Nodes Strategy 2023

This strategy has been prepared with the Nodes Steering Group in December 2022 to align with GBIF's new strategic framework. Following comments from the nodes, this final version was approved by the Nodes Steering Group during the mid-term meetings in March 2023.

Rationale

Since the 15th Global Nodes Meeting (October 2019 at GB26 in Leiden), the Nodes Committee, led by the Nodes Steering Group (NSG), has identified priority objectives to guide the global efforts of the nodes.

These nodes strategies are implemented by the Nodes Committee with the support of the Secretariat under the supervision of the NSG. They also provide a framework for discussions at the Global Nodes Meetings. At the end of the year, the NSG will assess the progress towards these strategic objectives.

The global objectives are aligned with GBIF's strategic framework and implementation plan. Regions are welcome to add their own objectives. Different regions might have different approaches and activities to reach the common strategic objectives. For this reason, the activities under each objective should be considered as a non-exhaustive list of suggestions that might differ regionally.

The strategic objectives

1. Engage research communities for data mobilization and use
2. Support national biodiversity commitments and the science-policy interface
3. Promote open biodiversity data approaches within the business and finance sectors
4. Develop capacity within regional communities of practice
5. Strengthen support services for collections communities
6. Contribute to data model enhancements

Priority Area 1: Science and Research

Improving biodiversity evidence for scientific research and understanding

1. Engage research communities for data mobilization and use

Nodes play an essential role in building engagement with researchers within their countries and networks, promoting open science principles (in line with the UNESCO open science recommendation) and building communities of data publishers and users. Research communities can help to identify data gaps, data needs, and challenges in the use of the available data that can help nodes to prioritize activities. Several nodes have succeeded in embedding GBIF within academic training programmes (see guiding example from Benin),

developing capacity and encouraging new generations of researchers to follow open science practices. GBIF's focus on thematic communities (including soil, freshwater and disease vector thematic communities in 2023), will lead to growing interest in data publishing and data use from researchers that will seek to connect with nodes for support.

Nodes are encouraged to:

- Engage with scientific leaders in biodiversity sciences to build and develop a scientific community around the node. The country filter of literature tracking and annual Science review can help identify active users of GBIF-mediated data in the country.
- Encourage local researchers to join the biodiversity open data ambassadors programme. Cultivate active relationships between the node and ambassadors to promote GBIF data use in research through national and regional conferences and other relevant fora.
- Organize national or thematic events targeting research communities, including focus on training for DNA derived data and GBIF (see available guide and training materials).
- Promote and participate in data mobilization actions relating to thematic approaches, such as calls for data papers.
- Promote the Data Use Club within research and student communities as a means to develop data literacy skills, for example, by organizing a national/thematic team (see guiding example from Colombia).
- Engage with national graduate schools, universities and other key partners in higher education aiming at making data skills and GBIF training an essential part of university curricula (using the increasing popularity of teaching *R* and the Masters programme in biodiversity informatics in Benin as examples).
- Increase promotion of the Graduate Researcher Award and Ebbe Nielsen Challenge to encourage and recognize innovative research use of GBIF-mediated data.
- Support the development and implementation of national policies on open science and data to implement FAIR and CARE principles.
- Know, seek and develop key partnerships with national, regional, global and thematic research infrastructures to help drive the agenda around data-intensive biodiversity research.

Priority Area 2: Policy and Partnerships

Developing partnerships that benefit policy and society

2. Support national biodiversity commitments and the science-policy interface

Through partnerships and coordination, nodes can enable data flows into indicators and reporting processes relating to biodiversity status and trends, supporting commitments under the Convention on Biological Diversity (CBD) and the Sustainable Development Goals. By building linkages with the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), nodes can support biodiversity assessments by providing access to biodiversity data and enabling policy-related research based on GBIF-mediated data. These linkages can also support the nodes in terms of raising awareness of the value of open biodiversity data to national policy and commitments, as well as identifying policy-relevant gaps in data availability.

Nodes are encouraged to:

- Make connections with the CBD focal points or even include them in their node team to support the implementation of national commitments under the Convention on Biological Diversity (CBD).
- Engage with the IPBES national focal points (see guiding example from Belgium) and with other biodiversity-related conventions to discuss data flows and known data gaps.
- Relate data use cases and other GBIF activities to supporting the Sustainable Development Goals (SDGs) (see guiding example from the Chinese academy of Sciences).

3. Promote open biodiversity data approaches within the business and finance sectors

In recent years, several nodes have scaled up engagement with the private sector resulting in increased data mobilization, partnerships, and communication materials to support further engagement (see the resources developed and available for reuse through the CESP OpenPSD project and the GBIF private sector page).

