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**Leibniz Research Network Biodiversity
Leibniz Institute for Baltic Sea Research Warnemünde**

**From knowledge to action:
“10 Must Knows” as a guide to preserving biodiversity**

From as yet undiscovered biodiversity to resilient forests and the impact of food consumption on nature: 64 experts have now published their knowledge and recommendations in the form of “10 Must Knows from Biodiversity Science” for 2024. The Leibniz Research Network Biodiversity’s new report provides policymakers and society with concrete ways to effectively conserve and sustainably use biodiversity at the local, national, and European levels and thereby also mitigate climate change. With this publication, the researchers contribute current scientific facts to the debate on the German National Biodiversity Strategy, which is to be adopted before the next United Nations Biodiversity Conference in autumn 2024.

“We are already exceeding planetary boundaries, both in terms of global warming and biodiversity loss. Joint responses are needed to counter these crises. We know that preserving biodiversity can significantly contribute to mitigating climate change, for example through biodiverse forests and rewetted peatlands that can act as carbon sinks. Only by focusing on measures to protect biodiversity can we succeed in tackling both crises at the same time,” says Kirsten Thonicke, lead author and Deputy Head of Research Department “Earth System Analysis” at the Potsdam Institute for Climate Impact Research (PIK), who coordinates the research network.

Following the great response to the “10 Must Knows from Biodiversity Science” first published in 2022, scientists from a total of 52 German and international research institutions have now contributed their expertise from the environmental, life, spatial, social, humanities and economic sciences to the new version. “Our recommendations summarise the research available today for decision-makers. The Must Knows are intended to provide guidance on how to implement the globally agreed biodiversity targets in the German context,” says author Sibylle Schroer from the Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB). “This also includes the awareness that so far we only understand a relatively small part of biodiversity. Recognising this fact, is a crucial step towards more sustainable environmental policies. These policies should focus on ecosystem-based habitat management – and thus the functions and interactions between species and habitats, rather than just individual species and habitats.”

Concentrated biodiversity knowledge from 64 experts across all disciplines

To implement the 23 global biodiversity targets agreed by United Nations member states at the UN Biodiversity Conference in December 2022 (COP 15), the German National Biodiversity Strategy 2030 is currently being developed. The strategy aims to preserve and protect biodiversity in Germany. In order to provide up-to-date facts from the scientific community, the first version of the “10 Must Knows” from 2022 was expanded to include numerous aspects and brought up to date with the help of current literature. The new report addresses, among other things, how the impact of food consumption on biodiversity can be reduced in concrete terms: “Understanding and using biodiversity as a crucial production factor can help to stabilise yields, enhance agricultural resilience and turn us all into biodiversity managers, whether we are producers or consumers,” says author Jens Freitag from the Leibniz Institute of Plant Genetics and Crop Plant Research (IPK). The authors offer practical suggestions for policymakers and provide citizens with specific options for taking action in society.

The BMBF Research Initiative for the Conservation of Biodiversity (FEa) and the German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig collaborated on the project. The “10 Must Know”s” were commented on by experts from politics, administration, science and associations before publication.

The “10 Must Knows from Biodiversity Science 2024” are:

1. Achieving climate and biodiversity protection together
2. Enabling a healthy life on a healthy planet
3. Considering undiscovered biodiversity
4. Linking linguistic, cultural and biological diversity
5. Harmonising the diverse use of forest ecosystems and biodiversity conservation
6. Transforming agricultural and food systems
7. Protecting land and resources
8. Releasing transformative change through international collaboration and Education for Sustainable Development
9. Ensuring free access and open use of biodiversity-related data
10. Reducing biodiversity impacts from food consumption

Quotes from scientists, who contributed to the “10 Must Knows from Biodiversity Science”:

A healthy planet is pivotal for our human health. Biodiversity conservation and health policy should be linked across sectors because an intact natural environment also promotes physical and mental health. We need a joint global action plan for biodiversity and health. Locally, cities and municipalities should actively work to protect and restore nature, including urban nature, as it positively impacts on health and social well-being.

– **Aletta Bonn**, Helmholtz Centre for Environmental Research (UFZ) Friedrich Schiller University Jena and German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig

National and international agreements on the protection of biodiversity require concrete numbers to implement, assess, and reward conservation measures. Those numbers can only be supplied by research if biodiversity-related data, such as digital sequence information, are freely accessible and openly usable, as well as standardized and sustainably archived across national borders.

– **Christiane Hassenrück**, Leibniz Institute for Baltic Sea Research (IOW)

We should adapt our management practices and spatial planning in a way that reconciles the diverse use of forest ecosystems with biodiversity conservation. This will enable us to counter the increasing negative impacts of climate change in forests while resolving trade-offs between competing forest-related policy objectives. – **Mats Nieberg**, PIK and European Forest Institute (EFI)

Diverse forests and forest structures are the basis for sustainable forest management and of central importance do ensure the provisioning of forest ecosystem services under climate change.

– **Christopher P.O. Reyer**, Potsdam Institute for Climate Impact Research (PIK)

Currently around 60 hectares of new settlement and transport areas are being allocated in Germany every day. This means that the German government's land-saving targets are becoming a distant prospect. Soils can no longer carry out their basic functions, their ecosystem services are being lost and habitats are disappearing. The protection, development and restoration of biodiversity must be given central consideration at all political and planning levels. This applies to international projects as well as to regional and municipal planning. – **Barbara Warner**, Academy for Territorial Development in the Leibniz Association (ARL)

Spatial and landscape planning can deliver valuable concepts for the wider protection and restoration of habitats for plants and animals. These concepts must be implemented consistently and backed up with financial resources. Higher priority must be given to biodiversity protection and the development of habitats in spatial planning decisions on land use. – **Wolfgang Wende**, Leibniz Institute of Ecological Urban and Regional Development (IÖR)

Halting the loss of biodiversity requires comprehensive and swift measures involving various economic and environmental sectors, tackled with great vigour. – **Bernd Hansjürgens**, Helmholtz Centre for Environmental Research (UFZ)

The Earth's true wealth lies in its immeasurable biological diversity. But it seems as if we humans are too short-tempered, too short-sighted to handle this treasure with care. Many know the stock market better than the portfolio of species that nature offers us. It is time to make biodiversity education a goal for all of us - for a biodiversity-friendly world of tomorrow. – **Christoph Scherber**, Leibniz Institute for the Analysis of Biodiversity Change (LIB)

Download the complete document „10 Must-Knows from Biodiversity Science 2024“ here:

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Leibniz Research Network Biodiversity: <https://www.leibniz-biodiversitaet.de/en>

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