

10 Must Knows from Biodiversity Science 2024



10MustKnows24
on Zenodo

WEBINAR

Biodiversity science synthesized for good living and sustainable development

22 May 2024 | 

12:00 - 13:00 UTC | 

Zoom | 



Giles Bruno Sioen
Future Earth Secretariat &
Natl. Institute for Env.
Studies, Japan



Eva Rahner
Potsdam Institute for Climate
Impact Research (PIK)
Coordinator, Leibniz Research
Network Biodiversity



Sibylle Schroer
Leibniz Institute of Freshwater
Ecology and Inland Fisheries,
Scientific Coordinator
Sustainability Research



Hein van der Voort
Museu Paraense Emílio
Goeldi, Belém, Brazil



Kirsten Thonicke
Potsdam Institute for Climate
Impact Research (PIK) &
Speaker, Leibniz Research
Network Biodiversity



Cornelia Krug
bioDISCOVERY & URPP Global
Change and Biodiversity, Dept.
of Evolutionary Biology and
Env. Sciences, Univ. of Zurich

MODERATORS

SPEAKERS



POTSDAM INSTITUTE FOR
CLIMATE IMPACT RESEARCH



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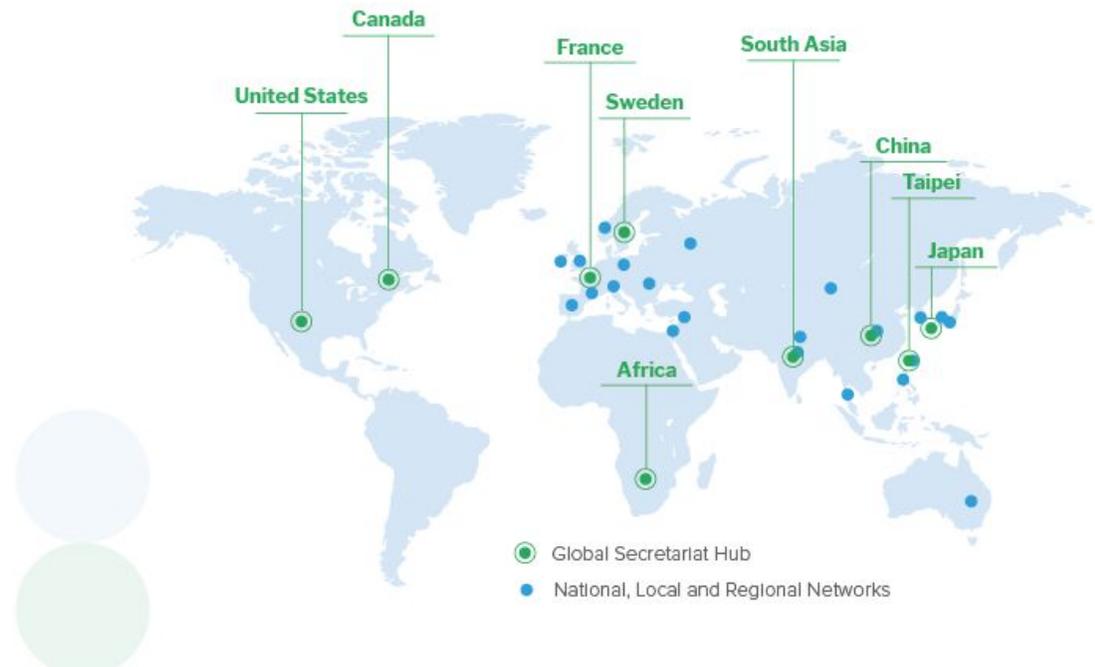
Future Earth is a **global network** supporting collaboration between researchers and stakeholders from all different regions, backgrounds, and sectors who are working to generate actionable, solutions-oriented knowledge needed to support transformations towards sustainability

Future Earth's focus is:

- Facilitating research and innovation
- Building and mobilizing networks
- Shaping the global narrative



A Global Network of Researchers and Innovators



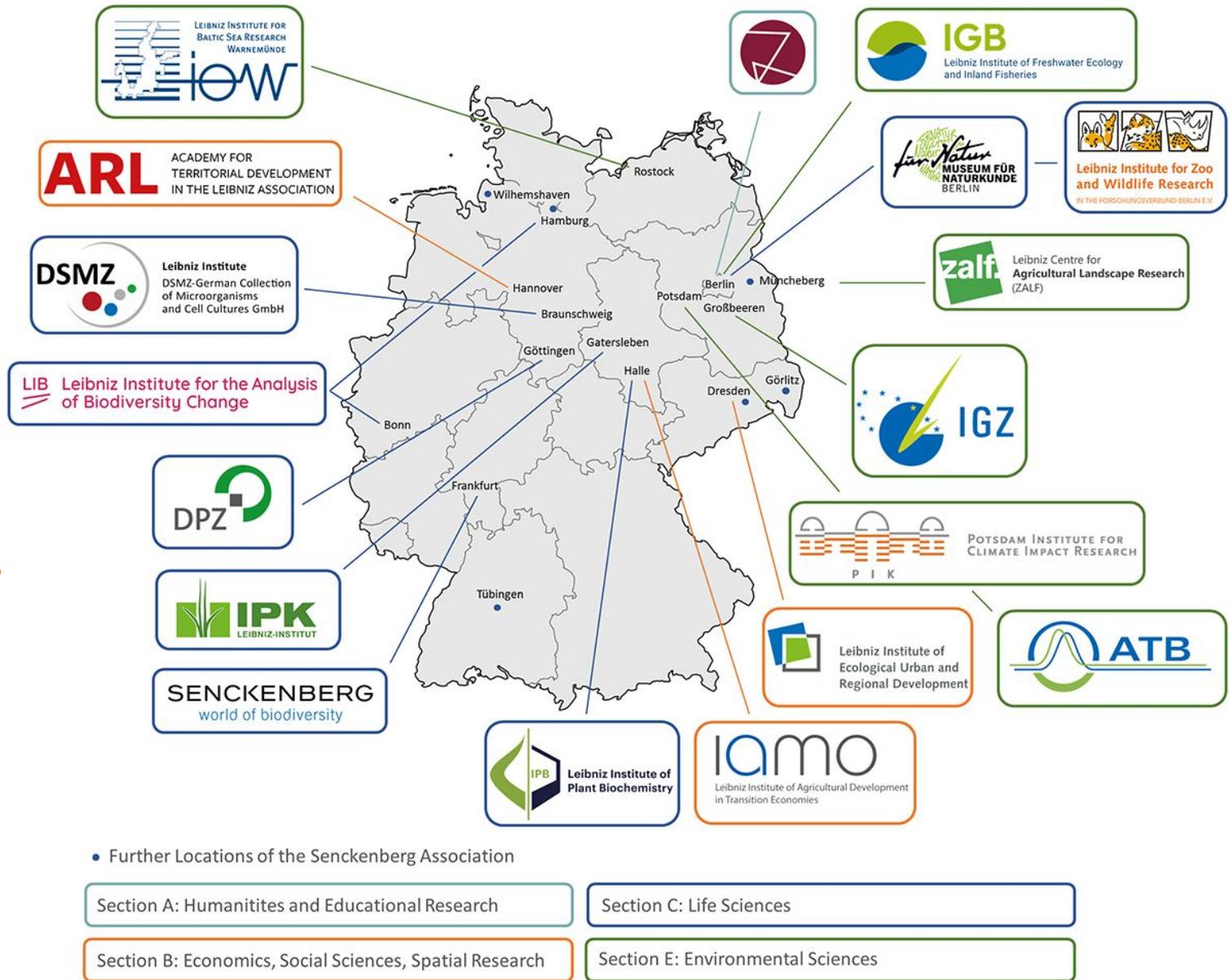
09 Global Secretariat Hubs

27 Global Research Networks

20 National, Local, and Regional Networks



18 German research institutes from the Leibniz Association from environmental sciences to the humanities *conducting research on drivers of biodiversity loss, nature restoration and the multitude of human-environment relationships*

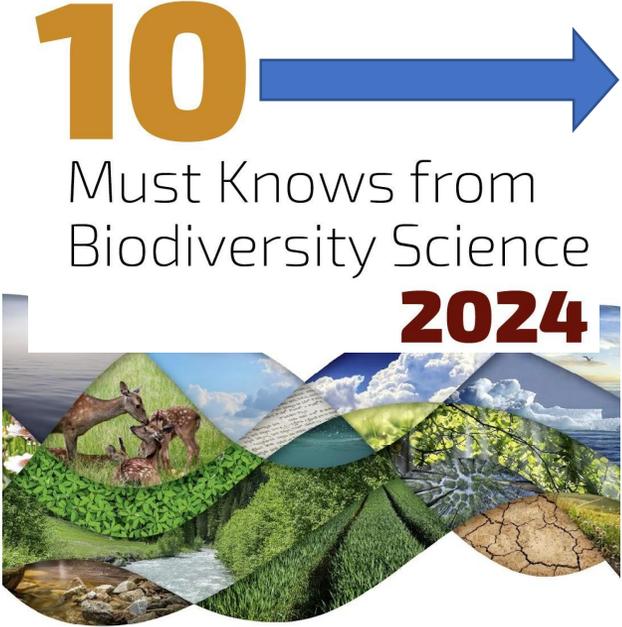


From the Kunming-Montreal Global Biodiversity Framework (GBF) to National Biodiversity Strategies

How can science support the process?