Nodes are encouraged to:

- Engage with the private sector through sectoral associations, individual companies and consultancies to promote publishing of data associated with environmental and social impact assessments (ESIA) as well as ongoing biodiversity monitoring.
- Where appropriate and practical, support data publication from the private sector through guidance and use of data publishing platforms.
- Engage with national environment monitoring authorities to encourage mandatory publishing of primary biodiversity data through GBIF as part of the ESIA process (see resources developed by the CESP BIREME project).
- Engage with national development agencies to promote requirements for data publication in projects supported by development finance or overseas development assistance.

Priority Area 3: Community and Capacity

Developing the GBIF network to meet future needs and challenges

4. Develop capacity within regional communities of practice

All nodes have limited resources. Ensuring capacity at the node level in terms of a skilled and stable node team remains a priority. Nodes should strive for a team of at least four full-time equivalents (FTEs) per country node. A node team would typically include a Node Manager, an IT-developer, a data manager and a node staff member for scientific outreach and communication. Recognizing that this is a combined responsibility with the Heads of delegation, Node managers will report on progress to establish such functional node teams.

Nodes contribute to institutional capacity development for data mobilization and use within their national and thematic networks. Also, via collaboration with other nodes and regional

partners, nodes strengthen GBIF's broader community of practice - the individuals that are actively engaging in advancing GBIF's mission. In 2021, GBIF initiated work to strengthen regional capacity through regional support teams of contractors in Africa and Caribbean, in the context of the Biodiversity Information for Development (BID) programme, and later in Asia, in the context of the Biodiversity Information Fund for Asia (BIFA) and SYNTHESYS+. This approach has complemented the ongoing efforts of node managers, regional representatives, and volunteer trainers and mentors, to develop regional communities of practice engaged in data mobilization and use through GBIF. With the success of these regional support teams, GBIF will seek to expand this approach through identifying additional funding streams, and nodes will be essential to guide future regional-level support for capacity and participation.

Interregional partnerships should be encouraged under the umbrella of GBIF to support more extensive capacity building and / or sound academic training of students in order to promote a new generation of data scientists capable of data use to inform decisions on biodiversity conservation and sustainable use across regions.

Nodes are encouraged to:

- Collaborate with other nodes and partners to support active participation in GBIF by more countries.
- Continue to collaborate with other nodes on capacity development, including through the Capacity Enhancement Support Programme.
- Assist in communicating the value of GBIF, including via the materials to be developed based on the economic valuation of the GBIF network commissioned from Deloitte Access Economics, to potential partners at all levels.
- Continue training and engagement actions to strengthen and expand national data publication and use.
- Develop and enhance hosted portals and Living Atlases for national, regional and thematic data communities.
- Further explore partnerships between nodes and the regional support teams to support the work of the nodes as well as broader capacity development in the region, and contribute to discussions on the future of this approach.
- Contribute to the development of future capacity development programmes, such as the Biodiversity Information for Development (BID) programme.

Priority Area 4: Infrastructure and data products

Maintain and evolve infrastructure to advance biodiversity-related knowledge

5. Strengthen support services for collection communities

Nodes have been actively contributing to updating and enriching the content of GRSciColl, supported by videos and training activities. For institutions with collections that are not yet publishing data, updating their records in GRSciColl can be a simple first step towards engaging them as data publishers in the future. This work helps to raise the visibility of collections, including those that have not yet been digitized.

Nodes are encouraged to:

- Contribute actively to updating GRSciColl and engaging institutions with collections and relevant societies and networks in data mobilization.
- Support the development of hosted portals for collections.

6. Contribute to data model enhancements

Community engagement is essential in the work on diversifying the data model. Case studies are being prepared in collaboration with community members who have identified the need to better support the publishing of their specific type of biodiversity data. These case studies are open for ongoing comments and inputs. Nodes and community members are contributing to the series of webinars exploring progress towards the new data model. The Integrated Publishing Toolkit (IPT) is being enhanced to support data publishing using the new model. This work will continue in 2023 and will rely on community feedback, testing, and engagement through the nodes. Nodes, in their role of supporting data mobilization activities from their communities, will need training materials and documentation to allow them to efficiently promote data publishing via the new model. Ultimately, this should enable GBIF and nodes to provide the data infrastructure for a broader set of biodiversity data holders and users.

Nodes are encouraged to:

- Participate in the regular webinars exploring the new data model.
- Engage in the development and testing of new training materials and documentation to support data publishing with the new data model.