

## **GFBio - A FAIR<sup>1</sup> infrastructure network to support and assist scientists in data management**

The German Federation for Biological Data (GFBio) is implementing a national infrastructure for the preservation, integration, and publication of biological and environmental data generated in German research projects. GFBio commits itself to the FAIR<sup>1</sup> data principles including technical, organizational, cultural, and policy aspects. It is based on the collective experience and expertise of leading researchers as well as on a network of German natural science collection data repositories, a data publisher for earth and environmental science, as well as selected facilities from the molecular biology research community. GFBio addresses data management requirements of a wide array of stakeholders ranging from individual scientists to large research networks. GFBio must thus be capable of handling highly heterogeneous data. Services provided by GFBio will cover the full research data life cycle from field or real time data acquisition to long term archiving and publication as well as analysis and re-use of these data. GFBio especially aims to encourage and support individual scientists to embed good data management practices in their daily scientific work. The goal is to promote open science by improving the availability, quality and thus re-usability of research data according to the FAIR data principles. New scientific reward mechanisms based on data sharing and data citation will be suggested and discussed to advance the cultural change in science. In the future, hopefully the entire scientific community and individual scientists will benefit by gaining additional credit, visibility and reputation for their open science work.

The GFBio project is currently entering its third phase focusing on sustainability as well as on consolidation and hardening of services. In order to successfully manage the transition from a project to a national infrastructure network, the non-profit association GFBio e.V. was founded in 2016. It will provide a single-entry point for all services, and will assure cooperation of GFBio partners and availability of services beyond the project phase. GFBio is ready to impart its experiences in research data management with initiatives like the German national research data infrastructure (NFDI).

### **Reference:**

Wilkinson, M. D. et al. The FAIR Guiding Principles for scientific data management and stewardship. *Sci. Data* 3:160018 doi: 10.1038/sdata.2016.18 (2016).