

# The Biodiversity Knowledge Hub (BKH): A Crosspoint and Knowledge Broker for FAIR and Linked Biodiversity Data

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## Abstract

The [Biodiversity Knowledge Hub](#) (BKH) is a web platform acting as an integration point and broker of an open, FAIR (Findable, Accessible, Interoperable, Reusable) and interlinked corpora of biodiversity data, services and knowledge. It serves the entire biodiversity research cycle, from specimens and observations to sequences, taxon names and finally to scientific publications. The strategic aim of the BKH is to support a functional and integrated biodiversity knowledge graph and an emerging new community of users. The BKH is aimed at biodiversity researchers in the widest sense, research infrastructures and publishers (Fig. 1).

The BKH is the key product of the EU-funded *Biodiversity Community Integrated Knowledge Library* ([BiCIKL](#)) project (Penev et al. 2022). The four goals of BiCIKL and the BKH are:

1. Improved access to open and FAIR biodiversity data;
2. Establishing of bi-directional data linkages between infrastructures;

3. Development of new methods and workflows for semantic publishing, harvesting, liberating, linking, accessing and re-using of data in literature (specimens, material citations, samples, sequences, taxonomic names, taxonomic treatments, figures, tables);
4. Testing and implementation of services through use cases and open call projects for researchers outside the project.

The BKH consists of several modules, such as the Home page that presents the main user groups and the benefits that the BKH provides to them. It has guidelines and protocols, such as various documents on the policies, functions, and recommendations for the users. And it has relevant projects, that use linked FAIR biodiversity data.

In the core of the BKH is the [FAIR Data Place](#) (FDP), which presents novel services and tools developed over the course of BiCIKL. In the future, the FDP will also accept services for linked data provided by new contributors. The FDP consists of three sub-modules:

- [Infrastructures and organisations](#): Lists the contributing organisations and research infrastructures with short descriptions and links to their data, tools and services. Research infrastructures are sorted by the main type of biodiversity data they aggregate and serve: specimens, sequences, taxon names and literature.
- [Linked data services](#): A catalogue of novel services that deliver FAIR data linked between the participating research infrastructures. Examples of such services are: [ChecklistBank](#), [LifeBlock](#), [OpenBiodiv](#), [TreatmentBank](#), [SIBiLS “BiodiversityPMC”](#), [eBioDiv](#), [SynoSpecies](#), [PlutoF Curation Tool](#) and others.
- [Become a contributor application form](#): A formal questionnaire which serves as a basis to check the suitability of an organisation or research infrastructure to join the BKH. Part of the application form is a FAIR data checklist.

The BKH serves as a navigation system in a universe of interconnected biodiversity research infrastructures and is open to new contributors and collaborators in accessing open data and knowledge by anybody, anywhere, at any time.

## Keywords

biodiversity informatics, research infrastructure, semantic publishing

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## **Conflicts of interest**

The authors have declared that no competing interests exist.

## **References**

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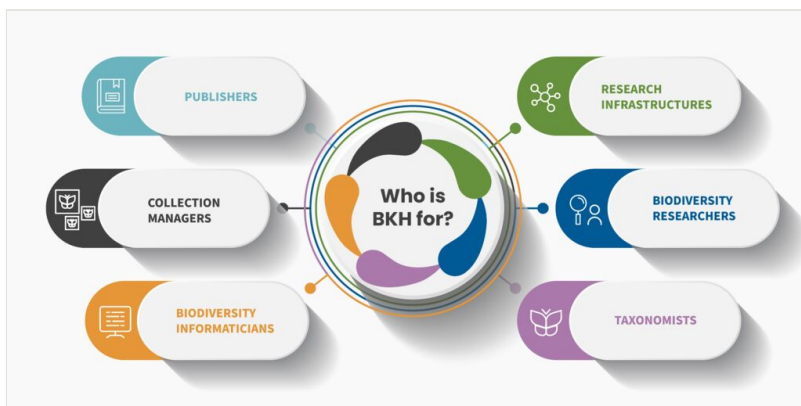


Figure 1.

Target groups of the new emerging community of users of the FAIR and interlinked biodiversity data, tools and services.