is a main theme of [iDiv's mission](#) – this is what the "i" in iDiv stands for and takes place on several levels:

1. Integration across time and space
2. Integration across complexity levels
3. Integration across disciplines

sDiv

The Synthesis Centre of iDiv

Contact

Dr Marten Winter

scientific coordinator sDiv

Address

German Centre for Integrative
Biodiversity Research (iDiv)
Halle-Jena-Leipzig
Deutscher Platz 5e
04103 Leipzig, Germany

Phone: +49 341 9733129

Fax: +49 341 9739358

marten.winter@idiv.de

www.idiv.de

German Centre for Integrative
Biodiversity Research (iDiv)
Halle-Jena-Leipzig
Deutscher Platz 5e
04103 Leipzig, Germany

UST-IdNr. DE 141510383

iDiv is a central facility of the Leipzig University within the meaning of Section 92 (1) of the Act on Academic Freedom in Higher Education in Saxony (Sächsisches Hochschulfreiheitsgesetz, SachsHSFG). It is run together with the Martin Luther University Halle-Wittenberg and the Friedrich Schiller University Jena, as well as in cooperation with the Helmholtz Centre for Environmental Research – UFZ.

The following non-university research institutions are involved as cooperation partners: the Helmholtz Centre for Environmental Research – UFZ, the Max Planck Institute for Biogeochemistry (MPI BGC), the Max Planck Institute for Chemical Ecology (MPI CE), the Max Planck Institute for Evolutionary Anthropology (MPI EVA), the Leibniz Institute DSMZ–German Collection of Micro-organisms and Cell Cultures, the Leibniz Institute of Plant Biochemistry (IPB), the Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) and the Leibniz Institute Senckenberg Museum of Natural History Göttingen (SMNG).

2 Goals of sDiv – the tool to create synergy

Addressing these questions, topics and integrating their answers into a comprehensive theory of biodiversity and successful real-world applications represent a major technological and intellectual challenge. To meet this challenge, iDiv will conduct and promote excellent science as well as explore new territory with respect to communication structures and outreach. One of our main measures taken to ensure close collaboration between theoreticians, empiricists, and practitioners inside and outside of iDiv is **the establishment and maintenance of networks within the scientific community and with the public**. Fostering collaboration between scientists across the world is one of the central tasks of [sDiv](#), which is embedded within iDiv (Figure 1).

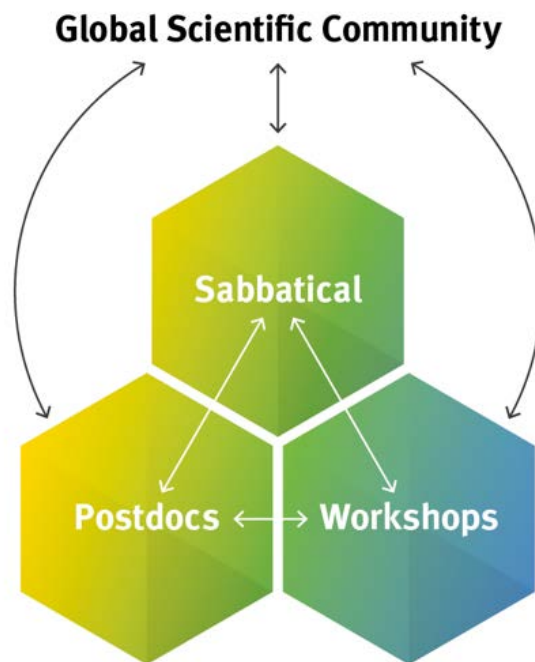


Figure 1: Structure of sDiv and the global scientific community of biodiversity research.

Building upon experience gained in other successful synthesis programmes, we have established sDiv to offer **national and international working groups, postdoc positions and a sabbatical programme**. sDiv is an important instrument of iDiv to foster theoretical and synthetic thinking in biodiversity sciences by bringing together researchers from different projects and disciplines and by providing conditions that promote the creative process.

Though a stand-alone construct, sDiv is physically integrated into the active research centre of iDiv, with over 160 scientists, covering a wide spectrum of modern integrative biodiversity research.

The core of the iDiv philosophy is that of synergy and integration, which is achieved by **interaction between sDiv visitors and resident scientists**. Formally, this is achieved by **inclusion of at least one iDiv member in each sDiv project** and by a mandatory seminar open to all iDiv scientists usually during the course of the 1st working group meeting. Interaction within and beyond the working group members is promoted by an informal get-together with iDiv researchers after the seminar and with white boards and various open spaces. We hope that sDiv visitors will bring in fresh ideas and views and may be interested in collaboration with iDiv scientists beyond the scope of their working group. The body of resident scientists in turn represents a unique concentration of expertise in biodiversity science, and sDiv visitors are encouraged to approach them for help, discussions and participation. **sDiv postdocs and sabbaticals have to have at least one iDiv member as mentor, supervisor and/or Co- or full PI.** [sDiv-funded working groups](#) can organize two or three meetings over a period of one to three years.

