

Biodiversity Informatics: A success story for the long-term financial sustainability of the European Open Science Cloud (EOSC)

Patricia Mergen^{‡,§}, Miguel Rey Mazon[|], Dale Robertson[¶]

[‡] Royal Museum for Central Africa, Tervuren, Belgium

[§] Meise Botanic Garden, Meise, Belgium

[|] TU Graz, Graz University of Technology, Graz, Austria

[¶] EGI Foundation, Amsterdam, Netherlands

Corresponding author: Patricia Mergen (patricia.mergen@plantentuinmeise.be)

Abstract

The European Open Science Cloud's ([EOSC](#)) ambition to provide European researchers, innovators, companies, and citizens with a federated and open multi-disciplinary environment where they can publish, find and reuse data, tools and services for research, innovation, and educational purposes. To enable this, EOSC promotes the use of the [FAIR](#) (Findable, Accessible, Interoperable and Re-usable) principles. The EOSC Sustainability Working Group under the EOSC Secretariat published the FAIR Lady Report (European Commission, Directorate-General for Research and Innovation, 2020), formulating recommendations for sustainability in the form of a Minimal Viable EOSC (MVE) including criteria for its sustainable implementation, formed by three essential components:

1. EOSC Core, containing the minimum set of components necessary to provide researchers with the means to discover, share, access and reuse data and services;
2. EOSC Exchange, a marketplace built on top of the EOSC Core to extend the set of public and private providers, and
3. EOSC Data federation.

The [EOSC Association](#) was established in July 2020 as the legal entity to govern EOSC. The Association appointed several Advisory Groups to provide recommendations towards the implementation of EOSC, including two Task Forces on [Long Term Data Preservation](#) and on the [Financial Sustainability](#) for [Sustaining EOSC](#). This presentation will focus on the Financial Sustainability Task Force. The Task Force formed three "Working Streams" following the recommendation of the FAIR Lady Report to tackle the EOSC Core, Exchange, and Data Federation in smaller groups.

Within the Data Federation Working Stream, the experts have identified many thematic data federations that have existed for quite some time, notably in environmental

sciences, biodiversity, and social sciences. The case of Biodiversity Informatics is presented here as one of these success stories, retracing the history of major data federations such as [GBIF](#) (Global Biodiversity Information Facility), the [CoL](#) (Catalogue of Life), [BHL](#) (Biodiversity Heritage Library) and how they managed to move from community-driven initiatives to structurally funded research infrastructures supported by national and international governmental authorities with a long term perspective, leading to the establishment of infrastructures like the Distributed System of Scientific Collections ([DiSSCo](#)) and [LifeWatch](#).

This presentation will also address the essential contributions of associations like [TDWG](#) (Biodiversity Information Standards) and [CETAF](#) (Consortium of European Taxonomic Facilities) to achieving long-term sustainability and on how to successfully obtain complementary funds from EU projects in Horizon 2020 and its successor, Horizon Europe, with programs such as Synthesis of Systematic Resources ([SYNTHESYS](#)), [DiSSCo Prepare](#), Biodiversity Community Integrated Knowledge Library ([BiCiKL](#)), and Transforming European Taxonomy through Training, Research, and Innovations (TETTRIs), to name a few.

Keywords

biodiversity information, FAIR principles, sustainability

Presenting author

Patricia Mergen

Presented at

TDWG 2022

Funding program

Flemish Open Science Board (FOSB)

References

- European Commission, Directorate-General for Research and Innovation, (2020) Solutions for a sustainable EOSC : a FAIR Lady (olim Iron Lady) report from the EOSC. Sustainability Working Group, Publications Office, 48 pp. [In English]. [ISBN 978-92-76-25594-9] <https://doi.org/10.2777/870770>