



# The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

A brief introduction for scientists, policy makers, and practitioners





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Tree nurseries are essential for the reforestation of degraded forests

## Why a Brochure about IPBES?

Biodiversity, ecosystems and human welfare are inextricably linked. We are inseparable from the natural processes that regulate the climate, enable us to produce food, provide us with drinking water, and produce many of our medicines' active ingredients — to name just a few of the many services that nature provides us. The ongoing loss of biodiversity threatens our quality of life, as well as our chances for survival. Even though we know a lot about why landscapes, habitats and species are disappearing, this knowledge is rarely applied in the majority of the policy decisions that are happening at the local, national and global levels. The reason for this is that biodiversity concerns often do not reach the political level. When the concerns do manage to reach policymakers, the knowledge is often inaccessible due to the highly scientific nature of the information.

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) intends to change that. Just as the Intergovernmental Panel on Climate Change (IPCC) has served the climate community in making climate science accessible to policymak-

ers, so shall the IPBES compile the latest research and other knowledge on biodiversity and ecosystem services in order to formulate recommendations for policymakers. National governments, local and regional actors, as well as international biodiversity policy processes should all equally benefit. One intended beneficiary is the United Nations Convention on Biological Diversity (CBD). The CBD's slow implementation is often attributed to inconsistent and incomplete information available to the negotiating states' representatives.

### **IPBES needs support**

In order to support IPBES in its efforts to compile knowledge and to pass on the resulting reports and recommendations to those who wish to use them — governments, practitioners from the agriculture, fishery, and forestry management sectors, beekeepers, as well as municipalities and planning departments — a strong network will be necessary. Numerous organizations, initiatives and projects already exist that have a long history of working on issues related to biodiversity and ecosystem services and will be key players in supporting IPBES. The Network-Forum for Biodiversity Research Germany (NeFo) and the GIZ-Project ValuES are two of the projects that are supporting IPBES in the implementation of its work programme.

NeFo, a National Biodiversity Forum, has been supporting the IPBES platform since its inception with the mobilization of scientific experts for assessment processes, helping to ensure that qualified experts are working at the interface of science and policy, and providing advisory services from the German government to IPBES. Although NeFo has traditionally focused its work in Germany, it is increasingly broadening its scope to include work at the regional and global levels in response to the international orientation of IPBES.

The GIZ ValuES Project is dedicated to disseminating methods and approaches for improving the integration of ecosystem services in policy, planning and practice. The project advises specialists and experts in ministries and other organizations in around 20 partner countries in the global south, conducts capacity building trainings and brings project partner experiences back into the global scientific and policy dialogue on biodiversity and ecosystem services. ValuES has followed the development of IPBES since 2015, bringing in its expertise into the IPBES work on multiple values of biodiversity and ecosystem services.

With the publication of this brochure, NeFo and ValuES want to provide their partners and other interested parties a quick and informative overview of IPBES and the different topics and processes of this still young science-policy interface. The brochure may also encourage readers to identify topics that are relevant to their own activities and/or to consider participation in the political process of IPBES.



The sharing of local knowledge is an important basis for biodiversity conservation

## The Four Functions of IPBES

In order for IPBES to effectively improve the bilateral exchange of science and policy, the work of the platform and its products must be policy *relevant*. In other words, the platform must deal with pressing political and social issues in the field of biodiversity and provide specific information. Therefore, the IPBES bases its work first and foremost on requests made from governments, followed by multilateral environmental agreements. The interests of other stakeholders — for example environmental associations, scientific facilities, civil society organizations or the private sector — are considered secondary.

At the same time, IPBES must prove itself to be *credible*. This means that the best available data must be used and made accessible, comprehensible evaluation methods must be applied and unbiased conclusions must be made that ultimately undergo a transparent, peer-review process. Through international participation in IPBES and joint decision-making of all its member states, IPBES should gain universal recognition as a legitimate information broker, granting its standing on the global stage.

The experience of past assessments — for example, the Millennium Ecosystem Assessment or the Living Planet Index — shows that it is insufficient to conduct periodic (mainly natural scientific) assessments of the state and future developments of nature and the environment as a means of maintaining biodiversity. Rather it needs to be analysed why and how biodiversity is disappearing and which policy instruments exist to counteract this loss. For this, the social sciences and humanities, as well as other non-scientific forms of knowledge, such as the practical, local knowledge of beekeepers and farmers or the traditional knowledge of indigenous and local communities, need to be considered in such assessments. Effective biodiversity conservation requires theoretical and practical knowledge. The four functions of the IPBES reflect these needs.

