

## The Global Biodiversity Information Facility GBIF Information Sheet 1

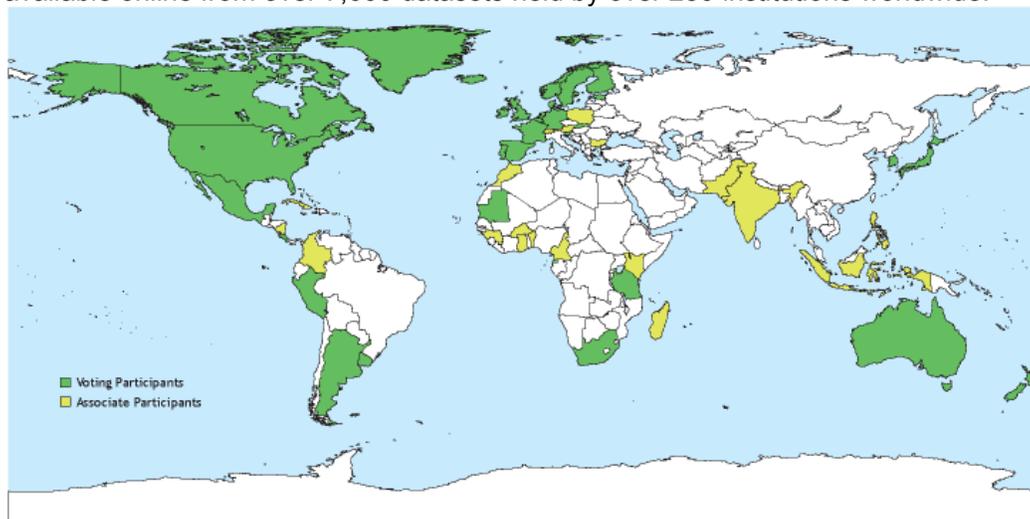


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### Background

The Global Biodiversity Information Facility (GBIF) is an intergovernmental global science research initiative enabling access to global biodiversity data. Thus, GBIF provides a tool for the conservation and sustainable use of biodiversity from local to global levels. GBIF was established in 2001 at the behest of OECD Science Ministers, in response to their recognised needs for such a mechanism to improve access to, and integration of biodiversity data, for improved decision-making to underpin sustainable development.

GBIF is implemented as an inter-operable network of biodiversity databases via the internet, and is a formalised and growing partnership between countries and international organisations sharing a common vision of open access and sustainable development. GBIF comprises a growing membership of 51 Countries and 43 international organisations, with over 181 million primary biodiversity records available online from over 7,600 datasets held by over 250 institutions worldwide.



GBIF Voting and Associate Participants

GBIF provides the informatics architecture, standards and protocols, and web services whereby sharing of data is possible, providing the means by which disparate data can be linked and used for richer analyses than individual datasets alone. GBIF is comprised of a growing network of data holders who retain ownership and control over their data, but who have voluntarily linked their datasets by making them searchable and accessible via the Internet, using GBIF-mediated common standards and protocols. Through GBIF, digital biodiversity data are being made freely and openly available for scientists, researchers and the general public, as mandated by the Convention on Biological Diversity's (CBD) Decision VIII/11. The GBIF data portal ([data.gbif.org](http://data.gbif.org)) is a unique tool making it possible to analyse and tackle some of the world's most critical environmental problems.

### **Why is GBIF needed?**

The Millennium Assessment showed that human actions often lead to irreversible losses in diversity of life and these losses have been more rapid in the past 50 years than ever before in human history. Biological diversity is key to resilience - the ability of natural and social systems to adapt to change, and is essential for nearly every aspect of human well-being. In order for ecosystems to provide sustainable life-support services, ranging from food security, resilience to natural disasters, and access to clean water and raw materials, it matters which species are abundant as well as how many species are present. Human-induced changes in biodiversity and ecosystem functioning are disproportionately affecting the world's poorest people. Because human threats to biodiversity occur across large spatial and temporal scales, biodiversity and ecosystem monitoring, forecasting, and risk assessments require data to be organised in a globally-accessible, integrated infrastructure.

GBIF is fulfilling this critical need for such infrastructure; GBIF's internet architecture and web services enable participants to meet reporting requirements under the five major biodiversity-related conventions (Convention on Biological Diversity, Migratory Species, Wetlands, World Heritage and Convention on International Trade in Endangered Species), other environmental conventions such as on Combating Desertification and Framework Convention on Climate Change, as well as meet obligations under the Global Program of Action for the Protection of the Marine Environment from Land-Based Activities and proposed UN Ocean Assessment. In addition, predictions of movement of invasive alien species, vectors of human, crop and livestock diseases and ecosystem boundaries in response to climate change are feasible via use of GBIF-mediated datasets. The Millennium Assessment's first solution proposed as a 'key factor of successful response to biodiversity loss' was to "Mobilise knowledge; ensure that available knowledge is presented in ways that can be used by decision-makers." GBIF is a multi-national response to this need to mobilise information to improve decision-making.

### **In summary, GBIF:**

- Enables access to otherwise inaccessible primary biodiversity data;
- Provides free and universal access via the Internet;
- Mediates and supports the development of global standards for capturing, storing, managing and indexing biodiversity datasets;
- Provides the common informatics architecture within which the world can view and analyse global biodiversity information;
- Provides the foundation to analyse biodiversity status, trends and projections from local to global, temporal and spatial scales,
- Enables the identification of significant factors affecting biodiversity, and mitigation and adaptation options;
- Facilitates meeting national reporting requirements under biodiversity-related conventions;
- Provides the vehicle to monitor and evaluate the efficacy of biodiversity conservation policies and initiatives; and
- Maximises investment in relevant research and monitoring by improving access to the resulting biodiversity data for repeated use at various scales.