Leibniz Institute of
Ecological Urban and
Regional Development

Module 2
High-Level Policies

Module 2 - High-Level Policies

This second module introduces the most important RDM policies and principles

- Open Science
- Good Scientific Practice
- Open Access
- FAIR Principles

Open Science (OS)

a policy priority

OS is a policy priority of EU as standard research best practice to enhance knowledge dissemination, innovation.

OS policy ambitions:

- Open Data
- European Open Science Cloud (EOSC)
- Metrics and rewards OS engagement
- Knowledge and science dissemination (Open Access)
- Research integrity and reproducibility
- Citizen science

Good Scientific Practices

It implements the Code of Conduct of the DFG and the Guidelines of the Leibniz Association

Rule 1

- *1b) …fully **document all steps** and results of a study…*
- *1c) …**reproducibility** of all experimental results…*
- *1i) …give precedent to originality and **quality** over quantity…*
- *4) …**research data** must be stored in an accessible format for at least ten years… …data publicly accessible… …as well as methods, software…*

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Rules to safeguard good scientific practice at the Leibniz Institute of Ecological Urban and Regional Development, Dresden

Preamble

The Leibniz Institute of Ecological Urban and Regional Development (IOER) as a whole, as well as all persons entrusted with personnel management and project management in the field of scientific research, are required to comply with and communicate the principles of good scientific practice as set out in the respective current versions of the Code of Conduct of the Deutsche Forschungsgemeinschaft (DFG – German Research Foundation)[1] and the Guidelines of the Leibniz Association[2]. Every scientist is responsible for ensuring that their own conduct complies with the standards of good scientific practice. The basis of scientific work at the IOER is the honesty of scientists towards themselves and others. Scientists at all career levels must regularly update their knowledge of the standards of good scientific practice as well as the current state of research.

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Open Access (OA)

Originally OA is a publishing model used by scientific journals. (e.g. the golden/green route)

OA are a set of principles for free dissemination of scholarly and academic knowledge, independently from the output type.

- Free of charge to access it
- Free to use it (Open Licenses)

OA means using "open" license such as the **CC BY**

Open Access Environment

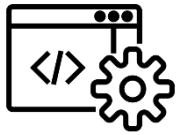
OA Workflow (Costs)

Typical in peer review journals

Journal hosting peer-review

Peer review publication

Algorithms



Software

Workflows

Peer review Data Paper

Peer review Software Paper

Scientific Reports

Posters

Documentation

Data

Designs Artworks

OA Workflow (Free)

Typical for Data and other research outputs

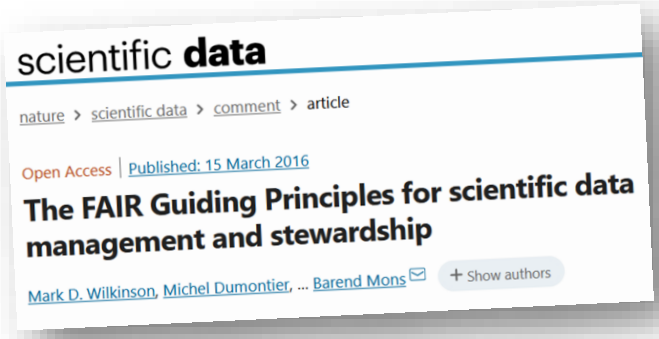
Self-archiving no peer-review

FAIR Research Output

“Academia, industry, funding agencies, etc., have come together to design and jointly endorse a concise and measureable set of principles”

“The FAIR principles are the **culmination of more than 20 years of agreements** and actions…”

“Research data not yet used widely **to realize their potential**”

