# Towards FAIR data and repository within the Biodiversity Exploratories

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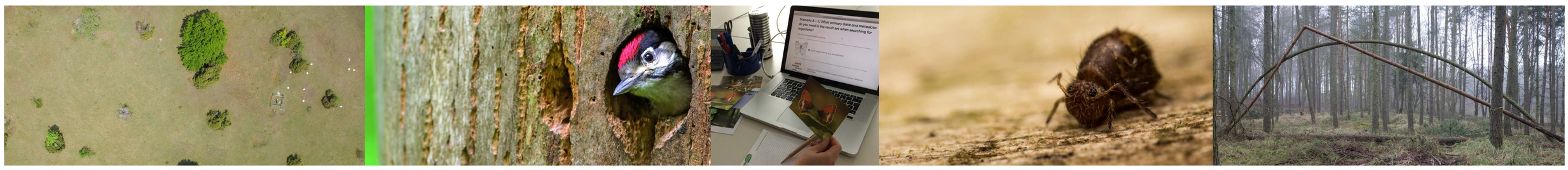


BIODIVERSITY EXPLORATORIES

## Question

The Biodiversity Exploratories Information System (BExIS) acts as centralized data management platform for all datasets providing many additional features to support scientist throughout the whole data life cycle.

Do BExIS and the provided data follow the FAIR data principles?

https://www.bexis.uni-jena.de/

## Method

Currently no standard or agreed upon measure or metric exists to assess the FAIRness (compliance to principles) of data or repositories. Different initiatives are working on this topic.
Few organizations have developed self-assessment tools on their interpretation of the FAIR principles. Thus they do not scale to a standard but are easy to understand and useful for engaging the research community to improve practice [1].

We chose a FAIR Data self-assessment tool developed by the Autralian Research Data Commons (ARDC). Answers to questions related to the principles will give a green bar indicator for each section and an overall 'FAIRness' indicator..

## Results and Outlook

Parts of the repository and the open data already fulfill some principles.
The **Findability** needs small adaptions to enhance discovery by several registries. The **Accessibility** is in a good shape already. Larger improvements are necessary concerning **Interoperability**. This is mainly due the insufficient interlinking of elements to community agreed formats and vocabularies. **Reusability** can be improved by including more provenance information.

## FAIR Data Principles

### To be Findable:

**F1.** (meta)data are assigned a globally unique and persistent identifier

**F2.** data are described with rich metadata (defined by R1 below)

**F3.** metadata clearly and explicitly include the identifier of the data it describes

**F4.** (meta)data are registered or indexed in a searchable resource

### To be Accessible:

**A1.** (meta)data are retrievable by their identifier using a standardized communications protocol

**A1.1** the protocol is open, free, and universally implementable

**A1.2** the protocol allows for an authentication and authorization procedure, where necessary

**A2.** metadata are accessible, even when the data are no longer available

### To be Interoperable:

**I1.** (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.

**I2.** (meta)data use vocabularies that follow FAIR principles

**I3.** (meta)data include qualified references to other (meta)data

### To be Reusable:

**R1.** meta(data) are richly described with a plurality of accurate and relevant attributes

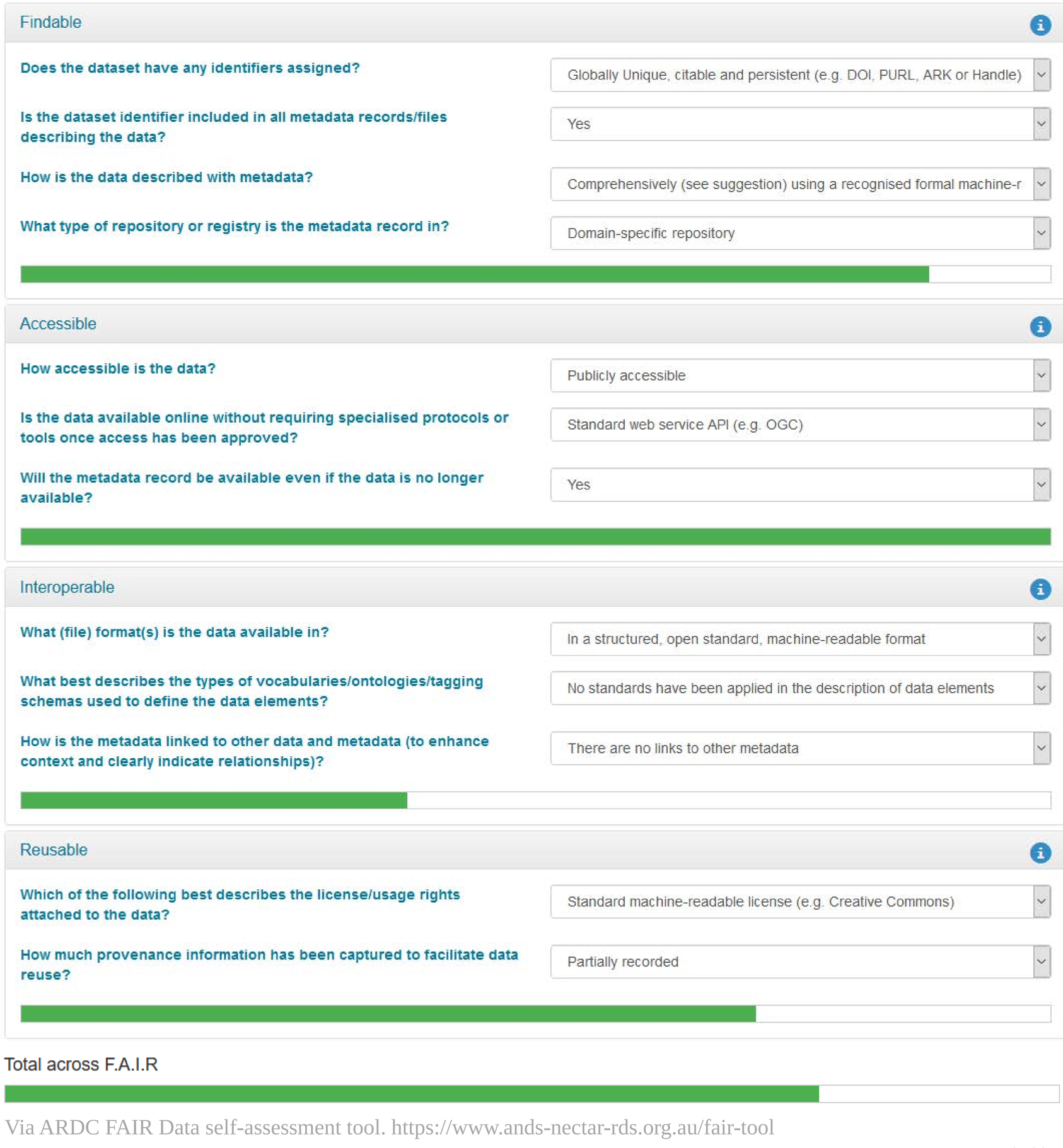
**R1.1.** (meta)data are released with a clear and accessible data usage license

**R1.2.** (meta)data are associated with detailed provenance

**R1.3.** (meta)data meet domain-relevant community standards

https://doi.org/10.1038/sdata.2016.18

## Self-assessment




Via ARDC FAIR Data self-assessment tool. https://www.ands-nectar-rds.org.au/fair-tool

[1] Final report and action plan from the European Commission expert group on FAIR data https://doi.org/10.2777/1524

www.biodiversity-exploratories.de

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