
GBIF
STRATEGIC PLAN
2017–2021

STRATEGIC FRAMEWORK

This Strategic Plan identifies a set of five interrelated priorities for GBIF activity during 2017-2021. The overall goal is to increase the relevance and value of GBIF as a mechanism for delivering comprehensive information on the recorded occurrence of species around the world.

Achieving this goal depends on expanding engagement into all countries and regions and on maximizing the value and benefits provided by GBIF for all key stakeholders, including data publishers, national and organizational participants, researchers, and governments and intergovernmental frameworks.

Together, these five priorities represent a challenging but significant path forward for GBIF to increase its usefulness for all stakeholders. Implementing this strategy will require coordinated activity throughout the GBIF network as well as engagement and collaboration with all other stakeholders in biodiversity information.

The first priority—to **empower global network**—underpins those that follow. GBIF is not simply a partnership focused on delivering a global data resource. Its goals must include establishing effective national biodiversity information facilities (BIFs) as activities and networks that connect the groups that hold or require information on biodiversity, and for these national BIFs to deliver value at the national level. Progress in any country will also yield benefits to others by increasing data availability and comprehensiveness and by contributing capacity and expertise to the global network.

The second priority—to **enhance biodiversity information infrastructure**—supports the previous priorities. GBIF must enhance its cooperation with other biodiversity informatics activities to increase interoperability and interconnection between GBIF species occurrence data and the best available information on taxonomy, sequences, species traits, and literature, among others. Progress in delivering the GBIO framework will reinforce GBIF's work in all areas by enabling integration of complementary data and use of species-level information to validate, clean and augment GBIF data.

The third and fourth priorities—to **fill data gaps** and to **improve data quality**—address the greatest weaknesses of the data already delivered through the GBIF network. They arise from the challenge of maintaining clear, precise, high-resolution data while integrating it from thousands of different institutions and projects. Such issues also stem from the uneven nature of content mobilization with regard to taxa, time and space. GBIF must focus on enhancing the accuracy and completeness of published data and metadata and on improving handling of aggregated data. Doing so will support more consistent overall quality and enable researchers to assess the fitness of the data for their purposes. At the same time, it is important to assess and prioritize the various gaps and variations within GBIF data and to work with the global community to address these weaknesses.

The last but in some ways overriding priority—to **deliver relevant data**—means providing access to the data resources and the aggregated data products needed by biodiversity researchers of all types and by policymakers in support of conservation and sustainable development. This priority requires closer engagement with user communities, both to establish present and future requirements and to collaborate in curating data to the highest possible standards of quality.

1 EMPOWER GLOBAL NETWORK

Ensure that governments, researchers and users are equipped and supported to share, improve and use data through the GBIF network, regardless of geography, language or institutional affiliation

Remove barriers to participation	Increase benefits associated with publishing biodiversity data	Address capacity needs
✳ Engage with government stakeholders in all regions to expand national participation in GBIF	✳ Promote best practices for citation and acknowledgment of data publishers	✳ Maintain current and complete guidance materials to support all types of data holder and data publisher
✳ ✳ Ensure that data holders everywhere have access to tools and support to publish and use data through GBIF	✳ ✳ Report on use of data accessed through GBIF network	✳ ✳ Support capacity exchange and reuse of tools and expertise to accelerate establishment of national biodiversity information facilities
✳ ✳ ✳ Evaluate and respond to needs for delivery of data and data summaries in additional formats and through new technologies	✳ ✳ ✳ Enable data publishers and users to collaborate in correcting and improving data	✳ ✳ ✳ Partner with other organizations, institutions and agencies to maximize benefits from investments in capacity development in all regions
		✳ ✳ ✳ ✳ Promote inclusion of biodiversity informatics training as part of relevant university and workplace education
		✳ ✳ ✳ ✳ ✳ Seek supplementary funding to support development of national biodiversity information facilities

2 ENHANCE BIODIVERSITY INFORMATION INFRASTRUCTURE

Provide leadership, expertise and tools to support the integration of all biodiversity information as an interconnected digital knowledgebase.