### **Assessments**

IPBES will prepare global and regional reports on the state of knowledge on biodiversity and ecosystem services, as well as on specific topics related to biodiversity, based on requests received from governments of IPBES member states or multilateral environmental conventions, but also from other stakeholders. The IPBES plenary meeting will determine which topics will be assessed and in which order the assessments will be conducted.

### **Policy Tools and Methodologies**

IPBES should support policy decisions and their implementation by identifying appropriate methods and tools that can help translate and apply the results of assessments into policy.

### **Capacity Building**

IPBES is supposed to identify the capacities and competencies that are required to work with IPBES and provide support for the most urgent measures and / or call on other organisations to support these efforts.

### **Knowledge Generation**

As part of its assessments and other processes, IPBES should identify currently lacking knowledge that is needed for policy decisions with regard to biodiversity, and support research facilities and other knowledge generators to fill in these gaps. IPBES itself does not conduct research.

These four functions are closely inter-linked, that is, within the framework of the assessments also policy measures and knowledge gaps will be identified, described and discussed. Specific measures for capacity building will contribute to an increased number of relevant actors being prepared to participate in the assessment processes and thereby ensure broad participation. The work of IPBES shall be based on the following guiding principles: independent, unbiased, policy relevant, credible, legitimate, trans- and multi-disciplinary, as well as ensuring equal participation of women and men.



## The IPBES Work Programme 2014 – 2018

The decision about which topics will be addressed by IPBES is taken by the plenary. The topics are selected based on their social relevance and urgency rather than on their research relevance. In 2013, governments as well as IPBES stakeholders were called upon to send to the IPBES Secretariat substantiated proposals for priority focal areas for the first work programme. Ten government entities sent 22 proposals, four multilateral environmental treaties sent 10 proposals, and 10 stakeholders sent an additional 20 proposals. The MEP and Bureau considered the proposals for the drafting of a first work programme, which was accepted at a second IPBES plenary session (IPBES-2) in December 2013, with few changes made to the draft (Figure 1).

In the meantime, two of the assessments have been completed. IPBES-4 (February 2016) published the technical reports, as well as their Summaries for Policy Makers (SPM), for the **thematic assessments on pollinators, pollination and food production**, as well as the



# Platform work programme 2014 – 2018: Objectives and associated deliverables

## Objective 1

Strengthen the capacity and knowledge foundations of the science-policy interface to implement key functions of the Platform:

- a) Priority capacity-building needs to implement the Platform's work programme matched with resources through catalysing financial and in-kind support
- b) Capacities needed to implement the Platform work programme developed
- c) Procedures, approaches for participatory processes for working with indigenous and local knowledge systems developed
- d) Priority knowledge and data needs for policymaking addressed through catalysing efforts to generate new knowledge and networking

## Objective 2

Strengthen the science-policy interface on biodiversity and ecosystem services at and across sub-regional, regional and global levels:

- a) Guide on production and integration of assessments from and across all scales
- b) Regional/subregional assessments on biodiversity, ecosystem services
- c) Global assessment on biodiversity and ecosystem services

## Objective 3

Strengthen the science-policy interface on biodiversity and ecosystem services with regard to thematic and methodological issues:

- a) One fast-track thematic assessment of pollinators, pollination and food production
- b) Three thematic assessments: land degradation and restoration; invasive alien species; and sustainable use and conservation of biodiversity and strengthening capacities/tools
- c) Policy support tools and methodologies for scenario analysis and modelling of biodiversity and ecosystem services based on a fast-track assessment and a guide
- d) Policy support tools and methodologies regarding the diverse conceptualization of values of biodiversity and nature's benefits to people including ecosystem services based on an assessment and a guide

## Objective 4

Communicate and evaluate Platform activities, deliverables and findings:

- a) Catalogue of relevant assessments
- b) Development of an information and data management plan
- c) Catalogue of policy support tools and methodologies
- d) Set of communication, outreach and engagement strategies, products and processes
- e) Reviews of the effectiveness of guidance, procedures, methods and approaches to inform future development of the Platform

**Fig. 1** The first IPBES work programme for 2014–2018. Prepared by the German IPBES coordination office and NeFo, 2014. Source: Report from the 2nd IPBES plenary session (IPBES/2/17).

