



FAIRsharing as a content provider for maDMP

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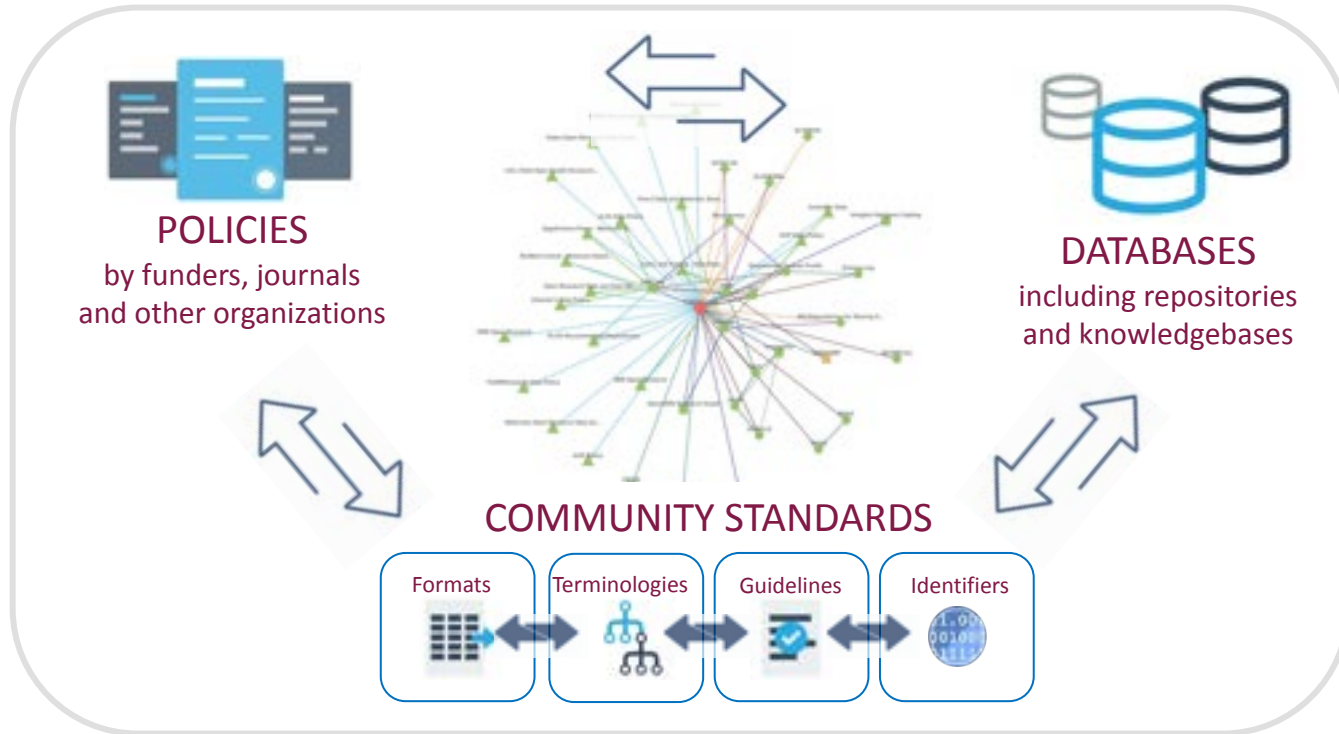
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RDA FAIRsharing WG co-chair

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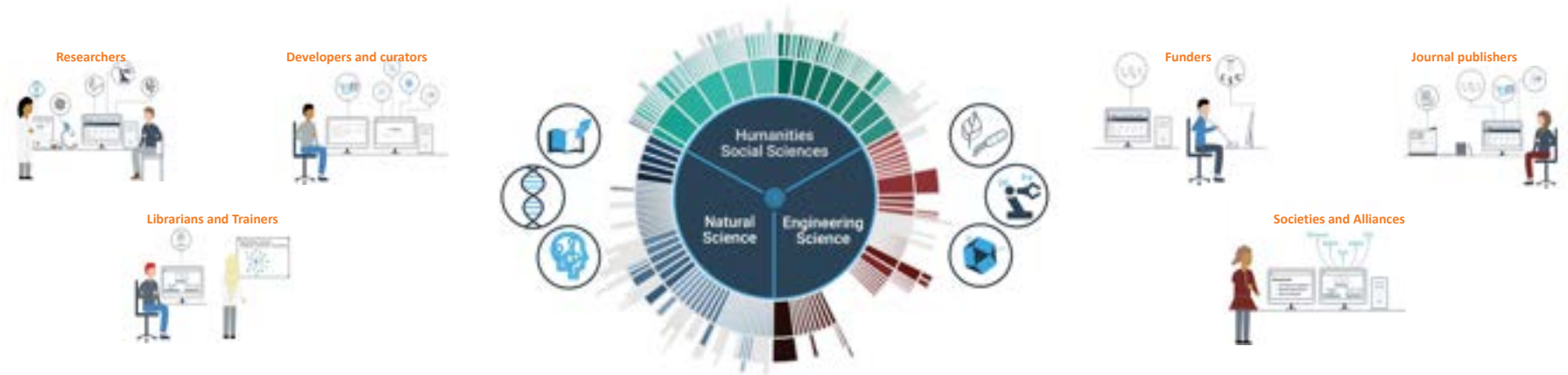
An informative and educational resource, and a service