Coordinate vision and strengthen partnerships with major biodiversity informatics initiatives

✳ Deliver comprehensive taxonomic solutions in partnership with Catalogue of Life and other partners

✳ ✳ Develop and promote shared architecture to enable all biodiversity knowledge to be integrated and managed as a linked digital resource

✳ ✳ ✳ Agree plans and secure funding to implement shared architecture in partnership with other major biodiversity informatics organizations, particularly around taxonomic and nomenclatural data

✳ ✳ ✳ ✳ Seek funding with partner initiatives to deliver a stable and efficient network of interoperable infrastructures connecting and maintaining all biodiversity knowledge

Promote standardization and common mechanisms for exchange of biodiversity data

✳ Promote development and adoption of a comprehensive domain model, standards and vocabularies for biodiversity information through TDWG and other partnerships

✳ ✳ Provide leadership in development and adoption of standardized tools, data format and vocabularies to enable mobilization and use of all biodiversity knowledge

Provide stable and persistent data infrastructure to support research

✳ Implement and promote models and tools for persistent sharing and use of open data

✳ ✳ Contribute to wider initiatives to standardize management and use of open data in research

3 FILL DATA GAPS

Prioritize and promote mobilization of new data resources that combine with existing resources to maximize the coverage, completeness and resolution of GBIF-mediated data, particularly with respect to taxonomy, geography and time.

Expand checklists to cover all taxonomic groups	Identify and prioritize gaps in spatial and temporal data	Engage institutions and researchers with complementary data
✳ Coordinate and deliver comprehensive solutions in partnership with Catalogue of Life and other partners	✳ Develop models and criteria to assess completeness and adequacy of existing data	✳ Develop mechanisms to integrate other classes of data providing information on species occurrence
✳ ✳ Target mobilization of checklists for remaining taxonomic groups	✳ ✳ Maintain "gap map" highlighting priority regions, taxa and time periods to fill gaps	✳ ✳ Ensure that tools and documentation support mobilization of data streams from all relevant research areas and observation systems
✳ ✳ ✳ Mobilize national and regional species lists		✳ ✳ ✳ Promote best practices for GBIF nodes to identify, engage and support all national holders of relevant data
		✳ ✳ ✳ ✳ Develop mechanisms to support data sharing from researchers and institutions in countries which are not yet GBIF Participants
		✳ ✳ ✳ ✳ ✳ Seek supplementary funding to support large-scale content mobilization

4 IMPROVE DATA QUALITY

Ensure that all data within the GBIF network are of the highest-possible quality and associated with clear indicators enabling users to assess their origin, relevance and usefulness for any application.

Enhance automated data validation	Implement tools for expert curation	Provide clear quality indicators for all data
✳ Validate metadata for completeness and interpretability	✳ Integrate and promote tools to annotate individual records and batches of records	✳ Improve metadata for all datasets explaining methods, provenance, transformations etc.("data stories")
✳ ✳ Validate individual data records	✳ ✳ Enable publication of cleaned data as "reference" datasets	✳ ✳ Provide metrics and filters for download of data subsets matching user criteria
✳ ✳ ✳ Validate datasets as a whole	✳ ✳ ✳ Improve communication with and support for data publishers to address issues	✳ ✳ ✳ Work with expert communities to develop reference datasets and/or filters for data suitable for key applications

5 DELIVER RELEVANT DATA

Ensure that GBIF delivers data in the form and completeness required to meet the highest-priority needs of science and, through science, society..

Engage with expert communities to manage data to the highest quality possible

✳ Engage taxonomic societies, professional researchers and amateur experts as partners in assessing and improving GBIF-mediated data

✳ ✳ Define criteria for determining data relevance (elements, completeness, etc.) for key applications and domains

✳ ✳ ✳ Develop mechanisms for community curation of taxonomic, geographic or thematic sectors within GBIF-mediated data

Deliver well-organized and validated data to support key applications

✳ Develop mechanisms to monitor and prioritize data needs from GBIF audiences

✳ ✳ Support supra-national research, conservation and sustainable use, particularly through CBD, IPBES and GEO BON

✳ ✳ ✳ Provide data relevant to understanding and responding to the impacts of climate change on biodiversity

✳ ✳ ✳ ✳ Ensure that GBIF serves as a virtual natural history collection to support taxonomic research