# Methodological Assessment on Scenario Analysis and Modelling of Biodiversity and Ecosystem Services

Scenarios and models are important tools for conducting assessments of biodiversity and ecosystem services. They can help identify and quantify the current and future functional relationships between ecosystems, the services that these ecosystems provide for humans and their wellbeing. They furthermore allow for integrating various forms of knowledge. Scenarios and models can, therefore, be usefully introduced into the political process, by helping to identify policy areas, con-

tributing to the design of related tools and instruments, as well as supporting the implementation and evaluation of such measures. The IPBES assessment on scenario analysis and modelling carried out a critical analysis of and a synthesis of existing methods and tools in this area. It summarizes the benefits and the opportunities for applying the scenarios and models for policymakers, as well as for the work within the framework of IPBES and in the scientific sphere.

**methodological assessment on scenario analysis and modelling of biodiversity and ecosystem services** (see box p.10&11). Furthermore, a **guide on the preparation of assessments** and a **guide regarding diverse conceptualisations of values of biodiversity and nature's benefits to people** have been produced.

Links to the aforementioned reports may be found in the list at the end of this brochure.

The following Assessments are currently in progress:

- **Four regional assessments on biodiversity and ecosystem services, for Africa, America, Asia-Pacific and Europe/Central Asia,**
- **One global assessment on biodiversity and ecosystem services, and**
- **One thematic assessment on land degradation and restoration.**

Furthermore, there are three task forces under IPBES addressing the following topics:

- Task force on Capacity Building: **building capacity for participation in the IPBES processes,**
- Task force on Data and Knowledge: **management of data and knowledge** that is necessary for operating IPBES processes, and which is compiled from the platform, and
- Task force on Indigenous and Local Knowledge: **inclusion of local and indigenous knowledge** and their knowledge holders into IPBES processes.

## Thematic Assessment on Pollinators, Pollination and Food Production

Honey bees and their wild relatives, as well as other insects such as bumblebees, beetles, flies, mosquitoes and butterflies, play a central role in the pollination of cultivated and wild plants — thereby also playing an important role in ensuring our food supply. Around 70 percent of the globally traded food crops and 35 percent of the world's food production rely on pollination, a dependency which has increased by 300 percent since 1961. The value of these food crops for global agriculture was estimated to be 153 billion Euros in 2005.

However, in recent decades the number and variety of pollinators has dropped dramatically. Honey bees are particularly affected (25% decline in Europe since 1985, and 59% decline in the USA since 1947), but also their wild relatives (60% decline as compared to 1980). The most important cause for this decline is industrial agriculture, which promotes monoculture, genetically-modified organisms and intensification in the use of pesticides and fertilizers, to increase production. These practices lead to the loss of habitats, food sources and nesting sites for pollinators. Parasites and climate change are also attributed with affecting pollinator numbers. The impacts of industrial agriculture ultimately harm the sector itself, as the contribution of honey bees cannot be replaced by other in-

sects. Forecasts for the US agriculture sector, for example, estimate losses of up to 46% if honey bees go extinct.

With the IPBES thematic assessment on pollinators, pollination and food production, an up-to-date report on the state of and threats to the global pollinator population is now available. The assessment focuses on the role of native and invasive pollinators, trends regarding the development of their populations, as well as the causes of their decline. Furthermore, the assessment draws attention to the effects that the loss of pollinator services could have on human wellbeing and food production. 23 key messages for policymakers were identified from a 900 pages report, and adopted as the so-called Summary for Policymakers at IPBES-4 (February 2016). This summary provides a concise overview of which measures governments and other actors must implement in order to stop the decline in pollinators. The recommendations pay special attention to agricultural practices, and the underlying economic interests and decisions. The most recent Conference of Parties (COP-13) to the CBD, which took place in December 2016 in Mexico, adopted the key messages from the assessment in-full as part of its decisions, thereby, for the first time, applying politically a result of IPBES.