FAIRsharing provides **curated descriptions** and **relationship graphs** of **standards, databases** and **policies**

Our mission and how we deliver it

Promote the *value* and *use* of **standards**, **databases** and **policies** in **all disciplines**, by engaging **stakeholders** across all sectors, through all stages of the research life cycle



Guide **consumers** to *discover*, *select* and *use* these **resources** with confidence

Help **producers** to make their **resources** more *visible*, more widely *adopted* and *cited*

FAIRsharing in numbers: content, contributions, coverage

1251

Contributors

Our community of record maintainers and creators

3856

Records

Descriptions of standards, databases and policies

198K

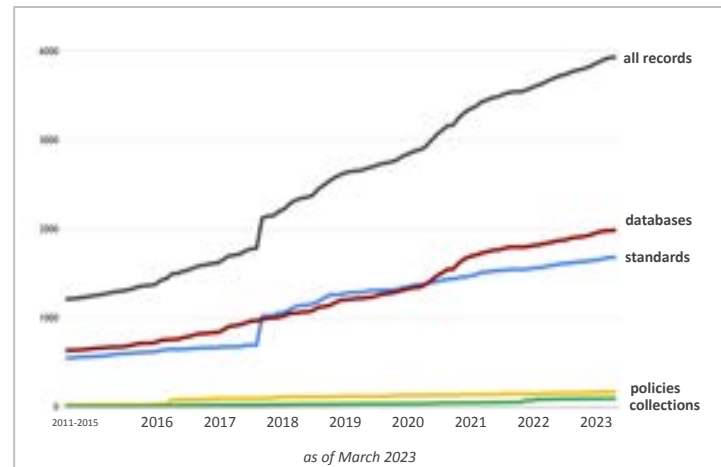
Views

Page visits since 2013

Types and subtypes



Growth since launch



Disciplines



Working with all stakeholders, all disciplines

Users, adopters and collaborators include:

Users from all stakeholder groups

Researchers



Developers and curators



Journal publishers



Librarians and Trainers



Societies and Alliances



Funders



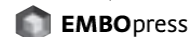
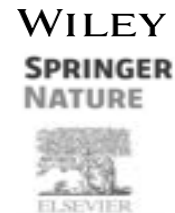
An endorsed output of the
FAIRsharing WG (since 2015):



A recommended resource in EOSC reports



A WG (since 2015) in:



<https://fairsharing.org/communities>



RESEARCH DATA ALLIANCE

Database attributes/criteria

FAIRsharing WG: doi.org/10.5281/zenodo.4683794

Data Repository Attribute WG



Dryad in FAIRsharing, DOI: 10.25504/FAIRsharing.wkggtx

Licenses	
<p>Version: Creative Commons Attribution 4.0 International License CC BY Public Domain Dedication</p> <p>Download license details</p>	
Attributes and Conditions	
Data Creation	open
Data Access Condition	open
Data Preservation Policy	Research Training
Data Deposition Condition	open
Data Versioning	open
Data Contact Information	open
Citation To Related Publications	open
Data Access For The Publication Review	open

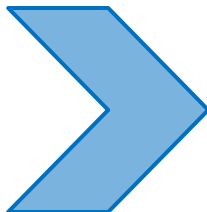
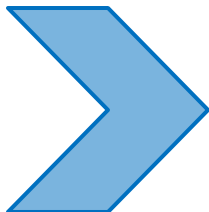


RESEARCH DATA ALLIANCE

Journal Data Policy Features

Data policy standardisation and implementation IG:

doi.org/10.5334/dsj-2020-005



Data Policy Checklist & Structured Description

doi.org/10.5281/zenodo.6281105

University of Edinburgh Data Policy in FAIRsharing, DOI:

[10.25504/FAIRsharing.c81b3c](https://doi.org/10.25504/FAIRsharing.c81b3c)

Data Citation	
Notes	Research papers which convey findings from research data should include a citation or data access statement which clearly provides a route for readers to obtain the data.
Value	open
Data Protection	
Notes	Research data management plans must specify how and when research data will be made available for access and reuse. Generally, accompanying research data should be made available as soon as findings are published, under appropriate safeguards when necessary. A Data Protection Impact Assessment is required whenever data pertaining to individuals is used.
Value	open
DMP Development	
Notes	Researchers must create a data management plan (DMP) as the first of their research proposal if any research data are to be collected or used. Plans should cover data types and volume, capture, storage, integrity, confidentiality, retention and destruction, sharing and deposit.
Timing of DMP	pre-award
Sharing Metadata	
Notes	Discoverability and access by machines is considered as important as access by humans. In order to accelerate global science and progress Open Research, FDI calls for the use of persistent identifiers, standard metadata, vocabularies and licenses to allow researchers and computer programs to identify access and process data. An emphasis on reusability means that any relevant documentation, protocols, or designs which will control and contribute to the data should be included with research data in repositories. Links to relevant publications, pre-prints, reports, and other research products such as software or source code should be provided in metadata records, with persistent identifiers when available.
Value	supported
Data Preservation	
Notes	A suggested minimum period of retention is three years from the end of the project, however requirements by funders and data providers, as well as disciplinary guidance should be observed.
Value	open

Powering 3rd party tools

A growing number of tools and services access FAIRsharing API, and use it for **look-up**, **selection** and **content retrieval** for **standards** and **repositories** in:

