GBIF is – a tool for science and society

Data discovered and accessed through GBIF are being used in many areas of scientific research and decision making. These uses support international policies and responses to key targets for ending the loss of biodiversity.

GBIF-mediated data have been used in more than 600 peer-reviewed scientific studies, for example to:

- Model the potential spread of known invasive alien species, under current and future environmental conditions
- Predict the consequences of climate change for biodiversity, from single species to global impacts
- Research agriculture and food security, including crop wild relatives and pest control
- Suggest priorities for conservation of threatened species and protected areas
- Explore links between biodiversity and human health, including modelling of disease vectors

GBIF has enabled:
Development of a tool to reduce the negative impacts of new industrial installations.

How?
By serving biodiversity data for the Local Ecological Footprint Tool (LEFT), which helps select sites for development based on ecological sensitivity.

How you can get involved in GBIF:

- **Explore and use** global biodiversity data on more than one million species at:
  http://data.gbif.org
- **Publish your data** using guidelines and manuals available in the GBIF Online Resource Centre at:
  www.gbif.org/orc
- **Contact your GBIF national node** through the list at:
  http://www.gbif.org/participation/participant-nodes/who-we-are/countries/
- **Participate in the GBIF community** as a country, institution or individual. For information on the benefits of participation, see:
  http://www.gbif.org/participation/outreach
- **Keep up to date** about GBIF activities and uses of biodiversity data by downloading the bimonthly GBits Newsletter and GBits Science Supplement at:
  http://www.gbif.org/communications/resources/newsletters/
- **Learn about GBIF's partnerships** with other organizations at:
  http://www.gbif.org/governance/partnerships/

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Free and open access to biodiversity data

The Global Biodiversity Information Facility (GBIF) was set up by governments in 2001 to encourage and facilitate free and open access to biodiversity data, via the Internet.

It enables anyone, anywhere to discover and use information about all types of life on Earth, gathered over centuries and held in many different formats.

The data mobilized by GBIF's network of countries, institutions and individuals support science, decisions and public awareness about biodiversity.

GBIF delivers data that underpin research on the world's species – generating knowledge to help conserve and sustainably use the biological resources on which all of us depend.



GBIF is – a connected community

GBIF's Participants collaborate to share skills, experience and technology to mobilize and use data about biodiversity for the public good.

GBIF is a network of governments and organizations, helping one another to set up national and thematic biodiversity information facilities.

Participants work with the Secretariat based in Copenhagen, Denmark to facilitate the flow of biodiversity data, ensure data quality and enable data use in science and policy. Expertise and technology are shared through:

- Regional groups, strategies and plans
- Training workshops and online learning resources
- Mentoring partnerships and collaboration between Participants
- Capacity enhancement programmes in developing countries

GBIF also collaborates with a wide range of other global and regional initiatives promoting access to data, information and knowledge on biodiversity.

GBIF has enabled:
Scientific justification for selecting the sites of new marine protected areas off Madagascar.

How?
By providing access to data on 274 fish species, used by researchers to model the most important areas to protect, based on biodiversity, fishing pressure and climate change.

GBIF is – an informatics infrastructure

GBIF encourages adoption and use of agreed, community-built data standards and informatics tools. This enables thousands of datasets, of many different types and coming from all over the world, to be discovered and used by anyone.

The informatics solutions facilitated by GBIF include:

- Open-source software providing a simple means of publishing or sharing biodiversity data via the Internet
- A global data portal enabling all data shared by GBIF publishers to be discovered and accessed from a single site
- National and thematic portals to meet the needs of GBIF Participants
- Web services that allow other websites and software to access and display data published through GBIF
- Tools to simplify organizing data using scientific names and classifications

GBIF has enabled:
Prediction of how the distribution of nearly 50,000 plant and animal species may change by 2080, based on different scenarios of climate change.

How?
By serving global biodiversity data to the Wallace Initiative, a partnership to help inform decisions on conservation, climate change adaptation and mitigation.

GBIF is – a window on biodiversity

The data published through the GBIF network describe where and when hundreds of millions of individual organisms have been observed or collected, helping countries to unlock knowledge about their own biodiversity held in other parts of the world.

GBIF enables universal access to data from more than 400 institutions publishing over 10,000 datasets, including:

- Specimens of plants, fungi and animals from herbaria, fungaria and zoological museums, dating back to the earliest days of natural history collections and digitized from millions of specimen labels
- Data from continuous monitoring projects and surveys, including some covering decades of sampling in oceans, land and fresh water
- Observations of animals and plants by 'citizen science' networks, with community-based checks on correct identification
- Information about species occurrences extracted from historic literature and online journals

GBIF has enabled:
Greater visibility and professional recognition for those who publish datasets, addressing some of the cultural barriers to sharing data.

How?
By developing with partners a simple process for submitting 'data papers' about biodiversity datasets for peer review, with examples already published from the Antarctic, India, Belgium and Taiwan.