Together with a large group of international synthesis centres, sDiv is part of the informal [International Synthesis Consortium](#). We developed close cooperation across centres, including joint calls with jointly funded projects, exchange of applications and evaluation tools.

sDiv is lead and coordinated by [Dr. Marten Winter](#), a scientist with a strong background in biodiversity research, supported by a dedicated administrative team. sDiv is supported as a top priority by iDiv's General IT Support Unit, the Bioinformatics and Biodiversity Informatics Unit and the centre's administration.

As part of our equal opportunity policy, **iDiv provides an option for flexible childcare**. If you have any further questions regarding this subject please read the relevant call documents and contact the sDiv coordinator.

In a nutshell: **sDiv, the Synthesis Centre of iDiv, is an incubator for new ideas – a think tank and place of inherent horizon scanning. This “hot spot” of biodiversity science** brings together extremely skilled and open-minded international scientists in a very interactive and fruitful atmosphere, and last but not least is being situated in Leipzig, a great place to live or visit and one of the “must-see places” according to the [NY Times](#).

3 Instruments of the Synthesis Centre

The [sDiv advisory board](#) consists of 13 members, **being leading biodiversity scientists**, representatives of each of the four iDiv founding institutions (FSU, MLU, UL, UFZ) and the sDiv coordinator. The sDiv board is appointed by the iDiv directorate. Proposals for working groups and postdocs are usually evaluated within 12 weeks after the submission deadline by the sDiv board and external reviewers.

- **Working groups**

Applications are **open to all scientists worldwide**. All fields involved in biodiversity research are welcome, ranging from biology to social or computer sciences. Working groups should focus on a concrete topic, with the aim of delivering a specific product. Outcomes are typically multi-author high-quality and ideally high-impact scientific publications. **Existing and new concepts, theories, approaches to data exploration, experiments, modelling and synthesis can be discussed and developed, with a strong and direct link integrating existing approaches and fostering, directly or indirectly, predictive biodiversity theory.** Similarly, working groups that initiate collaborative projects beyond the sDiv working groups itself are highly welcome. Working groups addressing socio-economic aspects of biodiversity science should involve stakeholders and social scientist.

Generally, deliverables can include concepts for practitioners of how biodiversity can be safeguarded and tools to disseminate such concepts to policy makers and the stakeholder community (e.g. software, websites, and databases).

PIs should strive for a well-balanced group of participants in terms of **gender balance, career stage, internationality and expertise diversity**. Also, at least **one iDiv [member](#) should be part of the working group (see goals of sDiv)**.

Successful groups consist of **people with excellent expertise but also with dedication and time to participate** in the meetings and to work on the working group goals. A well-balanced group of researchers at all levels is an important criterion for accepting applications for working groups. The availability of early results during the limited timeframe of a meeting typically boosts the intellectual progress.

Additionally, the application for a working group project can include a **request for support by a postdoc**. The postdoc works on the specific working group topic under the supervision of the PI(s), with additional supervision by the sDiv coordinator.

- **Individual Postdoc fellowships**

The aim of the sDiv postdoc fellowships is to allow **early-stage scientists to conduct synthesis projects** in a stimulating and supportive international environment. The projects should be related to one of the four key research areas of iDiv. After the recent decade of successful platform building and data generation, we perceive a need to synthesize biodiversity knowledge in order to **develop a more coherent theoretical framework for biodiversity science**. Therefore, postdoc projects addressing synthesis and theory projects, preferably those capitalizing on data available, e.g. through iDiv platforms, will be preferentially considered. Postdocs will be integrated into iDiv working groups and are expected to contribute to working groups where it makes sense, for example by crafting meeting results and ideas into high-impact publications. **Any postdoc at sDiv will receive a supervision and mentoring by an iDiv researcher**. The mentoring programme includes attendance in lab meetings, a general support for career development via the possibility of attending and leading courses at iDiv's graduate training school yDiv, co-supervision of PhD students (if applicable), and many other career counselling aspects.

- **Sabbatical programme**

Interactions and scientific involvement of sDiv visiting scientists are a central mechanism which contributes to iDiv's mission to be a leading biodiversity research centre. **sDiv sabbatical fellows play an important role in contributing to the iDiv mission through their intellectual and social interactions, sharing their vision, experience and passion for biodiversity research**. The sabbatical programme is designed to attract leading scientists in biodiversity research for a **period from three month up to one year** (can be split into several shorter-term periods). sDiv sabbatical fellows should have strong, well justified and specific ideas about their synthesis project(s) to be carried out during their stay at iDiv. **All synthesis topics in biodiversity research are welcome, ranging from biology to social or computer sciences**, preferably related to the core research questions of iDiv. To ensure mutual benefits and efficient communication between iDiv scientists and sDiv sabbatical fellows, sabbatical fellows are an integral part of the sDiv community, e.g. formal and informal presentations on their research, initiating new projects, or mentorship of PhD and postdocs.