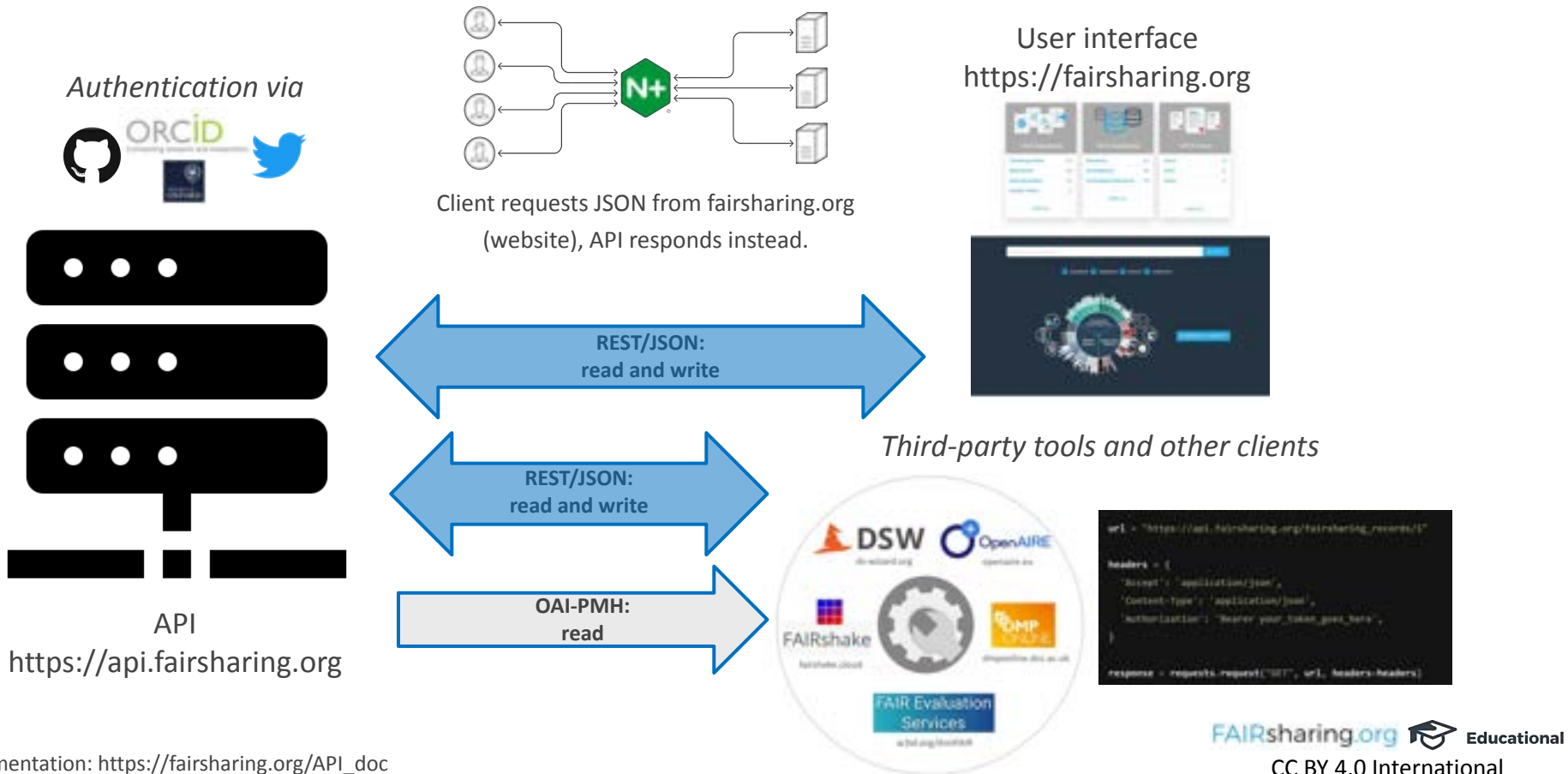
- creation of data management plans
- enrichment of guidance and training material
- assessment of FAIRness



 FAIR Metrics and Data Quality Task Force	<ul style="list-style-type: none">● Wilkinson, Mark D;● Sansone, Susanna-Assunta;● Grootveld Marjan;● Nordling, Josefine;● Dennis, Richard;● Hecker, David
FAIR Assessment Tools: Towards an "Apples to Apples" Comparisons	Hosting institution(s) <ul style="list-style-type: none">● Schultes, Erik
	Project member(s) <ul style="list-style-type: none">● Goble, Carole;● Lyster, Allyson;● Thurston, Milo;● Maayan, Avi

doi.org/10.5281/zenodo.7463421

FAIRsharing API for programmatic access



FAIRsharing provides curated metadata and stable references

- Tools can **search** and pull our content, including over 40 **metadata descriptors**
 - Funders, developers and other related organisations
 - Licence information
 - Database conditions
- This content can be **represented** using our **DOIs** within maDMPs
- Any required **metadata** can also be retrieved

