Conference Abstract

BiodiFAIRse: a Biodiversity dedicated GO FAIR Implementation Network

Yvan Le Bras[‡], Anne-Sophie Archambeau[§]

‡ French Museum of Natural History, Concarneau, France
§ IRD, Paris, France

Abstract

The global aims of the biodiversity field are to understand the underlying mechanisms of nature, document and capture the state and dynamics of ecosystems, and build predictive models for the future. This understanding is based on access to and use of data, models and analysis tools, produced in ever-greater quantities, and used by diverse communities tackling different aspects of biodiversity from observations, collections, sampling and experimental data.

The analysis of biodiversity data is essential for ecosystem services, risk analysis, and human well-being. The impact goes well beyond provisioning for material welfare and livelihoods, to include food security, resiliency, social relations, health, and environmental indicators. Species loss has dramatically accelerated around the world and now poses an existential threat to some ecosystems and susceptible human societies. There is an urgent need to; 1) collect, preserve and share FAIR data on species and ecosystems before they are lost to the scientific record, and, 2) provide automatic workflows producing biodiversity indicators so researchers, planners or policy-makers have evidence-based models to understand the complex dynamics of biodiversity.

To accelerate progress, both in the completeness and coverage of data, and in the richness of available information, all relevant sources of data must be aggregated; including sample-based data sets, ecogenomics, molecular research, remote-sensing,

literature records, local and regional checklists, and expert knowledge. These resources, records and diverse data types should be used not only as a source of occurrence information, but also as an effective discovery tool on species abundance, community compositions, and interrelated genetic data.

Towards these long term aims, the partners of the BiodiFAIRse IN plan to build a virtual research environment and tools, collectively bringing their expertise to FAIR compliance by adapting data exchange standards, promoting the use and mapping of controlled vocabularies and collaborating in the development of registries gathering FAIR research objects and processes, analysis tools, and scalable workflows.

Keywords

FAIR, GO FAIR, Standards, Metadata, Metadata portals, controlled vocabularies, Analysis workflows, Training

Presenting author

Yvan Le Bras