Call for Proposals

Nr. 115 **11 December 2024**

Priority Programme "Biodiversity Exploratories" (SPP 1374)

The Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) calls for proposals under the Infrastructure Priority Programme "Exploratories for Large-Scale and Long-Term Functional Biodiversity Research", which was established in 2006.

Research in the Biodiversity Exploratories encompasses comparative, experimental and theoretical approaches, as well as scientific syntheses, addressing the following themes:

- relationships of land use and land-use intensity with all facets of biodiversity, from the genetic to the community level;
- consequences of changes in land use, land-use intensity and biodiversity for the functioning of ecosystems, communities, populations and for ecosystem services;
- the social-ecological causes and consequences of the relations between land use, biodiversity and ecosystem services.

Since 2006, the Biodiversity Exploratories have contributed substantially to an in-depth understanding of land use – biodiversity – ecosystem functioning relationships. This revealed strong effects of the intensity of land use on many facets of biodiversity and ecosystem functioning/services in grasslands and forests, as well as many similarities, but also pronounced differences, between grasslands and forests and between study regions (see links below for further information on previous work).

An important and topical research perspective of the Biodiversity Exploratories are the temporal dynamics, stability and resistance/resilience of ecosystems under environmental change, including both land-use change and climate change. The Biodiversity Exploratories are uniquely placed to investigate interacting effects of climate change, land use on biodiversity and ecosystem services. Research on temporal patterns of stability, on responses to perturbations by land use, weather/climate or experimental treatments, and on mechanisms underlying stability is therefore encouraged by this call (see link below for further information).

Moreover, social-ecological research, focusing on the causes and consequences of the relationship between land use, biodiversity and ecosystem services, is an important emerging field to be addressed in the new phase. Such social-ecological research (e.g. on, but not limited to, social, economic or governance aspects) is encouraged by this call and should specifically address the context of the study regions of the Biodiversity Exploratories and of the land use in these regions.

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This call addresses research groups with expertise in the research areas described above. The DFG will fund empirical projects on these topics using comparative, experimental or social-ecological approaches. Projects using theoretical approaches and projects aiming to create added value by scientific synthesis of existing data and information are encouraged, too.

All projects should clearly relate to and use existing data of the Biodiversity Exploratories, as outlined below, and aim at conceptual, causal and mechanistic advances. All proposals, i.e. new proposals as well as renewal proposals for Biodiversity Exploratories projects, must clearly describe how they will contribute to a causal and mechanistic understanding of the studied processes, how the planned research fits conceptually to the Biodiversity Exploratories and how it uses the common design and complements existing research.

To create added value, it is essential that research projects make use of the common research design (see link to the research design below). This involves three study regions, the so-called Exploratories. In each Exploratory, 500 plots in forests and 500 plots in grasslands were initially surveyed, and their land use, soil and vegetation were inventoried. Out of these 3,000 plots, 50 forest plots and 50 grassland plots were selected in each Exploratory (150 grassland plots and 150 forest plots overall) and established for intensive research. These so-called Experimental Plots (EPs) represent the gradient of land-use intensities in the study regions. To contribute added value to the joint database, all proposed research projects need to consider all experimental plots in grasslands or in forests, or both. For particularly labour-intensive investigations, the use of a predefined subset of plots may be planned:3x25 medium-intensity plots (MIPs) or 3x9 very-intensive plots (VIPs) of the 150 grassland or forest plots (see link to the research design below).

Research projects that cover land-use effects across EPs in forests and grassland may in addition consider a set of 42 plots on arable fields (14 for each Exploratory) to facilitate comparisons across land-use types spanning the full gradient of land-use intensities between and within forests, grasslands and arable fields. These plots on arable fields will be available in 2026 along with baseline data on climate, vegetation, soil seed banks, arthropods, soil microbes as well as physical and chemical soil parameters. In parallel, information on crop rotation and land-use intensity will be available for these plots (see link below for further information about arable field plots). It is mandatory that research on arable plots is combined with work conducted on grassland and forest plots. Projects with a pure focus on arable land are therefore not encouraged by this call.

Large manipulative multi-site experiments (called REX, LUX and FOX), set up in 2020, are also available, both in forests (FOX) and in grasslands (REX, LUX), and are open for all projects. The rationale and design of these experiments is detailed on the website (see link to the design of REX, LUX and FOX below).

In 2025, a new experiment termed BEClimWood will be established to be available in 2026 in 30 forest plots (all the forest VIPs), focusing on biodiversity and ecosystem processes in deadwood trunks from beech and pine, and addressing how the interacting effects of rain-out shelter treatments and various degrees of soil contact depend on management and biodiversity of the surrounding plots (see link below for more details).

In addition to these larger experiments, research suggesting further small-scale experiments is also welcomed by the call. These should be replicated in as many plots along the land-use intensity

gradient as possible and in all three Exploratories, to reveal how experimental treatment effects differ between regions and among sites of different land use and biodiversity.

Before writing a proposal, investigators should consult Fischer et al. (2010), Basic and Applied Ecology, 11: 473–485, for a detailed description of the rationale and the design of the Exploratories, and the Exploratories website for further information (link see below). New projects are strongly encouraged to take advantage of the large body of data collected in the Exploratories over the last eighteen years. These data are managed in the Biodiversity Exploratories Information System (BExIS). Many datasets are publicly available there. Moreover, upon registration at BExIS, the metadata of not yet public datasets can also be explored (see link to BExIS and publicly available datasets below).