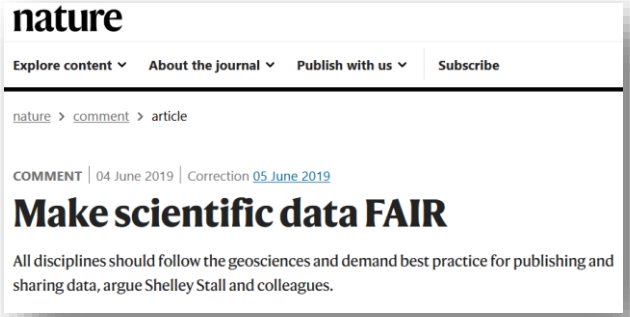

scientific data

nature › scientific data › comment › article

Open Access | Published: 15 March 2016

The FAIR Guiding Principles for scientific data management and stewardship

Mark D. Wilkinson, Michel Dumontier, … Barend Mons + Show authors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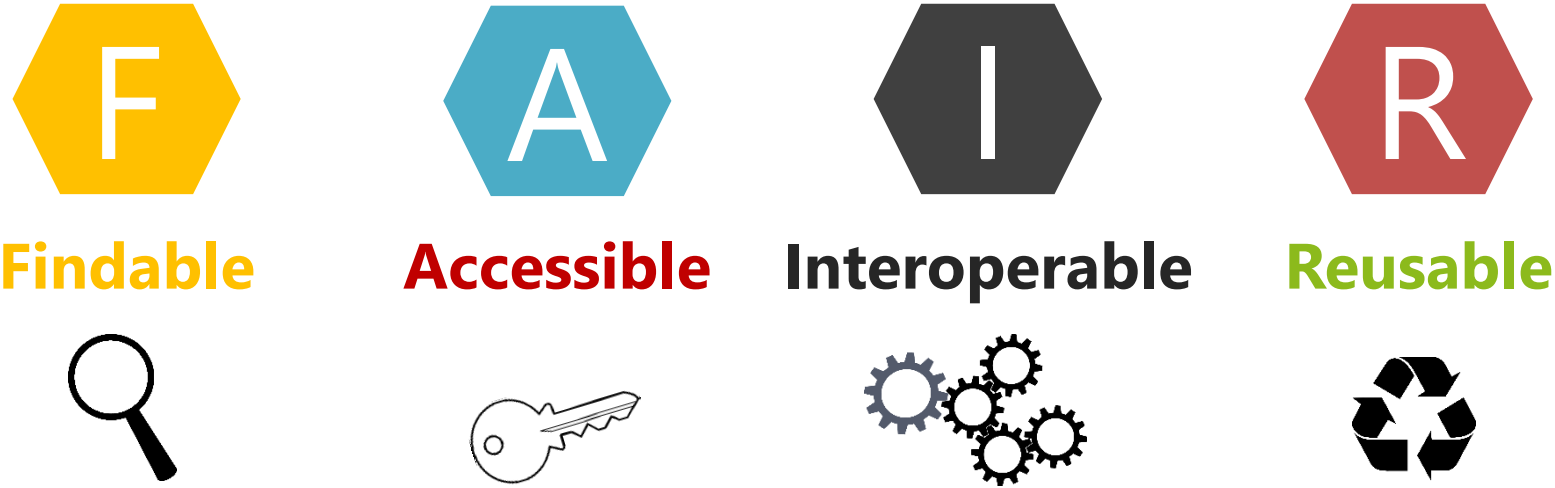
COMMENT | 04 June 2019 | Correction 05 June 2019

Make scientific data FAIR

All disciplines should follow the geosciences and demand best practice for publishing and sharing data, argue Shelley Stall and colleagues.

FAIR Principles

Contents from: *www.go-fair.org*



Icons from pixabay.com

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FAIR Principles

The first step in (re)using data is to find it

Contents from: www.go-fair.org

- F1. (Meta)data are assigned a globally unique and **persistent identifier (PIDs)**
- F2. Data are described with sufficient **metadata**
- F3. Metadata clearly and explicitly **include the identifier** of the data they describe
- F4. (Meta)data are **registered or indexed** in a searchable resource

Findable

FAIR Principles

How can be data accessed

Contents from: www.go-fair.org

- A1. **(Meta)data are retrievable** by their identifier using a **standardised** communications protocol
- A2. **Metadata are accessible**, even when the **data** are **no longer available**

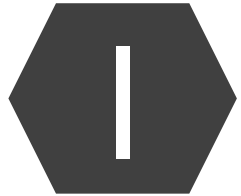
Accessible

FAIR Principles

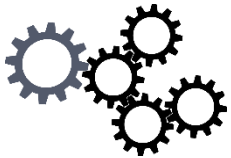
Data and Metadata need to be integrated with other data

Contents from: www.go-fair.org

- 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**



Interoperable



FAIR Principles

The ultimate goal of FAIR is to optimise the reuse of data.

Contents from: www.go-fair.org

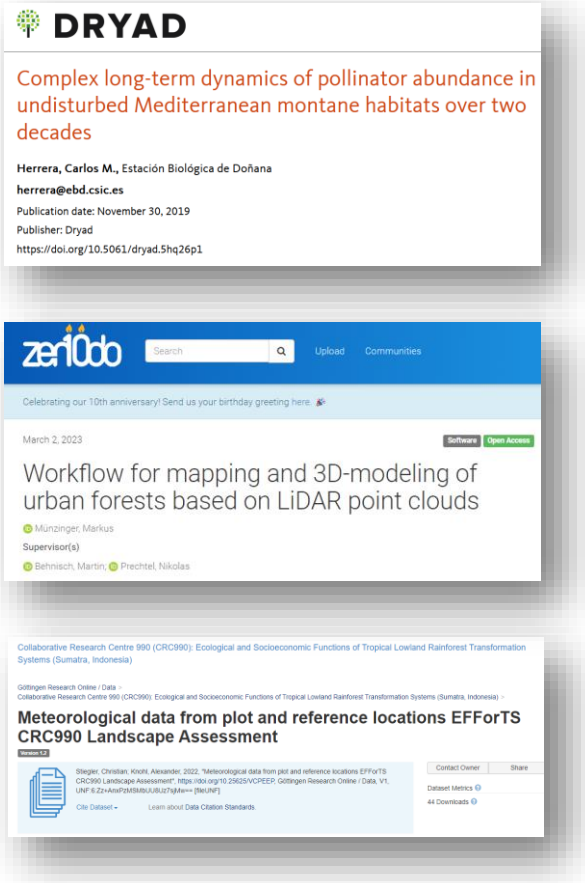
- R1. **(Meta)data are richly described** with a plurality of accurate and relevant attributes
- R1.1. (Meta)data are released with a clear and accessible **data usage license**
- R1.2. (Meta)data are associated with detailed **provenance/lineage**
- R1.3. (Meta)data meet domain-relevant **community standards**

Reusable

Some **FAIR** examples

By publishing your research output in a Repository you make your data "99%" FAIR.

Although **Repositories** are heterogeneous in terms of their Domain and Standard adopted, are all **designed to be FAIR compliant**.



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Coffee break

www.ioer.de