@UN Biodiversity



@BMUV Germany

Science can provide key knowledge

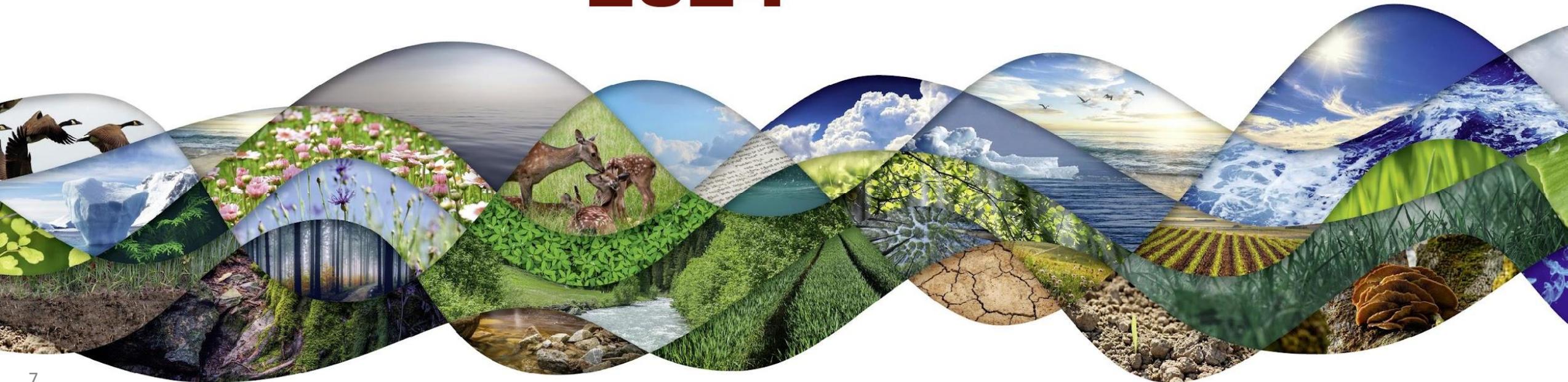
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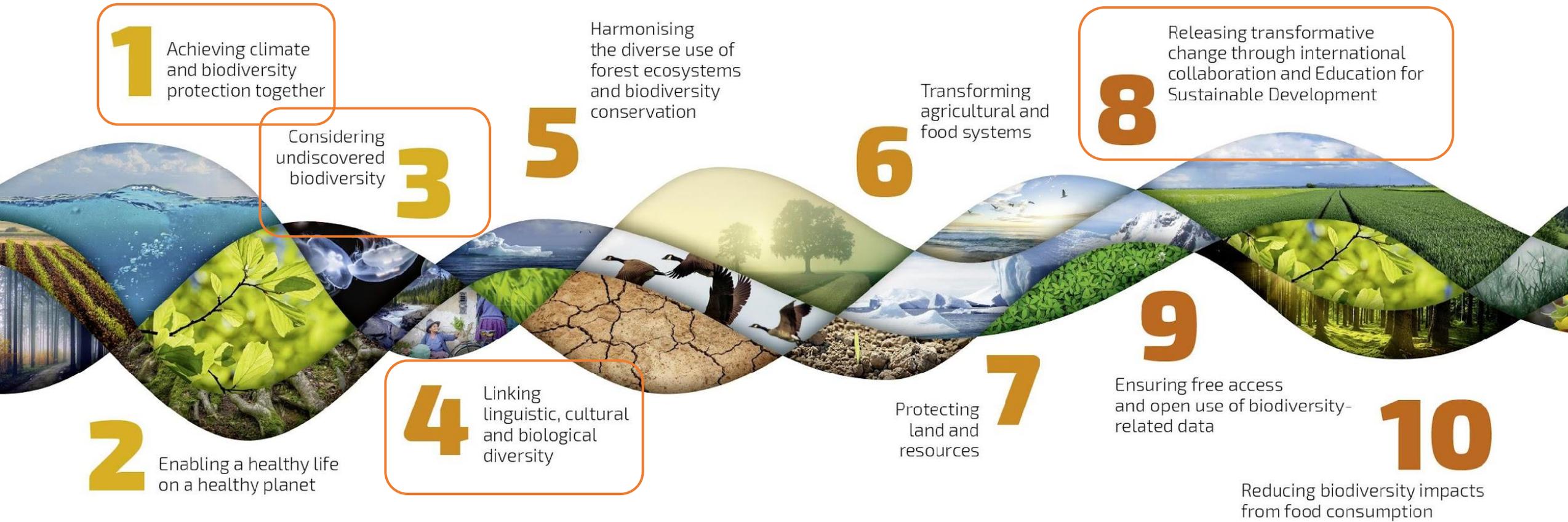
Must Knows from Biodiversity Science **2022**



10

Must Knows from Biodiversity Science **2024**





In cooperation with:



BMBF Research Initiative for the Conservation of Biodiversity



German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig

Other institutions



7 Protecting land and resources

5 key findings

- 1 Biodiversity and the protection, restoration and development of natural resources should be reflected in all land-use discussions, decisions and spatial planning processes at all levels, starting with international and national conservation area planning, including their interconnections (biotope networks), and down to regional and local spatial planning.
- 2 The restoration of degraded areas should begin immediately and must be accelerated.
- 3 Protected areas and their interconnections are the backbone of biodiversity conservation. The weakening of EU species protection standards and landscape-protected areas from other uses, such as photovoltaic systems, must be prevented. New protected area implementation should be enforced, and existing and new areas must be effectively managed.
- 4 Integrative cross-sectoral biodiversity management should also be enforced beyond protected areas, e. g., in agricultural landscapes and forests (>MustKnows5, 6).
- 5 Societal discourses should be initiated and intensified, existing policy and governance instruments strengthened and supplemented by new ones in a targeted manner. Stakeholders should be enabled to recognise the consequences of their actions, so that they avoid negative impacts and make effective contributions to biodiversity conservation (>MustKnow6). This is a central prerequisite for *socio-ecological transformation*.

Central message

Since 2022, the social debate on transformation has intensified once again, and policymakers and planners are faced with increasing and often conflicting courses of action. The conservation of biodiversity and natural resources must have top priority in land use and spatial planning decisions.

Explanation of key findings

To implement the GBF targets, spatially designated and cross-sectorally integrated targets are required, particularly at local and regional levels.

Biodiversity protection must be integrated into land-use decisions across sectors and substantiated and made binding in spatial planning. Avoiding adverse impacts on biodiversity have to be given priority over other interests. Current

accelerated legislative timetables that weaken species protection laws in the transport, industrial, and renewable energy and building sectors and that limit impact regulation to actual compensation or compensation payments are heading in the wrong direction (cf. results of the government coalition committee of March 2023). Instead, exploring sustainable development synergies should have priority. To this end, it is

vital to monitor whether GBF targets are being achieved. Every project and associated land consumption should be assessed for its compatibility with the conservation of nature and landscape, biodiversity and land-use targets.

The *EU Nature Restoration Law* constitutes an important basis for the restoration of nature, covering all ecosystems. One of its provisions is the restoration of degraded

3x A 3-fold internal development is necessary. This triple development is to develop mobility, green and open spaces and building together in a qualified approach¹⁷.

268,721 Global management effectiveness of protected areas: 268,721 protected areas exist worldwide: 16% of the terrestrial and inland waters are under protected area coverage¹⁸. Only 59 sites are listed (as of October 2023) in the *IUCN Green List* of protected or conserved areas that are certified and recognised as achieving ongoing results for people and nature in a fair and effective way.

50% Less than 50% of water bodies in the EU exhibit good ecological status. In Germany, more than 95% of original peatlands have been drained. Thus, it is not surprising that biodiversity is most threatened in aquatic ecosystems¹⁹.

wetlands and peatlands, which is also called for in Germany's *Action Plan on Nature-based Solutions for Climate and Biodiversity (ANK)*. On 27 February 2024, the European Parliament passed the EU Nature Restoration Act. This law must now be implemented with ambitious national standards. Potential areas for the restoration of ecosystems must be identified, saved and developed. It is furthermore vital to regularly monitor whether GBF targets are being achieved.

Target 3 of the *Kunming-Montreal Global Biodiversity Framework (GBF)*, which calls for the effective conservation and management of 30% of terrestrial and inland waters, and of marine and coastal areas, requires an effective protection status for protected areas (>MustKnow7); it is not sufficient to

merely sum up existing protected areas. Besides achieving the quantitative target, it is also indispensable to foster effective qualitative protection²⁰.

A green infrastructure concept²¹ and a nationwide biotope network should go beyond the existing protected area landscape, linking protected areas and biodiversity hotspots on a large scale in a legally binding manner. This network could be implemented by a new *Naturflächengesetz* (Act on the Required Extent of Natural Areas). The protection of biodiversity, water, soil and climate should be interlinked to ensure consistent and comprehensive resource protection. *Nature-based solutions* are the first choice both in the urban and rural context, as they form a basis for water retention, the protection of

open and green spaces, the restoration of groundwater reserves and climate mitigation, but also due to recreational benefits²².