FAIRsharing.org



```

{
  "metadata": {
    "description": "The Ecological Metadata Language (EML) metadata standard is a part of the earth, environmental and biological sciences. It is based on prior work of Society of American and associated efforts. It has been developed to document or as such can be used outside of those original subject areas. EML is implemented using XML (Extensible Markup Language) and is designed to describe and capture part of the total metadata that should be captured about a dataset.",
    "language": "en",
    "metadata_standard_id": "https://doi.org/10.21961/FAIRsharing.org",
    "type": "DOI"
  },
  "name": "EML",
  "url": "https://doi.org/10.21961/FAIRsharing.org",
  "description": "The Ecological Metadata Language (EML) metadata standard is a part of the earth, environmental and biological sciences. It is based on prior work of Society of American and associated efforts. It has been developed to document or as such can be used outside of those original subject areas. EML is implemented using XML (Extensible Markup Language) and is designed to describe and capture part of the total metadata that should be captured about a dataset."
}

```

Example Repository: GBIF

GENERAL INFORMATION

This record replaces or incorporates the following deprecated resources:
[Canadian Biodiversity Information Facility](#)

 **GBIF** GBIF.org (GBIF.org)

[10.25504/FAIRsharing.zv11j3](https://doi.org/10.25504/FAIRsharing.zv11j3)



Type Repository

Registry Database

Description GBIF—the Global Biodiversity Information Facility—is an international network and data infrastructure funded by the world's governments and aimed at providing anyone, anywhere, open access to data about all types of life on Earth. Strictly speaking, GBIF is not a data repository. Rather, GBIF indexes thousands of datasets through a distributed infrastructure involving more than 100 formal participants that supports hundreds of data-publishing institutions worldwide. GBIF.org makes the FAIR and open data discoverable and citable, assigning each download a DOI and storing it for an extended period of time. More than three peer-reviewed research articles make use of data from the GBIF network every day, in studies spanning the impacts of climate change, the spread of pests and diseases, priority areas for conservation and food security. To share data with GBIF, follow this quick guide: <http://www.gbif.org/publishing-data/quick-guide>. To deposit or host data, we suggest using one of the trusted data hosting centres (DHC) listed in FAIRsharing.org that uses GBIF's IPT (Integrated Publishing Toolkit) software. The DHC provides data publishers with a hosted IPT account enabling them to manage and publish datasets through GBIF.org.

Homepage <https://www.gbif.org>

Year of Creation 2001

Maintainers gbif@koopas@gbif.org

Countries developing this resource Worldwide

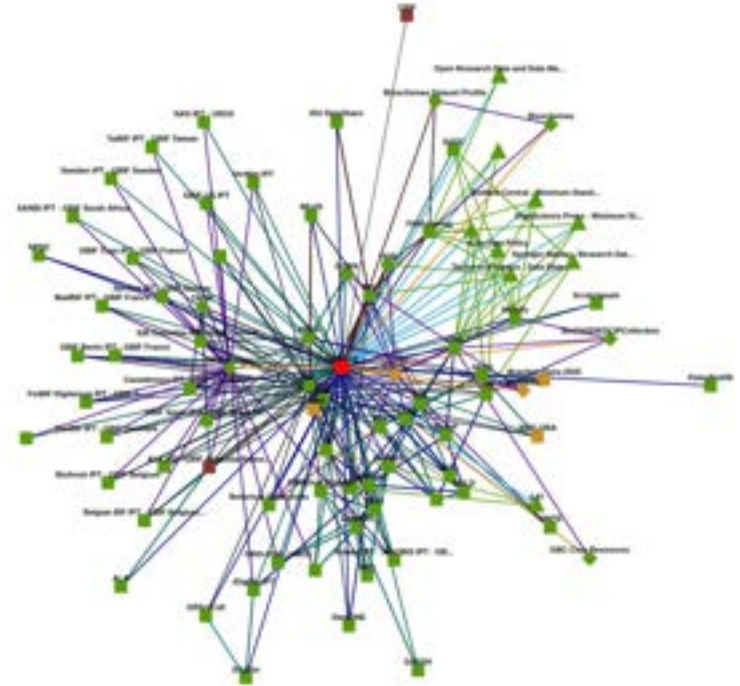
Subjects [Metagenomics](#) [Ecogenomics](#) [Taxonomy](#) [Marine Biology](#) [Biodiversity](#) [Natural Sciences](#) [Natural History](#)

Domains [Citation](#) [Taxonomic Classification](#) [Biological Sample Annotation](#) [Biobank](#) [Marine Metagenome](#) [Biological Sample](#) [FAIR](#) [Biodiversity](#)

Taxonomic Range All

User Defined Tags None

[CITATION GRAPH](#)



Example Format: EML

GENERAL INFORMATION

Ecological Metadata Language (EML)

