

Defining the “Core” of GBIF

Recent discussions within the GBIF Governing Board and Executive Committee have identified the importance of clarifying the “core” set of products, services and mechanisms that are essential to the existence, growth and health of GBIF. The goal is to ensure clarity around several key questions:

- **What is the unique role of GBIF?** (in contrast with the roles of its Participants, other biodiversity informatics activities and other intergovernmental arrangements)
- **What are the components of GBIF that must be funded and safeguarded** even when resources are limited?
- **Which components of GBIF should receive funding from the core contributions of Voting Participants?**
- **What budget is needed to maintain and develop GBIF’s health and relevance?**

The priorities of different GBIF Participants

All GBIF Participants have recognised the importance of mobilising and sharing biodiversity information. However different Participants have different reasons for prioritising this work. These differences are reflected by different government ministries supporting GBIF’s work in different countries.

- In some countries, the relevance of GBIF data is seen primarily as the global e-infrastructure for sharing collections and observation data to support science (including taxonomy, ecology and other fields). For these Participants, the ultimate value of GBIF is seen to increase in proportion to the scale and quality of the data within the network and the number of researchers depending on the existence of these data. In such countries, GBIF is likely to be linked to a science ministry and GBIF is likely to be perceived primarily as a research infrastructure. A further value recognised by many of these countries is GBIF’s role in promoting free and open sharing of this type of information. GBIF has helped to drive a culture change in this area.
- In other countries, the relevance of GBIF comes from the use of biodiversity data to underpin decision-making particularly in the area of environmental planning and conservation, and in some cases more specifically biosecurity, agriculture and other primary industries, and human health. For these participants, the value of GBIF is also seen to increase in proportion to the scale and quality of the data within the network, but the key measure will be the degree to which these data can support relevant planning and decision-making. In such countries, GBIF is likely to be linked to an environment or similar ministry and perceived primarily as a data resource and perhaps as an instrument to fulfil national obligations under international conventions.

GBIF Participants also vary in the degree to which capture and management of biodiversity information is already addressed at the national level by existing infrastructure and investments.

- Some countries already manage significant quantities of biodiversity information as part of one or more national information systems. In extreme cases, these countries already have access to the vast majority of digital information relevant to understanding their

biodiversity. In these cases, involvement in GBIF has importance particularly as a research infrastructure that ensures the development and availability of transnational data sets and to sometimes as a tool to support national obligations to make biodiversity information accessible to other countries.

- Other countries may be in the early stages of managing biodiversity information and may not yet have made other significant investments in this area. In these cases, involvement in GBIF has importance particularly as a means to gain access to content, technology, and experts from elsewhere in the network, and to participate in collaborative programs for capacity development.

These variations lead to different expectations around the key elements of GBIF's work which should be funded from core funds. The GBIF Memorandum of Understanding requires Participants to establish a Node as well as to contribute to core funds. However many countries still have limited capacity and resources for establishing such a Node. For these countries there is a natural desire for GBIF to focus on capacity development at the national level. This may however conflict with priorities and funding restrictions within those countries that fund GBIF as a science infrastructure activity (several of which provide the majority of GBIF funds).

Consequently GBIF core funds should be applied to support those elements which are of benefit to all Participants. Additional mechanisms should urgently be established to secure funds for those activities which reflect the interests of different subsets of the network, and in particular to provide additional support for content mobilisation and capacity development activities in countries which do not have strong national networks and Nodes.

A distinction – GBIF as a global network and GBIF as a funded activity

The overall goal for GBIF is to maximise free and open access to biodiversity information, in particular to data providing evidence for the occurrence of any species at any time and place. This means that the most important component of GBIF is the content mobilised through the network. However it is the GBIF Participants and other data publishers that own and share these data, using GBIF as the mechanism for providing this access. This means that the actual generation of content, something essential to GBIF's existence and success, is part of the role of these Participants and publishers rather than GBIF's core-funded activity. Nevertheless GBIF's core role does include the work of facilitating tools and standards for efficient data exchange and mobilisation.

Similarly GBIF depends on the development of expertise and adoption of shared best practices by countless agencies, institutions, organisations and individuals around the world. As a result capacity development activities (including those encompassed by the terms "engagement" and "participation" within GBIF) are essential to the health and development of GBIF. However, as with content mobilisation, the scale and granularity of capacity development needs significantly exceed any expected budget likely to be available to GBIF as a collaboration. Most of the required funds will clearly be secured, and expended, at national or sub-national levels.

Capacity development activities have been recognised as an important aspect of many other data infrastructure activities. The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) identifies it as a major element in its work programme for 2014-2018, something that offers collaboration opportunities for GBIF. Several GBIF organisational participants have a clear mandate

to focus on capacity development activities at regional levels. It is clearly desirable for GBIF to find the most effective way to support and enhance such activities and partnerships, in particular to support the interests of many participants to develop national capacity or to assist others in developing capacity. The World Meteorological Organization (WMO) provides one example of an organisation that developed a parallel process for funding capacity development alongside its core activities¹.

Conclusions

We must distinguish between the enormous amount of GBIF-related activity which is required throughout the world, particularly in capacity development and content mobilisation, and the more restricted set of activities which serve the interests of all GBIF participants and which can only be expected to be delivered as part of a joint, co-funded activity. This latter set of “core” activities includes:

1. The development and maintenance of GBIF’s governance and coordination structures
2. The development and operation of those informatics components which enable content mobilised throughout the network to be brought together as a shared information resource
3. The development and promotion of information and training materials (in all relevant languages) and tools to enable all participants to collaborate in GBIF’s work and make use of the GBIF research infrastructure
4. Strategic planning and evaluation of opportunities for GBIF to expand the scope of its biodiversity-related data management activity
5. The engagement of additional Participants and other stakeholders to join or work with GBIF

These are the “core” elements of GBIF’s work in the sense that these must be funded as joint activities to allow the GBIF network to maintain and expand its relevance and value. This does not diminish the need for and importance of significant funding throughout the GBIF network to exploit this core, particularly through capacity development and content mobilisation. The greater the investments in these areas, the more value GBIF can deliver. However the existence of GBIF is not directly dependent on the scale of this additional funding.

¹ “The WMO’s most significant work as an institution took place through its technical assistance program. At the time of the First WMO Congress (1951), the impending independence of Libya, then an Italian colony, created the possibility of a break in meteorological operations, since the existing weather service in Libya was staffed mainly by non-Libyan personnel. The Congress directed the Executive Committee to propose a plan for continuation of service and ‘to express the willingness of the WMO to provide all possible technical assistance within its available resources.’ From modest beginnings – \$23,000 contributed to four countries in 1952 – the Voluntary Assistance Program soon became one of the WMO’s most significant activities.” Paul N. Edwards. *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming* (Kindle Locations 2547-2551). Kindle Edition.