The starting date proposed for all new projects is **1 March 2026.** The duration of the projects should be 36 months and cannot exceed this period. To foster collaboration and synergy, successful applicants and their team members are expected to collaborate according to the rules of procedure of the Biodiversity Exploratories, to attend the annual assembly and to actively participate in relevant workshops and thematic group discussions of the Biodiversity Exploratories.

Interested applicants are asked to send a very short summary of the intended research no later than **16 January 2025** by email to the scientific coordinator of the Biodiversity Exploratories (see contact below). These summaries should contain the name of applicant(s) and their institution(s), a preliminary title, a maximum of 5 lines of text as well as one or several of the following keywords for the scale at which the work will be conducted: EPs; MIPs; VIPs; FOX; REX; LUX; BeClimWood; forest; grassland; "forest, grassland and arable fields"; theory and modelling; synthesis; social-ecological research. To facilitate mutual information and coordination among applicants, these short summaries will be compiled and made available to all applicants (in one password-protected file) named in these summaries.

On **21 January 2025,** an information event will be held that is open to all potential applicants. This event will take place from 3 pm to 5 pm as a video conference. To register for this event, please send an e-mail to the scientific coordinator (see contact below). Presentations on the rationale, design and research of the Biodiversity Exploratories will be followed by a discussion of open questions. A summary of important information from this event will be available on the project website soon after the event.

Proposals must be written in English and submitted to the DFG by **2 April 2025.** Please note that proposals can only be submitted via elan, the DFG's electronic proposal processing system.

Applicants must be registered in elan prior to submitting a proposal to the DFG. If you have not yet registered, please note that you must do so by **26 March 2025** to submit a proposal under this call; registration requests received after this time cannot be considered. You will normally receive confirmation of your registration by the next working day. Note that you will be asked to select the appropriate Priority Programme call during both the registration and the proposal process.

If you wish to submit a proposal for a new project within the existing Priority Programme, please go to Proposal Submission – New Project – Priority Programmes and select "SPP 1374" from the

current list of calls. Previous applicants can submit a proposal for the renewal of an existing project under Proposal Submission – Proposal Overview/Renewal Proposal.

When preparing your proposal, please review the programme guidelines (DFG form 50.05, section B) and follow the proposal preparation instructions (DFG form 54.01). These forms can either be downloaded from our website or accessed through the elan portal.

Please note
Compared with the last proposal phase, there is a new proposal template. Proposals based on the old template cannot be accepted. In addition, each applicant has to submit a CV (DFG form 53.200).

The review colloquium for the Priority Programme will be in the **second week of July 2025,** attendance of applicants is envisaged for one day (exact date will be communicated later).

The DFG strongly welcomes proposals from researchers of all genders and sexual identities, from different ethnic, cultural, religious, ideological or social backgrounds, from different career stages, types of universities and research institutions, and with disabilities or chronic illness. With regard to the subject-specific focus of this call, the DFG encourages female researchers in particular to submit proposals.

Further Information

Further information about research infrastructure and current activities in the Biodiversity Exploratories Schorfheide-Chorin, Hainich and Schwäbische Alb can be found at:
www.biodiversity-exploratories.de/en
www.biodiversity-exploratories.de/en/public-releases/publications/

Stability and climate change:
www.biodiversity-exploratories.de/wp-content/uploads/stability-and-climate.pdf

Research design:
www.biodiversity-exploratories.de/en/about-us/research-design/#section-comparative-approach

Arable field plots:
www.biodiversity-exploratories.de/wp-content/uploads/arable-fields.pdf

Multi-site experiments (REX/LUX, FOX):
www.biodiversity-exploratories.de/en/about-us/research-design/#section-large-scale-experiments

BEClimWood:
www.biodiversity-exploratories.de/wp-content/uploads/beclimwood_design_public.pdf

Services provided by the planned Core Projects:
www.biodiversity-exploratories.de/wp-content/uploads/infrastructure-information-provided-by-core-projects.pdf

Biodiversity Exploratories Information System (BExIS):
www.bexis.uni-jena.de
www.bexis.uni-jena.de/ddm/publicsearch/index

Rules and procedures of the Biodiversity Exploratories:
https://zenodo.org/records/13985687

The elan system can be accessed at:
https://elan.dfg.de/en

The latest DFG forms 50.05, 54.01 and 53.200 can be downloaded at:
www.dfg.de/formulare/50_05
www.dfg.de/formulare/54_01
www.dfg.de/formulare/53_200_elan

Questions with regard to scientific contents should be directed to the current and future speaker and scientific coordinator of the Biodiversity Exploratories:
Professor Dr. Markus Fischer, Universität Bern, markus.fischer@ips.unibe.ch,
Professor Dr. Nico Blüthgen, Technische Universität Darmstadt, bluethgen@bio.tu-darmstadt.de
and
Dr. Victoria Grießmeier, Senckenberg Biodiversität und Klima Forschungszentrum Frankfurt,
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Questions on the DFG proposal process can be directed to:
Programme contact: Dr. Meike Teschke, phone +49 228 885-2336, meike.teschke@dfg.de
Administrative contact: Tanja Zdebel, phone +49 228 885-3105, tanja.zdebel@dfg.de