Societal discourse and consensus on the question "How do we want to live in the future?" are important prerequisites for a socio-ecological transformation. It includes the development of new narratives and the forming of novel alliances²³. Farmers and foresters play a central role. In particular, the farmer or forester should become a "nurturer of biodiversity" (>MustKnow6)²⁴. One approach is to ensure adequate financial compensation within the agricultural and forestry sectors for the development of ecosystem services and biodiversity²⁵. Subsidies harmful to biodiversity should be abolished, and the GBF target 18 needs to be nationally

3 key figures

implemented. Until the overall goal of *net zero* land use is reached, municipalities whose leeway may be restricted by new protected areas or restored ecosystems should receive financial compensation. Nature conservation authorities and decision-making authorities must be accorded sufficient capacity to effectively carry out their work. It is furthermore essential to take into account *biodiversity offsets*, as an internationally recognised principle. However, mitigation hierarchy should be given priority⁸ in order to achieve a net gain in spatial planning³⁰.

Background

Every day, about 60 hectares (ha) of new settlement and transport areas are designated in Germany, so

the federal government's land consumption target of consuming 30 ha per day or *net zero* is a long way off. Soils can no longer provide basic functions (e. g. water and carbon storage), their ecosystem services are lost and *habitats* disappear³¹.

The restoration of ecosystems is a laborious and costly process that is subject to competition for land. Thus, it is vital to avoid negative impacts on ecosystems. Wetlands, water bodies and peatlands, in particular, are crucial for regulating water quantity and quality and recharging groundwater to ensure a healthy agriculture sector and protect climate and biodiversity³². Yet they are facing increasing pressure from climate change and agricultural use³³. Their restoration must be given high priority (->*MustKnow1*).

Many protected areas in Germany are not achieving the intended conservation aims³⁴. They are too small and isolated, poorly managed or not managed at all and subject to the impacts of climate change. The target of 30 percent land- and marine area protection must therefore account for the extent, connectivity and quality of such sites (->*MustKnow1*). In addition, efforts must be undertaken to prevent an ever more intensive utilisation of land in the remaining areas.

The protection of land and natural resources is an indispensable, essential part of sustainable transformation processes in society, politics, economy and planning. Clashes of interests in the valuation and use of natural resources should be resolved through integrated

Biodiversity protection must be integrated into land-use decisions across sectors and substantiated and made binding in spatial planning.

approaches for climate change mitigation and biodiversity protection.

Political actors should strive to create shared visions and processes for more biodiversity protection by means of appropriate narratives and dialogue processes such as

those accompanying the implementation of the German *National Biodiversity Strategy (NBS2030)*. Regulatory law in combination with economic incentives like taxes and subsidies should also be exploited. Concrete positive examples should

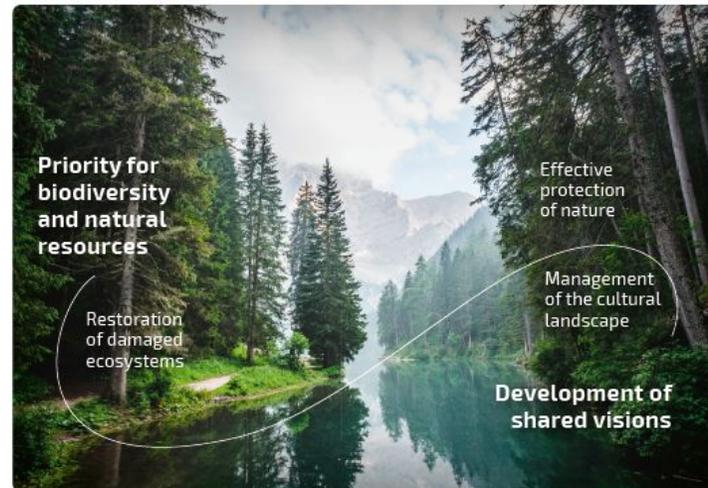
address not only the institutional level (e. g. *Zukunftskommission Landwirtschaft*) but also civil society as a whole in addition to professional representatives and associations.

Recommendations for political decision-makers

- 1. Call for action:** It is insufficient to aim for the lowest common denominator. Rather, relevant actors must assume political responsibility for decisions taken to ensure the consistent protection of biodiversity and land-water ecosystems as a form of biodiversity responsibility. Integrative, cross-sectoral strategies are available as part of the National Biodiversity Strategy, the *European Green Deal*, the potential *Naturflächengesetz*, and various laws and draft laws. These strategies should be consistently applied, i. e. the required legal, personnel, financial and technical resources should be provided and clear responsibilities and level-related objectives need to be defined.
- 2. Synergistic action:** Resource protection works best when and if there is a long-lasting majority regarding the protection of biodiversity-creating synergies with other sustainable development aspects. A goal-oriented, well-founded debate on the protection of natural life-support systems is not possible if contrary political goals are played off against each other, e. g. within the debate on biodiversity and resource protection like the use of wood (->*MustKnow5*). It is therefore important that political goals, plans and programmes address potential conflicts and resolve them already in advance.
- 3. Biodiversity mainstreaming** in all sectors: The protection of natural resources (land, water, soils, air, biodiversity and landscapes) as a cross-sectional task must be primarily reflected in all decision-making processes – the balance in considerations must be shifted in favour of biodiversity and ecosystem services – and prioritised for sustainable development across all sectors.

Recommendations for society

- 1. We all benefit** from the conservation of natural resources and biodiversity – building on nature can become a synergistic driver for innovation and new jobs.
- 2. We can all contribute** to objectifying the debate; we are all responsible and we all can do something to save land, preserve natural resources and protect and develop biodiversity.
- 3. We can all work together** to preserve our natural resources. We need positive narratives where people can find their own needs and hopes reflected. Society must overcome existing narratives, e. g. the false dichotomy of nature conservation versus agriculture. We have to develop fresh visions of a shared and healthy future as a prerequisite for new alliances.



Biodiversity must be given a more prominent role in decisions on planning and land use.

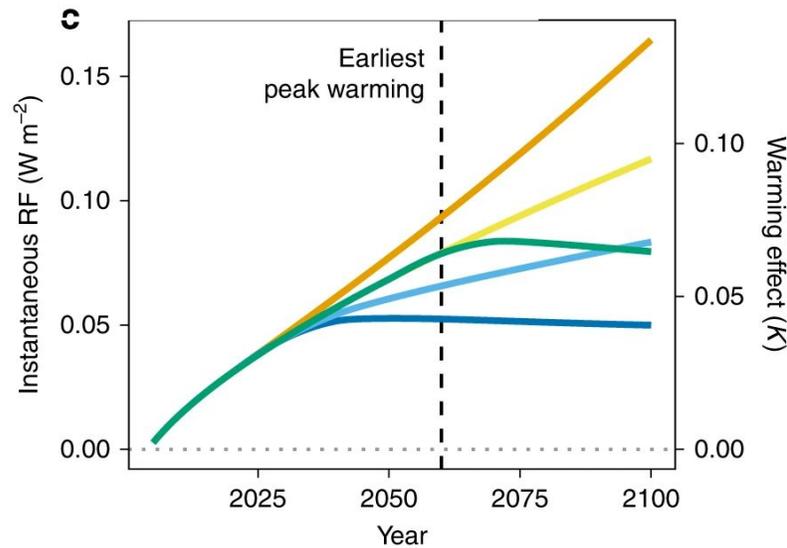
More background on the Must Know

Individual graphic

Recommendations for politics and society

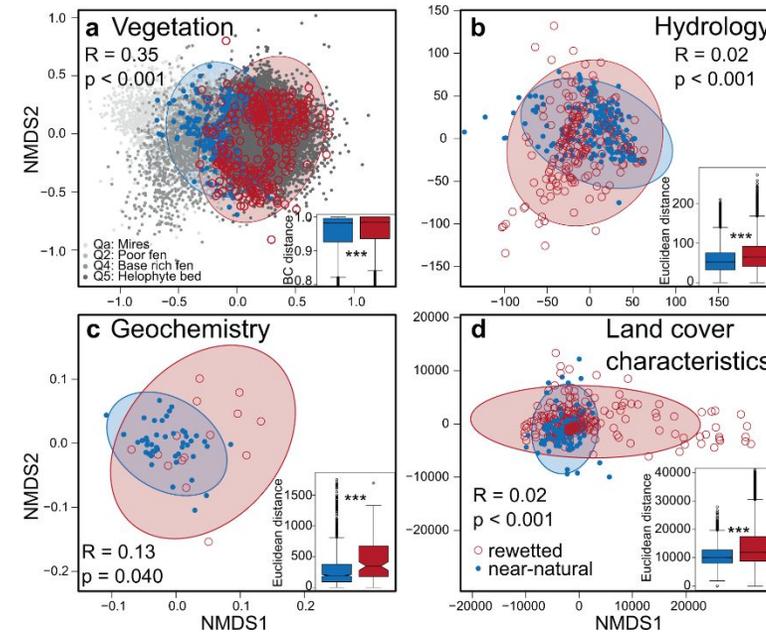
1 Achieving climate and biodiversity protection together

2 Among terrestrial ecosystems, *peatlands* are exceptionally well suited to combine biodiversity conservation and climate protection. Many of Germany's currently drained peatlands used by agriculture can be rewetted and still allow sustainable agriculture (*paludiculture*). Still, recovery of peatland biodiversity may take several decades.



