UFZ HELMHOLTZ Centre for Environmental Research

www.ufz.de

UFZ Call for Expression of Interest –

Helmholtz Investigator Group on Planetary Solutions

The Helmholtz Centre for Environmental Research (UFZ) has excellent reputation as an international competence center for environmental sciences. We are part of the largest scientific organization in Germany, the Helmholtz Association. Our research seeks to find a balance between social development and the long-term protection of our natural resources.

The UFZ invites Expressions of Interest from outstanding early-career scientists (2-6 years post PhD) seeking to establish an independent Helmholtz Investigator Group at the UFZ. The selection follows a two-stage process:

1. Initial selection by the UFZ, identifying candidates with exceptional scientific excellence, strategic fit to our mission and leadership potential.
2. Final selection by the Helmholtz Association involving an international expert panel.

Successful candidates will be supported in submitting a competitive proposal to the Helmholtz Association and in building a high-visibility, internationally competitive research group at UFZ.

Announcement

The Helmholtz Center for Environmental Research (UFZ) invites Expressions of Interest from outstanding early-career scientists (2-6 years post PhD) to apply for their own *Helmholtz Investigator Group* (standard track) along one of our thematic tracks. Successful Helmholtz Investigator Groups will be hosted at UFZ, receive five years of dedicated funding, and - subject to a positive evaluation at the end of the funding period - be offered a permanent position.

Thematic track

The UFZ advances planetary solutions to climate change, biodiversity loss and pollution through integrative, cross-disciplinary research.

Within the Helmholtz Investigator Group Call, we invite proposals that strengthen UFZ's core expertise addressing one of the following themes for which we seek experts to strengthen our future research program.

I – Urban footprints in the landscape water cycle (water quantity, quality or ecological effects)

The UFZ Research Unit Water Resources and Environment is looking for a leader of an investigator group on the footprint of cities on water systems of the surrounding landscape and on options to reduce their impacts on the terrestrial water cycle and the associated aquatic ecosystems. The thematic focus could either be on water (quantity/quality) and the landscape water balance or on effects on the aquatic ecosystems (biodiversity, ecological processes) and should generate synergies with research priorities of the Research Unit. The successful candidate should apply state-of-the art methods in either aquatic ecology and biodiversity research (e.g., environmental Omics, eDNA,

etc.) or hydrology (e.g. integrated modeling and/or AI-based assessments of linked urban-periurban water systems). With a focus on the links between cities and their surrounding landscapes, the work should be complementary to the present water research at UFZ and therefore neither have a pure chemical or ecotoxicological focus nor a pure urban focus.

Contact: Markus Weitere *(tbl-water@ufz.de)*

II – Water-related solutions for climate-resilient urban development

The UFZ Research Unit Sustainable Ecotechnologies invites research proposals for an investigator group on water-related solutions for climate-resilient urban development.

The planned group will advance knowledge and technologies for systemic transformations in cities, with a focus on water-related challenges and solution strategies for urban climate adaptation. Key themes include comparative assessments of urban water systems in different contexts, model-based scenarios for future-proof urban water management, coupling of urban water and microclimate models (e.g. irrigation, cooling, ventilation), and the analysis of legal, regulatory and governance settings. Functional Digital Twins are envisaged to support local implementation and scaling of climate adaptation measures.

The investigator group will work in a broad, diverse and interdisciplinary environment across natural sciences, engineering, social sciences, economics, data science with strong links to municipal practice and other stakeholders.

Contact: Roland Müller *(roland.mueller@ufz.de)*

III – Digital Hydro-Twins for Water Resources Management

The UFZ Research Unit Smart Models and Monitoring is seeking a candidate to lead an investigator group on digital hydro-twins for water resources management. The thematic focus aligns with the Unit's mission to deepen the understanding of complex environmental systems and to provide reliable predictions of their responses to human-induced changes by integrating advanced hydrological modelling with real-time monitoring and forecasting.

The investigator group is expected to advance the development of groundbreaking digital hydro-twins by combining expertise in hydrological modelling with cutting-edge AI-based modelling and analysis techniques. The work should focus on creating frameworks capable of simulating real-time global scale water cycle dynamics, including human water demand at high spatial resolution. Given the critical role of water management in multifunctional landscapes, this research will enable decision-makers to explore sustainable and resilient strategies in response to climate-change-related challenges.

Contact: Sabine Attinger *(sabine.attinger@ufz.de)*

Before applying for one of these themes, please get in touch with the according contact person.

Eligibility

Due to Helmholtz requirements, you will be eligible to apply if you have between two and six years of postdoctoral experience. Periods of parental leave and childcare responsibilities are taken into account; for further details, please refer to the *official call*. Additional requirements include substantial international research experience, evidenced by a continuous research stay of at least six months during the doctoral or postdoctoral phase, as well as an exceptionally strong academic track record and a high-quality draft proposal aligned with one of the thematic tracks outlined above.

Selection Process

The selection follows a two-stage process:

1. Initial selection by the UFZ, identifying candidates with exceptional scientific excellence, strategic fit to our mission and leadership potential
2. Final selection by the Helmholtz Association involving an international expert panel

The initial selection by the UFZ will be based on the following criteria:

1. Outstanding scientific achievements and research experience of the candidate
2. Quality and strength of the submitted project summary
3. Compatibility with one of the thematic tracks outlined above
4. Leadership potential, in particular the ability to supervise international and diverse doctoral researchers

Please send a letter of intent, a project summary referring to one of the thematic tracks (not exceeding 6000 characters), a full CV and publication list to *hartwig.pohl@ufz.de* by **23 January 2026**.

Interviews will be scheduled from 26 January till 6 February 2026. By end of February, successful candidates will be informed by the UFZ executive management and asked to provide a jointly developed full proposal until 4 May 2026.

Information: *www.ufz.de/helmholtz-investigator-groups*