10.25504/FAIRsharing.r3vtvx

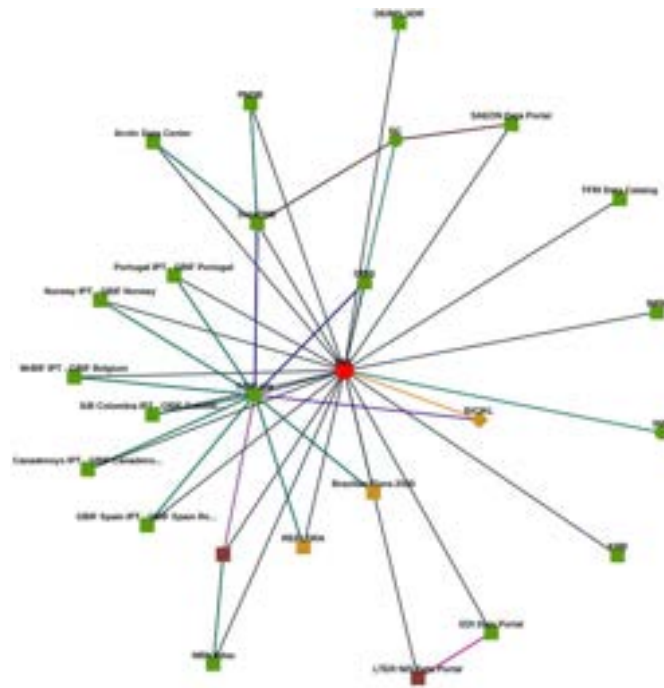
Type: Model and format
Registry: Standard
Description: The Ecological Metadata Language (EML) metadata standard was originally developed for the earth, environmental and ecological sciences. It is based on prior work done by the Ecological Society of America and associated efforts. It has been developed to document any research data, and as such can be used outside of these original subject areas. EML is implemented as a series of XML document types that can be used in a modular and extensible manner to document ecological data. Each EML module is designed to describe one logical part of the total metadata that should be included with any ecological dataset.
Homepage: <https://eml.ecoinformatics.org/>
Year of Creation: None found
Maintainers: NCEAS
Countries developing this resource: United States
Subjects: Environmental Science, Ecology, Natural Science, Earth Science
Domains: None
Taxonomic Range: All
User Defined Tags: Metadata Standardization

VIEW RELATION GRAPH

How to cite this record

FAIRsharing.org/EML, Ecological Metadata Language, DOI: 10.25504/FAIRsharing.r3vtvx, Last Accessed: Thursday, March 16th 2023, 10:43

Record created at: Tuesday, November 4th, 2014



Example (Integration) Question

III.4.a.1 Data format/type

Horizon 2020 DMP

Horizon Europe DMP

Science Europe DMP

Desirable: Before Submitting the Proposal

- Ecological Metadata Language
- Santa Barbara Coastal Observation Ontology
- Systems Biology Graphical Notation
- Chemical Markup Language
- Virtual Observatory Data Modeling Language
- UMLS Semantic Network
- XEML Environment Ontology
- Minimum Information About a Microarray Experiment

II.2.b.1.a.1 Reference database or dataset

Horizon 2020 DMP

Horizon Europe DMP

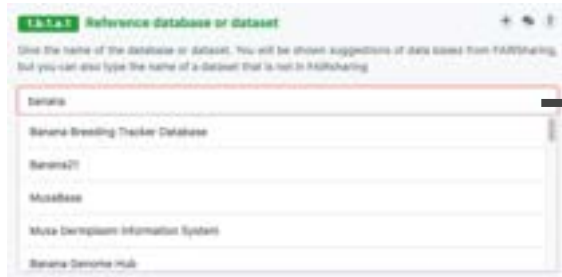
Science Europe DMP

Give the name of the database or dataset. You will be shown suggestions of data bases from FAIRSharing, but you can also type the name of a dataset that is not in FAIRsharing

Desirable: Before Submitting the DMP

- GBIF Benin IPT - GBIF France
- GBIF Togo IPT - GBIF France
- GBIF.org
- Sweden IPT - GBIF Sweden
- GBIF Guinea IPT - GBIF France
- Norway IPT - GBIF Norway
- Atlas of Living Australia IPT - GBIF Australia Repository
- GBIF France IPT - GBIF France