— Drain_More — Rewet_All_Now — Rewet_All_Later
— No_Change — Rewet_Half_Now

Source: Günther et al. 2020

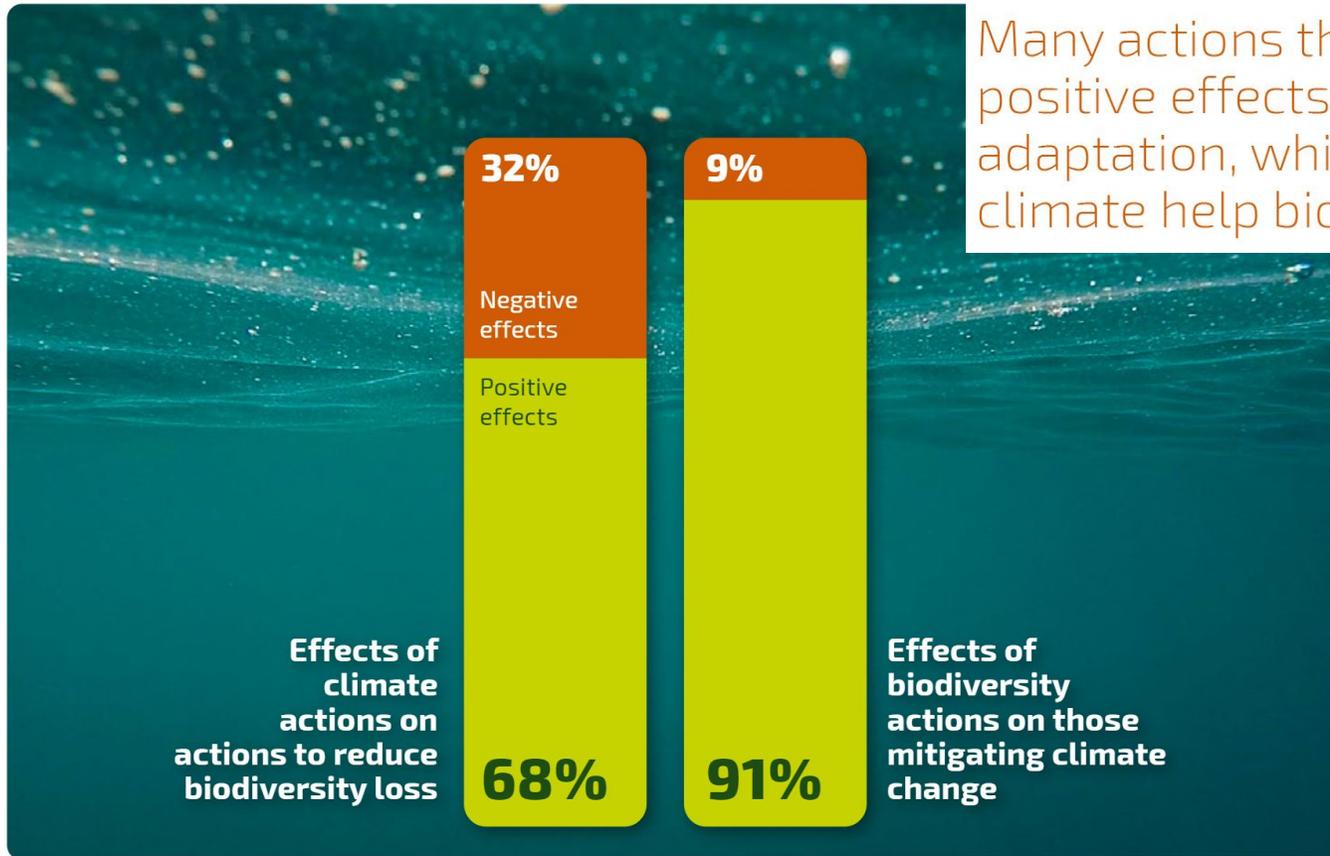


Rewetted temperate fen peatland sites (open red) are more variable than near-natural sites (filled blue) and many rewetted sites are outside the near-natural range of variation. (Source: Kreyling et al. 2021)

1 Achieving climate and biodiversity protection together

Many actions that conserve biodiversity also have positive effects on climate change mitigation and adaptation, while far fewer actions that protect climate help biodiversity.

Source: Pörtner et al. 2023; © pixabay.com / Pexels



1 Achieving climate and biodiversity protection together



Recommendations ...

Recommendations for political decision-makers

2. Rewetting peatlands has clear advantages for climate, water cycling and biodiversity, and avoiding continued CO₂ emission. Facilitating change by setting clear rewetting targets in the EU Nature Restoration Law, substantiated by adequate funding and incentivising new value chains from wet peatlands while co-designing implementation with all actors involved in the transition process is recommended.

Recommendations for society

1. Biodiversity conservation supports ecosystem resilience and adaptation, thus climate protection. Raise awareness and address concerns in the transformation for protecting, restoring and sustainably using wetlands, land- and seascapes by involving all societal actors (>MustKnow8).

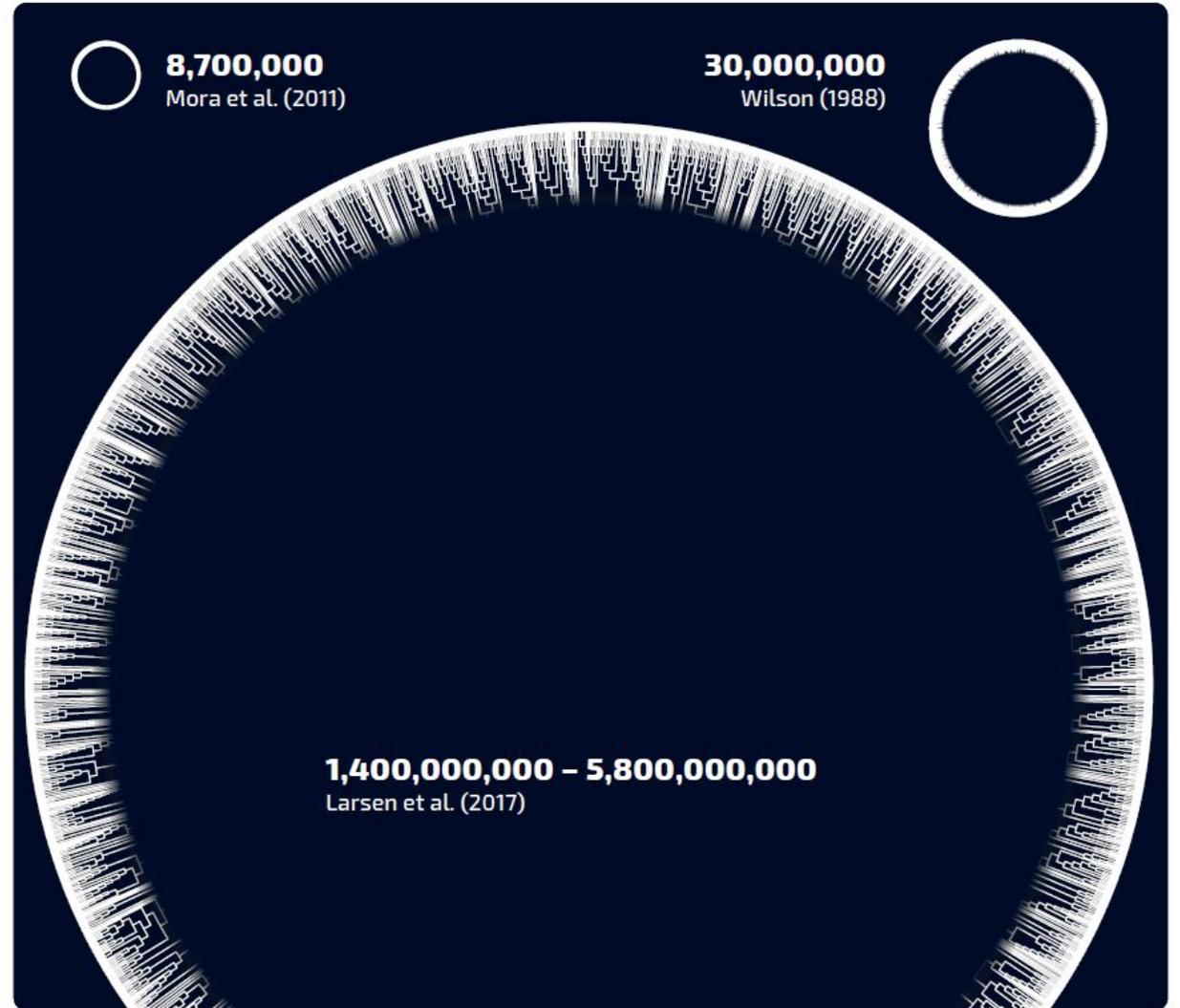
1 Achieving climate and biodiversity protection together

The protection and restoration of biodiversity creates synergies with climate mitigation. Resilient nature means good quality of life for all.