✳ ✳ ✳ ✳ ✳ Assess and develop role of GBIF in support of Nagoya Protocol

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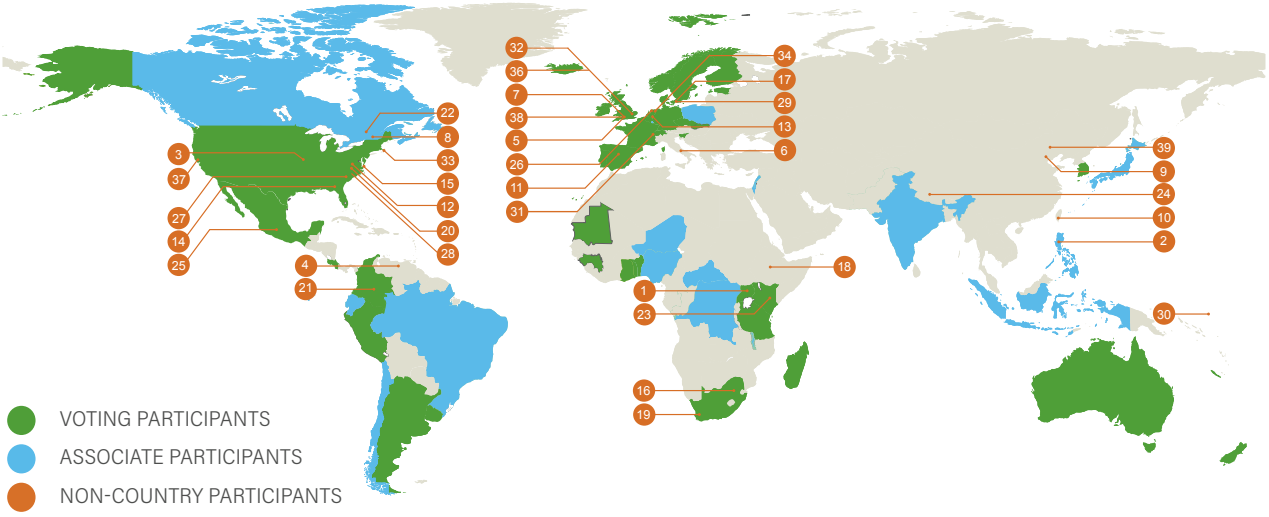
NETWORK AT A GLANCE *Participant network as of 1 Jan 2017*



To view the current map of GBIF Participants, visit www.gbif.org/the-gbif-network

NON-COUNTRY PARTICIPANTS

1. **ARCOS**: Albertine Rift Conservation Society
2. **ASEAN Centre for Biodiversity** (ACB)
3. **BHL**: Biodiversity Heritage Library
4. **Bionet-Andinonet**
5. **Bionet-International**
6. **Bioversity International**
7. **BGCI**: Botanic Gardens Conservation International
8. **Canadensys**
9. **Chinese Academy of Sciences** (CAS)
10. **Chinese Taipei**
11. **CYTED**: Ciencia y Tecnología para el Desarrollo
12. **CBOL**: Consortium for the Barcode of Life
13. **CETAF**: Consortium of European Taxonomic Facilities
14. **Discover Life**
15. **EOL**: Encyclopedia of Life
16. **Endangered Wildlife Trust** (EWT)
17. **EEA**: European Environment Agency
18. **Horn of Africa Regional Environmental Centre and Network**
19. **ICLEI** - Local Governments for Sustainability
20. **ITIS**: Integrated Taxonomic Information System
21. **IABIN**: Inter-American Biodiversity Information Network
22. **IBOL**: International Barcode of Life Project
23. **ICIPE**: International Centre for Insect Physiology and Ecology
24. **ICIMOD**: International Centre for Integrated Mountain Development
25. **ILTER**: International Long Term Ecological Research
26. **Naturalis Biodiversity Center**
27. **NCSA**: Natural Science Collections Alliance
28. **NatureServe**
29. **NORDGEN**: Nordic Genetic Resource Center
30. **PBIF**: Pacific Biodiversity Information Forum
31. **Plazi**
32. **SCAR**: Scientific Committee on Antarctic Research
33. **SPNHC**: Society for the Preservation of Natural History Collections
34. **Species 2000**
35. **TDWG**: Taxonomic Databases Working Group
36. **UNEP-World Conservation Monitoring Centre**
37. **VertNet**
38. **Wildscreen**
39. **WFCC**: World Federation For Culture Collections