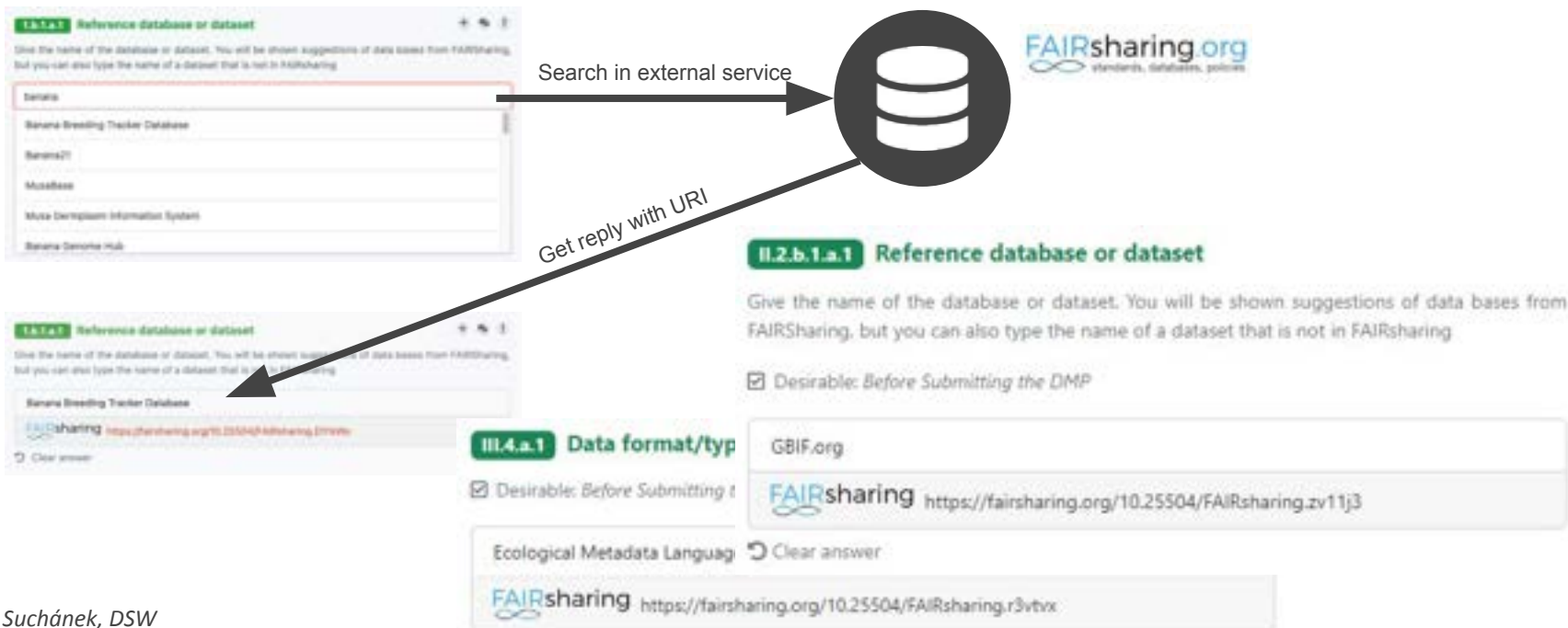
Example (Integration) Question



Search in external service



Example (Integration) Question



Search in external service

Get reply with URI

II.2.b.1.a.1 Reference database or dataset
Give the name of the database or dataset. You will be shown suggestions of data bases from FAIRsharing, but you can also type the name of a dataset that is not in FAIRsharing

Desirable: Before Submitting the DMP

III.4.a.1 Data format/type
 Desirable: Before Submitting t

GBIF.org

FAIRsharing <https://fairsharing.org/10.25504/FAIRsharing.zv11j3>

Ecological Metadata Language

FAIRsharing <https://fairsharing.org/10.25504/FAIRsharing.r3vtvx>

II.2.b.1.a.1 Reference database or dataset
Give the name of the database or dataset. You will be shown suggestions of data bases from FAIRsharing, but you can also type the name of a dataset that is not in FAIRsharing

Desirable: Before Submitting the DMP

Banana

Banana Breeding Tracker Database

Banana21

Musabase

Musa Derivations Information System

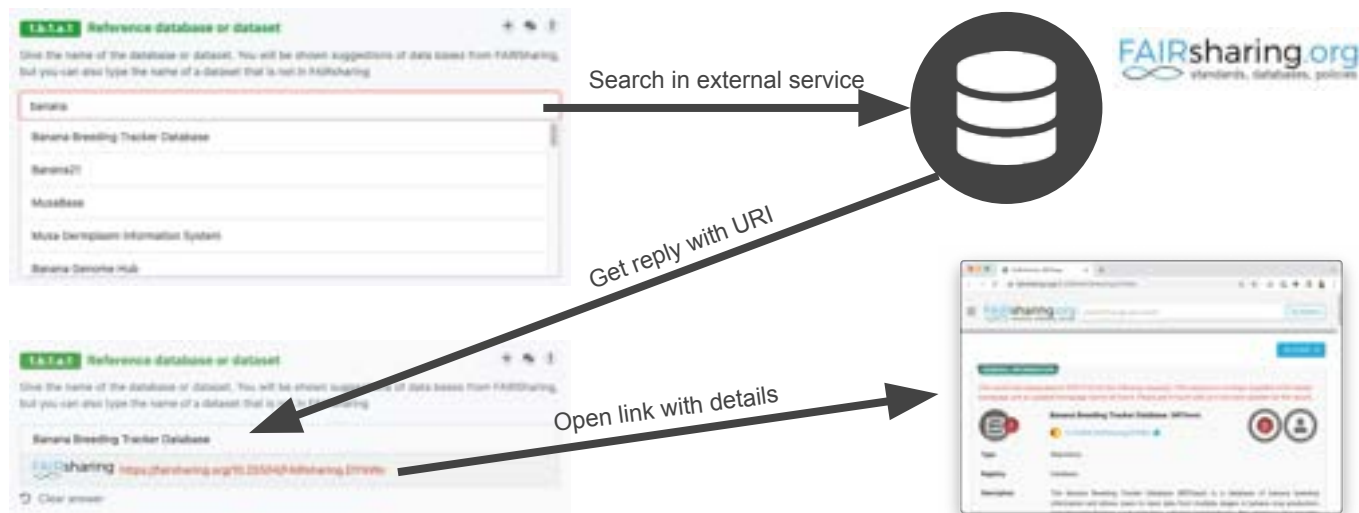
Banana Genome Hub

II.2.b.1.a.1 Reference database or dataset
Give the name of the database or dataset. You will be shown suggestions of data bases from FAIRsharing, but you can also type the name of a dataset that is not in FAIRsharing