Source: Pixabay/Alexandra_Koch

3 Considering undiscovered biodiversity



3 Considering undiscovered biodiversity

12% *Canada possesses one of the largest renewable supplies of freshwater in the world. 12% of its freshwater species are known to be endangered, threatened, or at risk. About 40% lack sufficient data to enable their status to be assessed⁷.*

50% *of the flying insect diversity belongs to only 20 families regardless of continent, climatic region, and habitat type. The same families contain many "hidden taxa" in that they suffer from increasing taxonomic knowledge gaps².*

59% *A recent review of the biodiversity literature indicates that soil harbours approximately 59% of all species on Earth, with organisms ranging from microbes to mammals. This is about double the previously estimated amount⁵.*

90% of the biodiversity is unknown

There is hidden biodiversity in neglected spatial and temporal context, including organisms invisible to the naked eye, beneath the surface in soil, freshwater, or marine environments, or invertebrates active at night.

3

Considering
undiscovered
biodiversity

Is biodiversity an understudied field? Do we need more research?

Yes, we need more research!

On soil, sediment, freshwater, marine areas, urban spaces and on stressors such as noise and light at night

Yes, we know enough!

To act immediately and improve measures for conservation and protection of biodiversity and habitat. Consequently, improving nature based climate protection

3

Considering
undiscovered
biodiversity

Solutions

Ecosystem-based habitat management rather than single-species/habitat-focused practices

Indicators for noise and light pollution are needed, existing indicators need to be enforced and urban areas need to be included into **area protection targets**

Modern tools like high-throughput DNA sequencing and AI can improve the monitoring

FAIR data principles can help to accommodate knowledge gaps and improve monitoring

Inter- and transdisciplinary research needs to be supported and results applied

3 Considering undiscovered biodiversity

Recommendations ...

Recommendations for political decision-makers

2. The monitoring needs improvement. Thus, the implementation of a nationwide standardised monitoring of biodiversity (e. g. *Darwin Core Standard*) is necessary, using FAIR principles in order to find and reuse data when new insights into hidden biodiversity are discovered (*GBF targets 14, 20, 21*).

Recommendations for society

3. Don't wait for regulations. Reducing stressors, for example pesticides, noise, and light at night, are useful measures to protect organisms we normally do not perceive. If these decisions are made without political pressure, the solutions can act as *bottom-up best-practice* examples for changing societal behaviour (*GBF target 7*).

3

Considering
undiscovered
biodiversity

The acceptance that we **only understand a small part of biodiversity** is a first step to improve conservation measures.

Source: Pixabay/PublicCo

4 Linking linguistic, cultural and biological diversity

6 Inari Sámi, a language spoken in Finland, has six different words for whitefish (*Coregonus lavaretus*). Oral stories and knowledge provide baselines for the (ecological) knowledge on management and restoration of natural pastures.

50 Germany has comparatively few native languages, eight from a single language family (the Germanic languages German, Danish, North and Saterland Frisian, the Slavic languages Upper and Lower Sorbian, the Indo-Aryan language Romani) and the German Sign Language. Some of them are highly regionally diversified in dialects. In comparison, the Southwest Amazon is about the same size but has over 50 languages representing seven language families and harbours ten isolates.

7,000 There are about 7,000 known languages. If we do not intervene, we could lose 1,500 by the end of this century. That would amount to at least one language per month.



Of the utmost importance to the conservation of *Indigenous and local knowledge* are language maintenance and revitalisation programmes which support *Indigenous and local communities*, as well as the documentation and analysis of Indigenous and local languages as the primary carriers of such knowledge that links to and sustains biodiversity.

4

Linking linguistic,
cultural and biological
diversity

Germanic languages

German

Low German

Danish

North Frisian

Saterland Frisian

Slavic languages

Upper Sorbian

Lower Sorbian

Indo-Aryan language

Romani

German Sign Language

DGS

The German context

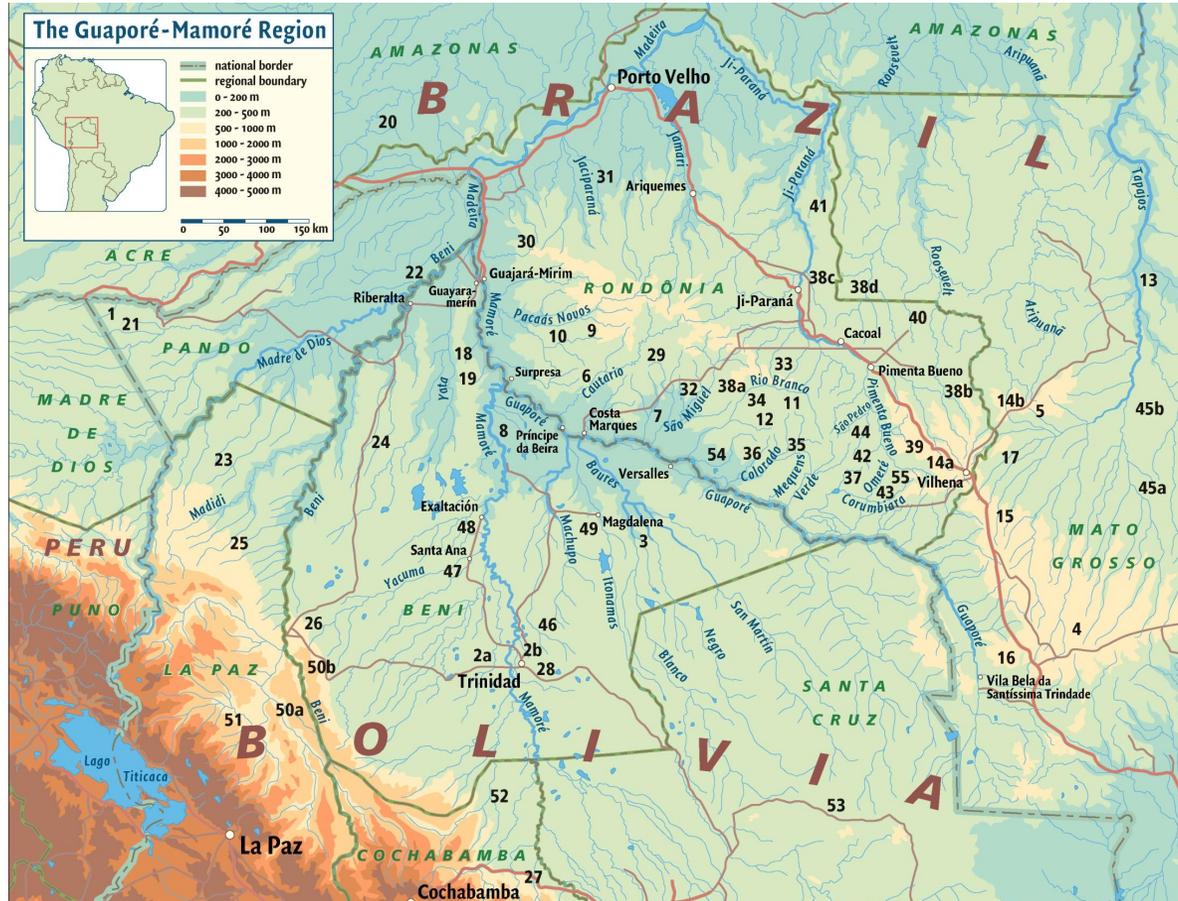
Germany has comparatively few native languages.

Except German Sign Language, they all belong to branches of the same **Indo-European language family**.

Some of these languages are **highly regionally diversified** in dialects.

In comparison, the **Southwest Amazon** is about the same size but has **over 50 languages** representing seven language families and harbours ten isolates.