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Various expert groups are responsible for the content-related work of IPBES

## Organizational Structure, Administration and Financing

The **Plenary**, i.e. the general meeting of member states, is the highest decision-making body of IPBES (Figure 2). It determines the thematic areas of IPBES' work and decides about the membership of the Bureau and the Multidisciplinary Expert Panel (see below). Any state of the UN can become member of IPBES. In the plenary, each member has an equal vote, and decisions are based on consensus principle, except for procedural questions (for which a two-thirds majority is sufficient). Non-members of the platform (e.g. multilateral environmental agreements, environmental associations, scientific facilities, civil society organizations, etc.) may participate as observers at plenary meetings, and they have the right to give speeches and make proposals. They may propose topics, which they believe to be highly relevant and that should be addressed by IPBES.

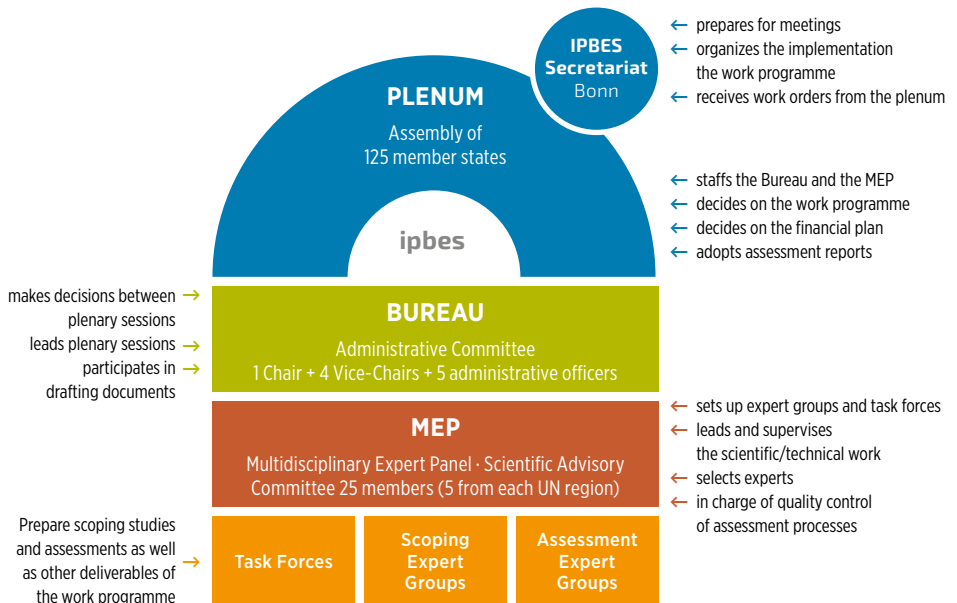
The plenary is supported by two administrative bodies: the Bureau and the Secretariat. The **Bureau** leads the plenary meetings and the administrative affairs of the IPBES. Two representatives from each of the five UN regions serve on the Bureau. The **Secretariat**, located in Bonn, is the headquarters of IPBES. It is responsible for the organization, coordination, and documentation of IPBES meetings, as well as for the external communication of IPBES' work and for the structural implementation of the IPBES work programme.

The **Multidisciplinary Expert Panel (MEP)** leads the scientific and technical work of IPBES. It decides on the composition of task forces and expert groups and ensures the scientific quality of the assessments. The MEP is comprised of 25 experts (five experts from each of the five UN regions). MEP members are replaced every two years.

IPBES is placed under the auspices UNEP (United Nations Environment Program), FAO (Food and Agricultural Organization of the United Nations), UNDP (United Nations Development Programme), and UNESCO (United Nations Educational, Scientific and Cultural Organization), and administered by UNEP. IPBES is, however, an independent body and is itself not an UN organization. IPBES is exclusively financed by voluntary contributions, which are channelled into a trust fund managed by UNEP. In order to avoid the possibility of a contributor exerting influence over the work of IPBES, it is not permitted to make earmarked donations. For the period 2012–2018, commitments of approximately USD 26 million have been made. In addition, numerous in-kind contributions have been rendered or are planned.

## How is the IPBES structured?

### Structure and Mandates



**Fig. 2** The bodies of IPBES and their tasks



Biological diversity comprises the entirety of species, their gene pool and the ecosystems in which they occur

## IPBES and the Convention on Biological Diversity (CBD)

The Convention on Biological Diversity (CBD) is a legally-binding international treaty. The decisions are made at biennial meetings of the Conference of Parties (COP) and are binding for all CBD members, which includes almost all countries of the world and the European Union (196 member states to date). The Convention's implementation at the national level takes place through National Biodiversity Strategies and Action Plans (NBSAPs). However, in the case of non-compliance, there are no mechanisms for sanctions.