Banana Breeding Tracker Database

FAIRsharing <https://fairsharing.org/10.25504/FAIRsharing.11191b>

Example (Integration) Question




```
"metadata": [
  {
    "description": "The Ecological Metadata Language (EML) metadata standard was originally developed for the earth, environmental and ecological sciences. It is based on prior work done by the Ecological Society of America and associated efforts. It has been developed to document any research data, and as such can be used outside of these original subject areas. EML is implemented as a series of XML document types that can be used in a modular and extensible manner to document ecological data. Each EML module is designed to describe one logical part of the total metadata that should be included with any ecological dataset.",
    "language": "eng",
    "metadata_standard_id": {
      "identifier": "https://doi.org/10.25504/FAIRsharing.r3vtvx",
      "type": "doi"
    }
  },
  {
    "host": {
      "title": "GBIF.org",
      "url": "https://doi.org/10.25504/FAIRsharing.zv11j3",
      "description": "GBIF—the Global Biodiversity Information Facility—is an international network and data infrastructure funded by the world's governments and aimed at providing anyone, anywhere, open access to data about all types of life on Earth. Strictly speaking, GBIF is not a data repository. Rather, GBIF indexes thousands of datasets through a distributed infrastructure involving more than 100 formal participants that supports hundreds of data-publishing institutions worldwide. GBIF.org makes the FAIR and open data discoverable and citable, assigning each download a DOI and storing it for an extended period of time. More than three peer-reviewed research articles make use of data from the GBIF network every day, in studies spanning the impacts of climate change, the spread of pests and diseases, priority areas for conservation and food security. To share data with GBIF, follow this quick guide: http://www.gbif.org/publishing-data/quick-guide. To deposit or host data, we suggest using one of the trusted data hosting centres (DHC) listed in FAIRsharing.org that uses GBIF's IPT (Integrated Publishing Toolkit) software. The DHC provides data publishers with a hosted IPT account enabling them to manage and publish datasets through GBIF.org."
    }
  }
]
```



The Ecological Metadata Language (EML) metadata standard was originally developed for the earth, environmental and ecological sciences. It is based on prior work done by the Ecological Society of America and associated efforts. It has been developed to document any research data, and as such can be used outside of these original subject areas. EML is implemented as a series of XML document types that can be used in a modular and extensible manner to document ecological data. Each EML module is designed to describe one logical part of the total metadata that should be included with any ecological dataset.



Description

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FAIRsharing is a knowledge graph of descriptions of **standards, databases and policies**. Tools can search and retrieve that information via our API, incorporating metadata or referencing it via stable DOIs.

FAIRsharing Community Champion Programme

Domain experts, from RDA, EOSC clusters and worldwide, who

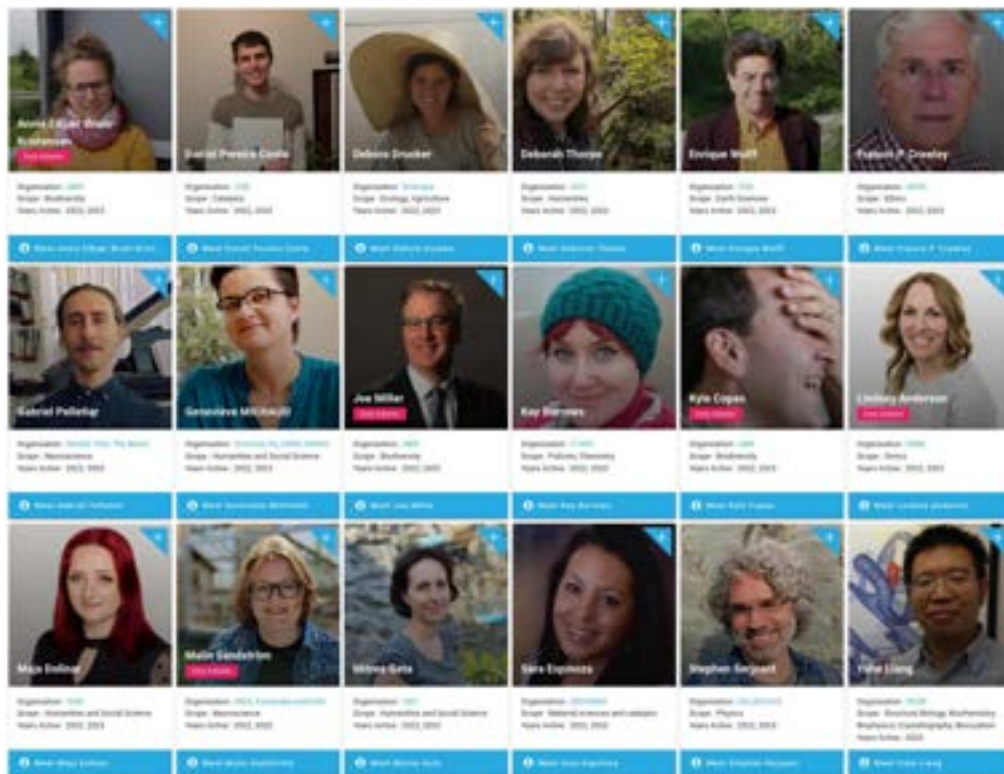
- Help **curate content**, standards, repositories and policies relevant to their EOSC cluster, RDA group, research domain, or area of focus
- Contribute to **educational material** for the users
- Gain **expertise, networking** and **attribution** for their work, via ORCID



fairsharing.org/community_curation



FAIRsharing Community Champion Programme



fairsharing.org/community_champions/our_champions

ORCID

Membership and service (1)

FAIRsharing.org: Oxford, GB

2022-01-01 to 2022-12-31 | FAIRsharing Community Curator (Service)