4 Linking linguistic, cultural and biological diversity

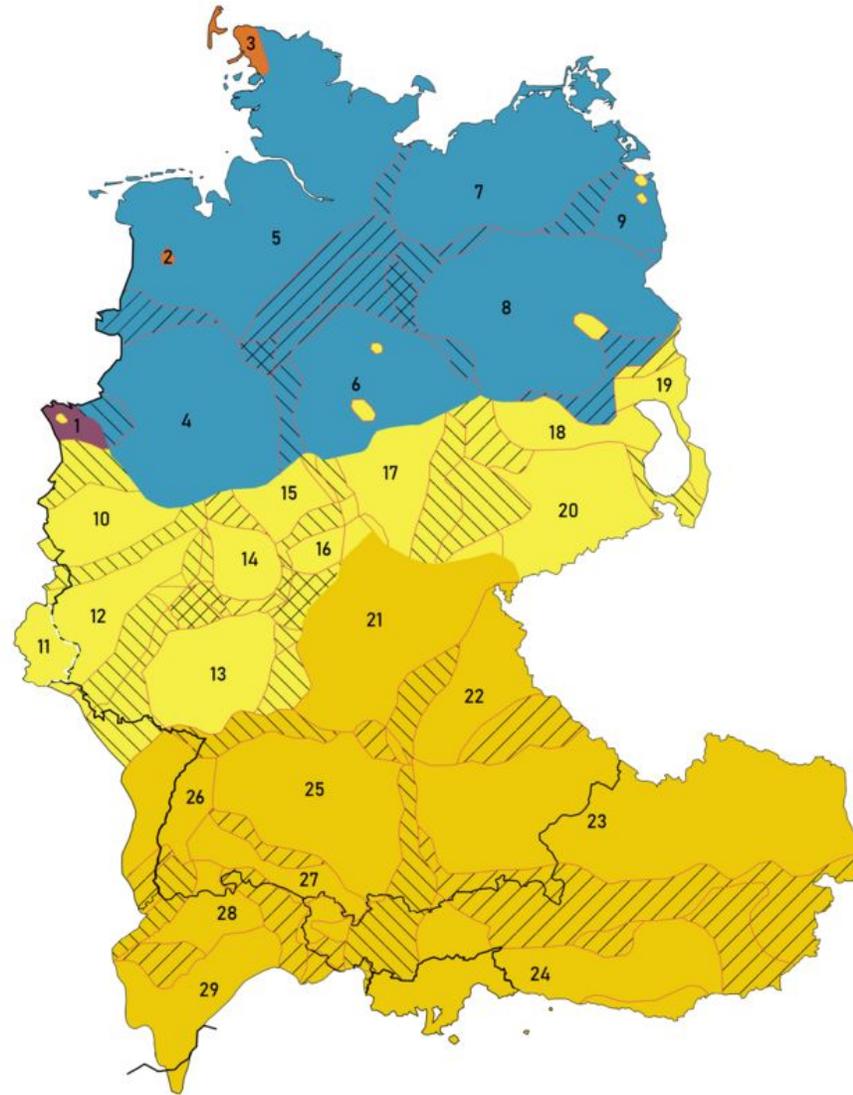


	Languages	Families	Isolates	
1	Machineri	Arawakan	42 Aikanã	
2	Mojo		43 Kanoê	
3	Baure		44 Kwaza	
4	Parecí		45 Irantxe, M'ŷky	
5	Enawê-Nawê		46 Canichana	
6	Kuyubí		Chapacuran	47 Movima
7	Miguelinho			48 Cayubaba
8	Moré (Itene)			49 Itonama
9	Oro Win			50 Mositén-Chimane
10	Wari' (Pakaanova)			51 Leko
11	Arikapú	Macro-Ge, Jabuti	52 Yurakaré	
12	Djeoromitxi		53 Chiquitano	
13	Rikbaktzá	Macro-Ge	54 (unknown)	
14	Latundê	Nambikwaran, North	55 Akuntsu-Kanoê pidgin	
15	Nambikwara	Nambikwaran, South		
16	Sararé	Nambikwaran		
17	Sabanê	Nambikwaran		
18	Chácobo	Panoan		
19	Pacahuara	Tacanan		
20	Kaxararí			
21	Yaminahua			
22	Ese Ejja			
23	Araona			
24	Cavineña			
25	Tacana	Tupian, Tupi-Guaraní		
26	Maropa			
27	Yuki			
28	Sirionó			
29	Uru-eu-wau-wau			
30	Karipuna			
31	Karitiana		Tupian, Arikém	
32	Puruborá		Tupian	
33	Tuparí		Tupian, Tuparí	
34	Makuráp			
35	Sakurabiat			
36	Wayuru			
37	Akuntsu			
38	Aruá, C.L., Gavião, Zoró	Tupian, Mondê		
39	Salamãï			
40	Suruí-Paitér			
41	Karo (Arara)	Tupian, Ramarama		

Endangered ethno-linguistic diversity in the Southwestern Amazon

4 Linking linguistic, cultural and biological diversity

German and Frisian dialects

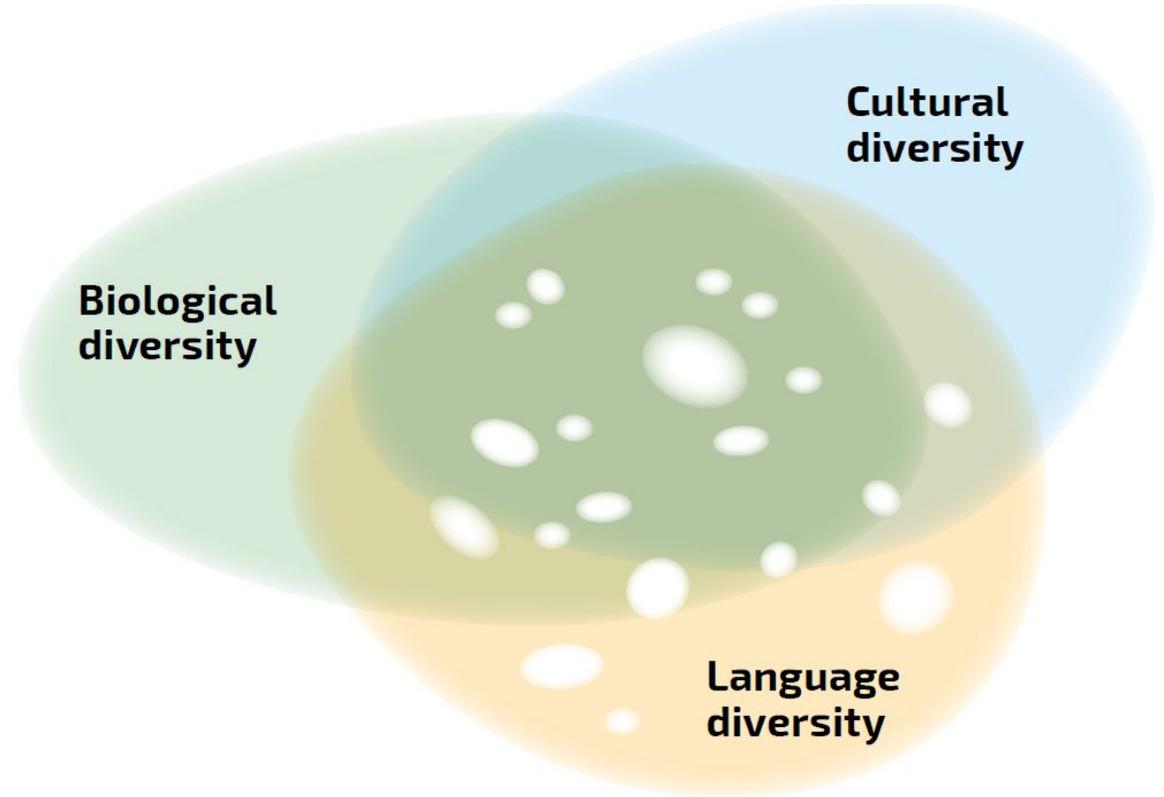
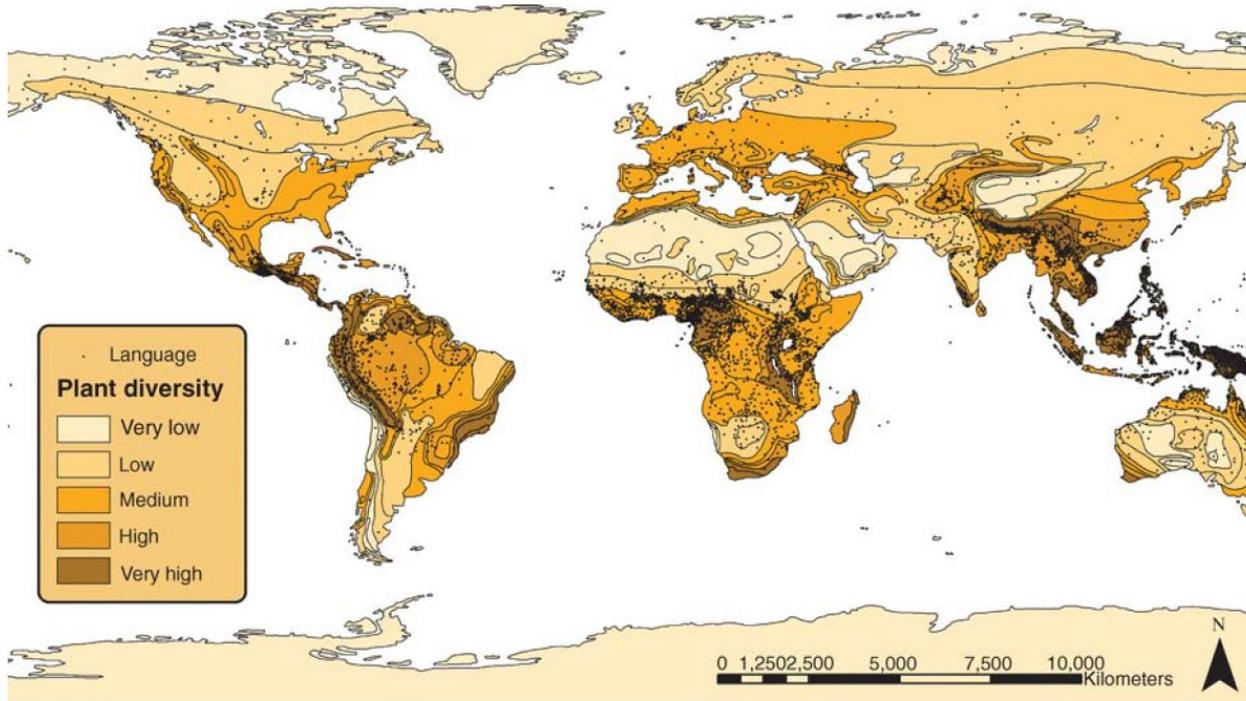