IPBES, by contrast, is a science-policy interface, the work of which is intended to inform policymakers about biodiversity issues, as defined by the IPBES plenary. The CBD and its member states are recipients of IPBES' results. IPBES works closely together with the Subsidiary Body of Technical and Technological Advice (SBSTTA) of the CBD. The CBD and other international environmental treaties are explicitly invited to make proposals for the IPBES work programme.



To be part of the IPBES process in particular means to get engaged in discussions

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## Opportunities to Participate in the IPBES Process

The broad inclusion of stakeholders is essential to ensure the relevance, effectiveness, credibility of IPBES – and thereby its overall success. In 2015, the third plenary session of IPBES (IPBES-3) adopted a strategy for stakeholder involvement in the platform. Within this strategy, stakeholders are institutions, organizations, groups and their respective experts if they:

- a) Contribute to the work programme's activities through their experience, knowledge, data and information, and/or
- b) Benefit from the results of the work programme, and/or
- c) Make it possible or support the participation of relevant individuals or groups in IPBES activities.

The term stakeholder, however, is problematic for certain key knowledge holders, especially representatives of indigenous peoples. They consider themselves, due to their status under international law, not as stakeholders, but rather as a separate group in the process. It remains a challenge to incorporate them and their (legitimate) claims, along with those of other actors in the IPBES process, in a common strategy for IPBES.

### **Observers at plenary meetings**

Participation in the plenary meetings provides an experience in the process of negotiation, as well as insight into the work happening at the interface of science and policy. For example, what positions do certain member states take on specific topics? Is it clear that the negotiating party understands the scientific basis for its arguments? What are the points of contention, and have these to do with insufficient knowledge or with specific interests of the parties involved? By finding out the answers to these and many other questions, observers improve their understanding of the policy knowledge requirements, which may in turn orient their own work, while also allowing them to make contacts with decision-makers in their field. In order to participate in a plenary session, the observer organization must be accredited by IPBES.

### **Member of an expert group or task force**

In order to work in one of the expert groups or task forces, a nomination is required from the expert's organization and/or government. Participating as an author in an assessment expert group can mean to fulfil one of the following possible roles: co-chair, coordinating lead author, lead author review editors or contributing author. The selection of experts falls to the MEP. Financial support for experts participating in expert groups or task forces is currently provided by IPBES only for experts from developing countries.

### **Participation in review processes of IPBES draft documents**

In order to participate in public reviews of IPBES draft documents, it is sufficient to register on the IPBES webpage. (More detailed information about participating is sent out by the IPBES Secretariat when the document is available for review, also known as *calls for review*.) In addition, IPBES has launched a special programme for young experts interested in working on assessment processes and at the interface of science and policy, the IPBES Fellowship Programme.


### **Member of the Multidisciplinary Expert Panel (MEP)**

In order to become a member of the MEP, the expert must be nominated by his or her government. The plenary selects five experts from each of the five UN regions (Africa, Asia, Latin America and Caribbean, Eastern Europe, and Western Europe and Others), based on the list of nominees submitted to the Secretariat. Every two years, the IPBES Secretariat sends out a call for nominations for new candidates replacing the current ones.

### **Working in a government delegation**

Scientists and other experts are often called upon by their respective governments to serve as advisors in the delegation to IPBES and will often represent their governments at the IPBES plenary meetings. The assumption of these roles does not follow any specific procedure; the decision falls to the responsible ministry of the member state. Any individual interested in this work should contact the national focal point for IPBES in his or her home country.





The Pan-European Stakeholder Consultation on IPBES (PESC) in 2016 in Leipzig, Germany

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### Networking with existing stakeholder groups, which work with IPBES

IPBES seeks to actively collaborate with stakeholders and their networks. IPBES-3 welcomed the establishment of an inclusive and self-organising stakeholder network that contributes to information exchange, capacity building and the mobilization of experts. The concept of an **IPBES Stakeholder Network** emerged through the cooperation of multiple civil society and environmental organizations during previous IPBES plenary meetings. Formal structures are currently being set up. It is open to other stakeholder groups to become officially networked with IPBES and to register themselves in the IPBES stakeholder registry.