URI: [FAIRsharing user page for kcopas@gbif.org](mailto:kcopas@gbif.org)

URI: [FAIRsharing Community Curator Programme](#)

Source: FAIRsharing.org

The following community curators have contributed to this record:

kcopas@gbif.org  jmiller@gbif.org 

Infographics and factsheets by our Champions



Educational

Infographics and factsheets by the FAIRsharing Team and our Community Champions, covering content and functionality for all stakeholders

FAIRsharing in a nutshell Definitions, types, benefits and need to know facts	FAIRsharing content: standards overview Definitions, types, benefits and need to know facts	FAIRsharing content: databases overview Definitions, types, benefits and need to know facts	FAIRsharing content: policies overview Definitions, types, benefits and need to know facts	FAIRsharing content: collections overview Definitions, types, benefits and need to know facts
FAIRsharing for you: researchers	FAIRsharing for you: journal publishers	FAIRsharing for you: funders	FAIRsharing for you: societies and alliances	FAIRsharing for you: librarians and trainers
FAIRsharing for you: developers and curators	FAIRsharing functionality: searching	FAIRsharing functionality: create a view using collection	FAIRsharing behind the scenes: capturing the resource life cycle	FAIRsharing behind the scenes: the FAIRness of FAIRsharing

FAIRsharing for you: researchers
For the management and sharing of your data

FAIRsharing guides you to...

- 1 use the right databases and standards to report your data*
- 2 write your Data Management Plan (DMP)**
- 3 Make your data more discoverable, citable and reusable

FAIRsharing supports you to:

- Find sources of existing data**
Discovering data resources (databases, repositories, knowledgebases) where you may find data of interest to your research
- Meet data policy requirements**
Supporting you to select the right resources to fulfil data management policy and guidance from funders, journal publishers, projects, institutions and other organisations
- Discover how to report, preserve, and share data**
- Choosing deposition resources**
where your data is uniquely identified, according to your:
 - type of data (e.g., datasets, software, documents)
 - domain (generalistic or discipline specific),
 - access needs (open, partially open, controlled)
- Informing you on which standards** (e.g., minimal information requirements, formats and terminologies) is required by the selected databases to describe and report your data

*As well as identifying and comparing your organisation's data resource requirements for long.

Examples of FAIRsharing content: DOI: 10.2202/17447862.12200

FAIRsharing
CC BY SA 4.0 International

ONE INFO 01522200001100000
Website: www.fairsharing.org
Phone: +44 (0)20 7320 4171
Email: info@fairsharing.org

Find more at
fairsharing.org/info/educational

fairsharing.org/educational

Thank you!



Stakeholder Advisors

- **Amye Kenall**, Research Square
- **Adam Leary**, Oxford University Press
- **Catriona MacCallum**, Hindawi
- **Dagmar Meyer**, ERC, Executive Agency
- **Dominic Fripp**, JISC
- **Emma Ganley**, Protocols.io
- **Geraldine Clement-Stoneham**, MRC
- **Helena Cousijn**, DataCite
- **Lauren Cadwallader**, PLoS
- **Imma Subirats**, FAO of the United Nations
- **Kiera McNiece**, Cambridge University Press
- **Luiz Olavo Bonino**, GO-FAIR
- **Lorenzo Feri**, Elsevier
- **Mark Leggott**, Digital Research Alliance of Canada
- **Marta Teperek**, TUDelft
- **Michael Ball**, Medical Research Council
- **Mike Huerta**, NIH National Library of Medicine
- **Rebecca Grant**, F1000
- **Nick Everitt** and **Matthew Cannon**, Taylor and Francis
- **Sarah Callaghan**, Strategy & Policy Unit, University of Oxford
- **Sarah Stewart**, Bodleian Libraries, University of Oxford
- **Scott Edmunds**, GigaScience, Oxford University Press
- **Simon Hodson**, CODATA
- **Sowmya Swaminathan**, Springer Nature
- **Theo Bloom**, British Medical Journal
- **Thomas Lemberger**, EMBO Press
- **Wei-Mun Chan**, eLife

Executive Advisors

- **David Carr**, Independent expert
- **Peter McQuilton**, (FAIRsharing Founding Member), GSK
- **Robert Hanisch**, NIST
- **Varsha Khodiyar**, Independent Expert

RDA FAIRsharing WG Chairs

- **Graham Smith**, Springer Nature
- **Holly Murray**, Health Data Research UK
- **Peter McQuilton**, GSK
- **Rebecca Grant**, F1000
- **Simon Hodson**, CODATA
- **Allyson Lister**, University of Oxford
- **Susanna-Assunta Sansone**, University of Oxford

Community Champions

fairsharing.org/community_champions/our_champions

fairsharing.org/communities#governance

WG

FAIRsharing Registry: Connecting data policies standards and databases RDA WG

www.rd-alliance.org/group/fairsharing-registry-connecting-data-policies-standards-databases.html

Operational Team



Allysoo Lister

Content and Community
Coordinator



Milo Thurston

Technical Coordinator



**Susanna-Assunta
Sansone**

Principal Investigator and Founder



Philippe Rocca-Serra

Co-Founder



Ramon Granell

Data Manager and Research
Software Engineer



Dominique Batista

First EOL Manager



Delphine Dauga

Curator Manager



Prakhyaat Gaitani

Web Developer