- Niederfränkisch
- 1. Niederrheinisch
- Friesisch
- 2. Saterländisch
- 3. Nordfriesisch
- Niederdeutsch
- 4. Westfälisch
- 5. Nordniedersächsisch
- 6. Ostfälisch
- 7. Mecklenburgisch-Vorpommersch
- 8. Brandenburgisch
- 9. Mittelpommersch
- Mitteldeutsch
- 10. Ripuarisch
- 11. Luxemburgisch
- 12. Moselfränkisch
- 13. Rheinfränkisch
- 14. Zentralhessisch
- 15. Nordhessisch
- 16. Osthessisch
- 17. Thüringisch
- 18. Nordobersächsisch
- 19. Südmärkisch
- 20. Obersächsisch
- Oberdeutsch
- 21. Oberfränkisch
- 22. Nordbairisch
- 23. Zentralbairisch
- 24. Südbairisch
- 25. Schwäbisch
- 26. Niederalemannisch
- 27. Mittellaemannisch
- 28. Hochalemannisch
- 29. Höchstalemannisch



Source: Wiesinger, 1983

4 Linking linguistic, cultural and biological diversity



Plant diversity and language distribution

(Source: Stepp, 2004)

4 Linking linguistic, cultural and biological diversity

Recommendations ...

Recommendations for political decision-makers

1. Campaign for the *Indigenous and Tribal Peoples Convention* (ILO 169)³² to be ratified and applied by as many countries as possible. It is the only convention in the world that legally protects the rights and cultures of indigenous peoples and thus biocultural diversity.

Recommendations for society

3. Nation states often try to impose monolingualism. However, multilingualism is the usual situation in human societies^{33,34}. Supporting multilingualism is one of the main strategies to preserve Indigenous and local languages and opens avenues for discovering new descriptions and views of nature, historic story-telling, shared experiences and traditional practices, thereby supporting ecoliteracy.

4

Linking linguistic, cultural and biological diversity

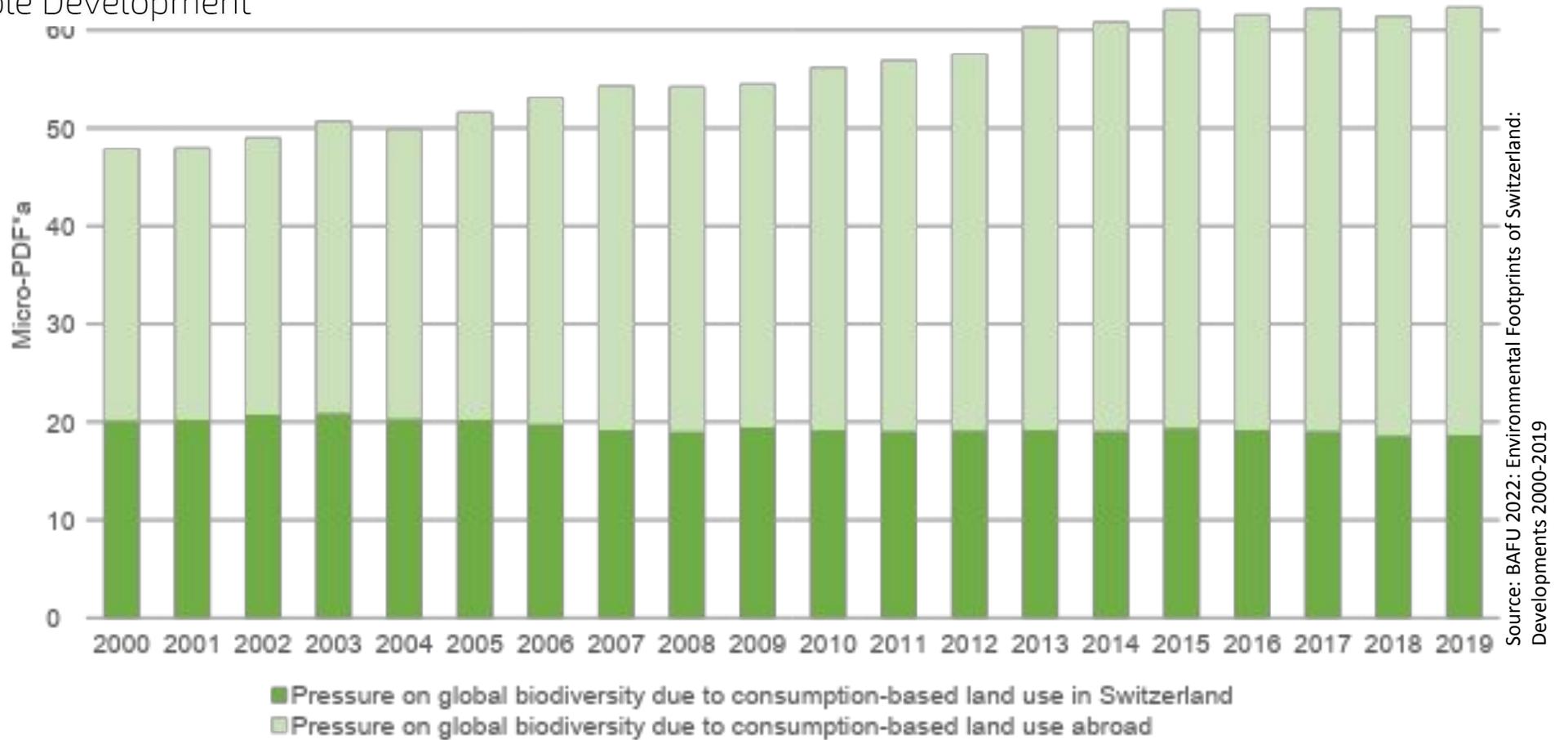
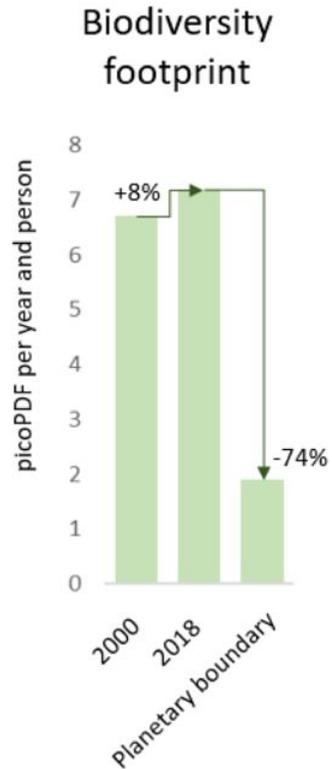
In order to protect biodiversity, you must also protect the territories of the IPLCs and respect their languages and cultures.

8 Releasing transformative change through international collaboration and Education for Sustainable Development



8

Releasing transformative change through international collaboration and Education for Sustainable Development



Source: BAFU 2022: Environmental Footprints of Switzerland: Developments 2000-2019

Although impacts on biodiversity are local in nature, drivers of biodiversity change are linked globally.

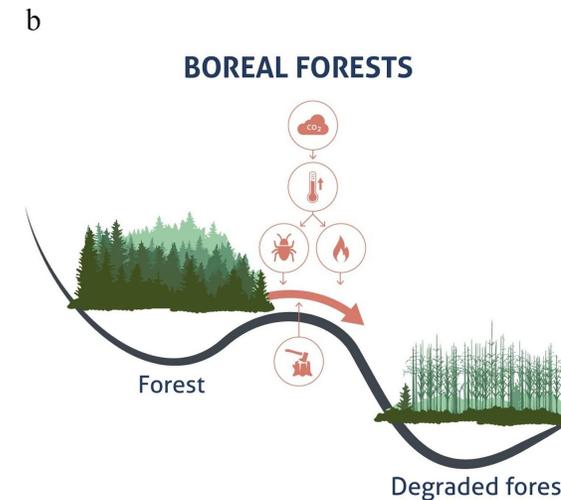
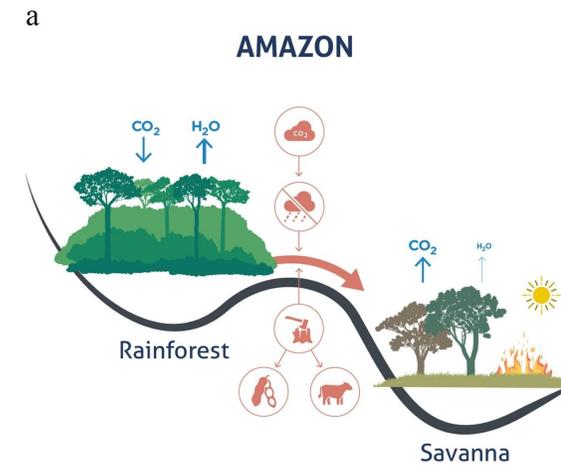
8 Releasing transformative change through international collaboration and Education for Sustainable Development