For young scientists and other young people possessing relevant knowledge it is often difficult to insert oneself as an expert into global processes. The **Biodiversity Science-Policy Interface Network for Early Career Scientists (BSPIN)** wants to change that. The international and interdisciplinary group, which currently includes 90 members, is specifically targeting exchanges with IPBES in order to improve its own capacities and increase the chances of its members of being able to participate in IPBES processes. The group meets once a year, prior to the IPBES plenary sessions.

At the national level, numerous **National Biodiversity Platforms** exist (or are emerging), which dedicate themselves to working with IPBES (among other things). For example, in Europe there are national platforms in France (*Fondation pour la Recherche sur la Biodiversité*, FRB), Germany (Netzwerk-Forum zur Biodiversitätsforschung – NeFo), Portugal (*Fundação para a Ciência e a Tecnologia*), Belgium (*Belgian Biodiversity Platform*), Finland, Great Britain and Switzerland (*Swiss Biodiversity Forum*). In order to pool their work and efforts, they have joined the **Pan-European Network of National Platforms Engaging in IPBES**.



## Links

### IPBES-Website

- Registering for the IPBES newsletter: [www.ipbes.net/](http://www.ipbes.net/)
- List of IPBES National Focal Points: [www.ipbes.net/about/members/nfps](http://www.ipbes.net/about/members/nfps)
- Summary for Policy Makers of the thematic assessment of pollinators, pollination and food production: [www.ipbes.net/sites/default/files/downloads/pdf/spm\\_deliverable\\_3a\\_pollination\\_20161124.pdf](http://www.ipbes.net/sites/default/files/downloads/pdf/spm_deliverable_3a_pollination_20161124.pdf)
- Summary for Policy Makers of the methodological assessment on scenario analysis and modelling of biodiversity and ecosystem services: [www.ipbes.net/sites/default/files/downloads/pdf/SPM\\_Deliverable\\_3c.pdf](http://www.ipbes.net/sites/default/files/downloads/pdf/SPM_Deliverable_3c.pdf)
- Guidelines for the preparation of assessments: [www.ipbes.net/sites/default/files/downloads/IPBES-4-INF-9\\_EN\\_0.pdf](http://www.ipbes.net/sites/default/files/downloads/IPBES-4-INF-9_EN_0.pdf)
- Preliminary guide on the methodological assessment regarding diverse conceptualization of multiple values of nature and its benefits: [www.ipbes.net/sites/default/files/downloads/IPBES-4-INF-13\\_EN.pdf](http://www.ipbes.net/sites/default/files/downloads/IPBES-4-INF-13_EN.pdf)
- IPBES Stakeholder Registry: [www.ipbes.net/stakeholders](http://www.ipbes.net/stakeholders)

### Websites from other organizations

- IPBES Stakeholder Network: <https://groups.google.com/forum/?hl=en-GB#!forum/ipbes-engagement-network>
- Pan-European Network of National Platforms Engaging in IPBES: <http://www.eca-ipbesnetwork.org/>
- Biodiversity Science-Policy Interfaces Network for Early Career Scientists (BSPIN): <http://biodiversity.de/de/schnittstellen/ipbes/bspin-nachwuchswissenschaftler>
- Regularly updated list of scientific publications related to IPBES on the NeFo website: <http://biodiversity.de/de/schnittstellen/ipbes/weitere-informationen-ipbes/literatur-ueber-ipbes>

# Imprint

This brochure is a joint effort of the Network-Forum for Biodiversity Research Germany (NeFo) and the project ValuES of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

The Network Forum for Biodiversity Research Germany (NeFo, [www.biodiversity.de](http://www.biodiversity.de)) is a project supported by the German Federal Ministry of Education and Research (BMBF). It is implemented by the Helmholtz Centre for Environmental Research (UFZ) and the Museum für Naturkunde Berlin (MfN).



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The project ValuES ([aboutvalues.net](http://aboutvalues.net)) works to disseminate methods and approaches for improving the integration of ecosystem services in policy, planning and practice. The project is being implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), with the support of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), and in collaboration with the Helmholtz Center for Environmental Research (UFZ) and the Conservation Strategy Fund (CSF).



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GIZ/Matzel



“We should preserve every scrap of biodiversity as priceless while we learn to sustainably use it and come to understand what it means to humanity.” EDWARD O. WILSON