Market share for investments highly concentrated:

large investment companies have the power to (de)stabilise the Earth system

business, industry, and finance institutions need to track their impacts on biodiversity along value chains and in investments

National Biodiversity Strategies and Action Plans need to include guidance for business and finance to internalise currently external costs to biodiversity
regulations are required to support implementation



Source: Galaz et al 2018. *Global Environmental Change*, 53, 296–302

8

Releasing transformative change through international collaboration and Education for Sustainable Development

The education sector is a primary change agent for:

raising awareness of biodiversity

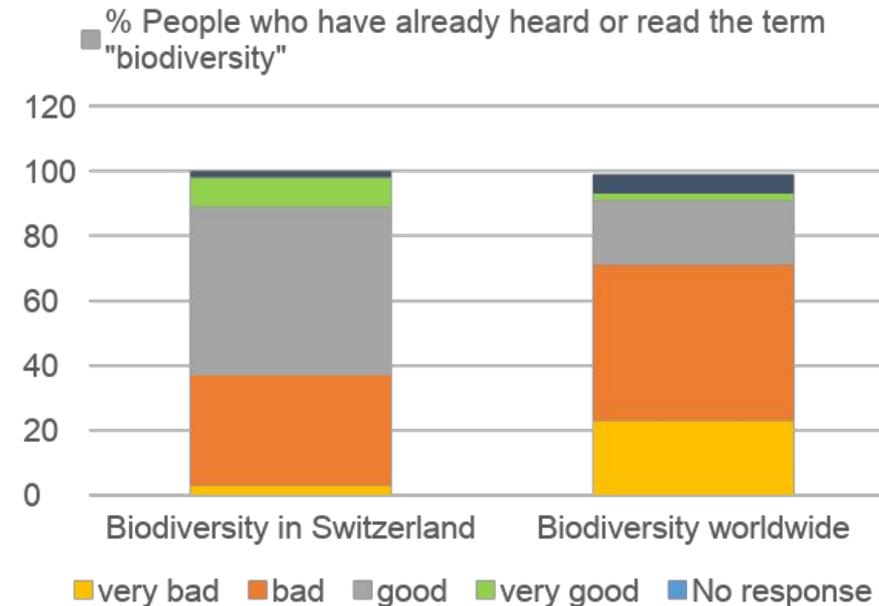
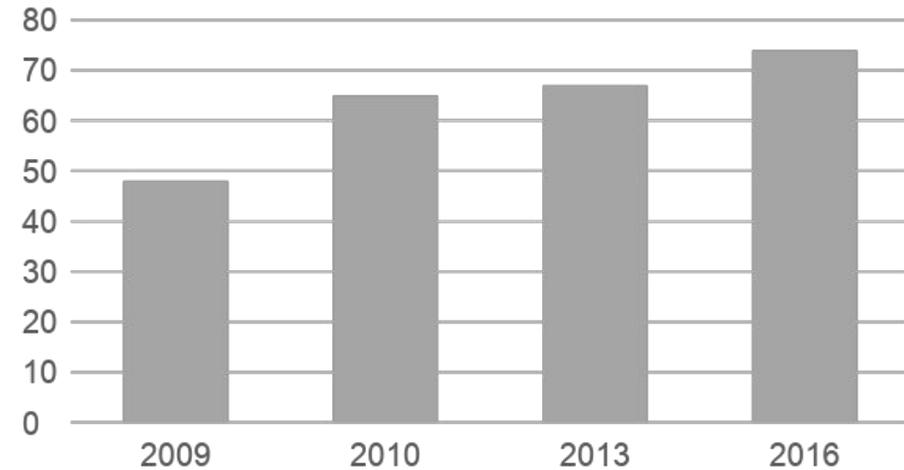
co-producing knowledge on the status of biodiversity

Education for Sustainable Development (ESD)

galvanising behavioural change

transformative learning approaches across all age and social groups, using various formats

It should be implemented across all levels of education.



Source: gfs-zürich 2016: Survey „Univox Umwelt“

8 Releasing transformative change through international collaboration and Education for Sustainable Development

Citizen and Community Science:

promotes and deepens the **understanding of science and scientific activities**

highlights **importance of biodiversity** and impacts of the loss of biodiversity

important part of ESD development

Citizen and Community Science projects:

support **collection of monitoring data**

build stronger connections between citizens and scientists

integrate **new sources of information and knowledge** for biodiversity research



Auswirkungen des Klimawandels

Pflanzen Phanologie Beobachten

Mit PhaenoNet beobachten Sie die Auswirkungen des Klimawandels auf Bäume, Sträucher und einige Frühblüher.



Beobachtung Schwarze Mörtelbiene

Biodiversität

Worum geht es in dem Projekt konkret? Die Schwarze Mörtelbiene (*avioul molta-neir*) ist eine gefährdete Bienenart, die von Anfang Mai bis Ende Juli



Ameisengotte/-götti bei Ameisenschutz beider

Artenschutz Waldgesundheit

Worum geht es in dem Projekt? Waldameisen waren die ersten Insekten, welche bereits 1966 bundesrechtlich geschützt wurden. Der Vollzug dieses

<https://www.citizen-science.uzh.ch/en.html>, <https://www.schweizforscht.ch>

8 Releasing transformative change through international collaboration and Education for Sustainable Development

Recommendations ...

Recommendations for political decision-makers

2. Strong international collaborations including scientific cooperation and technology transfer are the foundation to understand the drivers of biodiversity change, and track the effectiveness of targeted actions to conserve biodiversity, for example in the control of *invasive species*.

Recommendations for society

3. Indirect drivers such as investment in production, trade and financial flows, but also consumption patterns contribute to biodiversity loss and climate change. It is vital that business, industry, and finance institutions track their impacts on biodiversity along value chains and in investments.

8

Releasing transformative change through international collaboration and Education for Sustainable Development

Due to the complex nature of biodiversity loss, stopping it requires **connecting science, politics, economy and society** and enhancing education of **different formats for sustainable development** across all age and social groups.

Source: Pixabay/Raphs_Fotos

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Then write to: eva.rahner@pik-potsdam.de or scan the QR codes.



10MustKnows24 PR
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to action“



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**Let's shape
our future
together**

The 23 targets of the Kunming-Montreal Global Biodiversity Framework (GBF)

	1	2	3	4	5	6	7
1 Plan & manage all areas to reduce biodiversity loss	■	■	□	■	■	■	■
2 Restore 30% of all degraded ecosystems	■	■	■	□	■	■	■
3 Conserve 30% of land, waters & seas	■	■	■	■	■	■	■
4 Halt species extinction, protect genetic diversity, manage human-wildlife conflicts	■	■	■	■	■	■	■
5 Ensure sustainable, safe, legal harvesting & trade of wild species	□	■	□	■	■	□	□
6 Reduce introduction of invasive alien species (~50%), minimise their impact	□	□	■	□	□	□	□
7 Reduce pollution to levels not harmful to biodiversity	□	■	■	□	□	■	■
8 Minimise impacts of climate change on biodiversity & build resilience	■	■	■	■	■	■	■
9 Manage wild species sustainably to benefit people	□	■	■	□	□	□	□
10 Enhance biodiversity & sustainability in agriculture, aquaculture, fisheries & forestry	■	■	■	■	■	■	■
11 Restore, maintain, enhance nature's contributions to people	■	■	■	■	■	■	■
12 Enhance green spaces & urban planning for human well-being & biodiversity	□	■	■	□	□	■	■
13 Increase benefit sharing from genetic resources, DSI & traditional knowledge	□	■	□	■	□	□	□
14 Integrate biodiversity in decision-making at every level	■	■	■	■	■	□	■
15 Businesses assess, disclose & reduce biodiversity-related risks & negative impacts	□	□	□	□	□	□	□
16 Enable sustainable consumption choices to reduce waste & overconsumption	□	■	■	□	■	■	□
17 Strengthen biosafety, distribute the benefits of biotechnology	□	□	□	□	□	□	□
18 Reduce harmful incentives (≈ \$500 Billion p. a.), scale up positive incentives for biodiversity	□	□	□	□	□	■	■
19 Mobilise \$200 billion p. a. for biodiversity (incl. \$30 billion through international finance)	■	□	□	□	□	□	□
20 Strengthen capacity-building, tech transfer, scientific & technical cooperation for biodiversity	□	□	■	■	□	■	□
21 Ensure knowledge is available & accessible to guide biodiversity action	□	□	■	■	□	□	□
22 Ensure participation in decision-making, access to justice & biodiversity-related information for all	□	□	□	■	■	□	□
23 Ensure gender equality & a gender-responsive approach for biodiversity action	□	□	□	□	□	□	□

■ GBF target very important in MustKnow ■ GBF target important in MustKnow □ GBF target touches Must

Our approach



Our goals

Support the German National Biodiversity Strategy 2030 (and related national strategies) according to the 23 global Kunming-Montreal GBF goals (2022) with important scientific facts
Stimulate science-policy-society dialogues and actions to accomplish the urgent need of a socio-ecological transformation (until 2030)