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Der Wissenschaftsfonds.

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Research Data: Infrastructure, Re-use and Dark Knowledge

The European Open Science Cloud:
Austria takes initiative

October 30, 2018

Klement Tockner,
President Austrian Science Fund (FWF)



Freshwater
Information
Platform

www.freshwaterplatform.eu

Background

- BioFresh project (2010-2014)
- BioFresh Information Platform
- other freshwater research (projects)

FRESHWATER METADATA JOURNAL & METADATABASE



Freshwater Metadata Journal

Collect and save information about your freshwater dataset, then make it visible to the world by publishing it.

FRESHWATER DATA PORTAL



Find freshwater data and publish your own research data on the web.

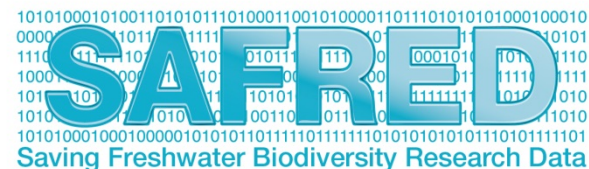
GLOBAL FRESHWATER BIODIVERSITY ATLAS



Publish your scientific results as a map in the atlas and make it visible to a wide audience.

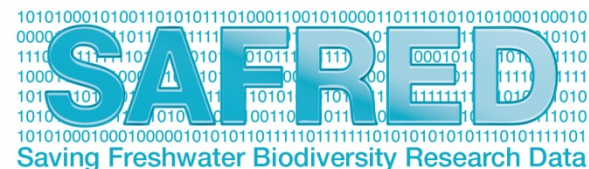
FIP as

- joint **dissemination outlet**
- aiming to reach the freshwater community and **raise the profile of freshwater biodiversity**
- central hub for **compiling** and **integrating** species **distribution data**
- exploring possibilities for **exchanging** and **publishing** data from freshwater observatories and monitoring institutes



Lessons learnt from projects like BioFresh, SAFRED, AQUACROSS

- successful data mobilisation needs extensive **operational support** for actively **hunting for data**
- **sufficient resources** for data mobilisation, data delivery and data processing are needed



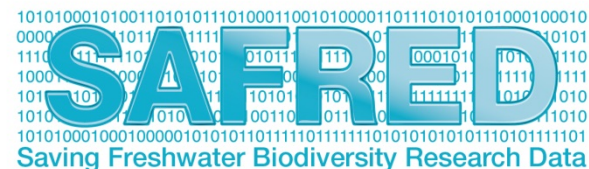
Open Science & Open Data

Reduce reluctance to publish data

- outline **advantages**: visibility, recognition, possibility of new research collaborations, etc.
- possibility of **large-scale analyses**

Need for a systematic approach

- **metadata publishing** first
- **journal data** (“GenBank-model”)
- institutional data policies and **data management plans** considering data publication upfront



FWF Approach to Research Data

- **Funding:** The necessary funds over the project's duration can be covered by FWF projects to ensure the preparation, archiving, open access and later use of research data in repositories.
- **Stand-Alone Publications Programme:** Innovative digital publication formats (e.g. wikis, apps, videos, databases) can be funded with a lump-sum grant of up to EUR 50,000.
- **Pilot programme:** In 2017, 12 projects were funded that established role models in various disciplines for how research data can be prepared professionally and made available freely.
- **Acknowledgement:** The production and analysis of research data will receive greater recognition in the evaluation of research proposals.
- **Data management plan:** From 2019 onwards, all funded projects will draw up a data management plan.

FWF Open Data Policy (new)

FWF expects grant recipients to provide open access to the research data and similar materials (e.g. source code, software) that they have collected and/or analysed using FWF funds. This is required for data underlying publications and should be done as soon as possible but at the latest together with the related scientific publication. Data should be openly accessible whenever legally, ethically and technically possible.

Criteria for Open Research Data

All research data should be findable, accessible, interoperable and reusable (fulfil the [FAIR](#) Principles), and the following criteria need to apply:

- The data repository must be certified. While certification in [CoreTrustSeal](#) is explicitly recommended, certification in [re3data](#) is required.
- Data should be deposited in such a way that they can be re-used without restrictions (e.g. CC0, CC BY, etc.).
- Deposited datasets have to be citable by means of a persistent identifier (e.g. DOI).

Close Coordination with National and International Partners



Science Europe and the [Netherlands Organisation for Scientific Research](#) (NWO) have launched an initiative for the voluntary international alignment of research data management policy



"[E-Infrastructures Austria plus](#)" aims to improve efficiency, secure concrete synergies, maximize the value of research data for students and teachers, promote participation in multi-disciplinary IT-based management networks, and share knowledge in the field of securing, archiving and making digital resources and research data available on processes and technologies in an intellectual property framework

Importance of EOSC

- The precondition for sustainable research data management is a first-class digital infrastructure.
- Digital infrastructures must be interconnected and interoperable.
- It is therefore in the interest of the FWF that EOSC should be a great success.

(Re-)use is key

- A first-class digital infrastructure is a necessary, but not sufficient, precondition for accessible and comprehensible research results.
- The infrastructure only acquires its value when it is used
 - for the reproducibility of research results
 - for the development of new scientific questions through re-use by the scientific community
 - by social groups outside the scientific community

Dark Knowledge

- A contrary trend towards Open Science seems to be that ever larger data sets are collected but are not available to science and society for commercial, political or ideological reasons.
- In many cases, however, these data are very important for research in order to analyse and solve highly relevant societal problems.

Synthesis Networks

It will be a major task of funding agencies to massively support:

- Research data management
- Re-use of data
- Long-term accessibility

How about, for example, a European-wide "Synthesis Network" programme?

- International networks that bring together existing research data on a specific scholarly problem to generate innovative solutions and new research questions
- Making research data openly accessible for further re-use in research and society
- Together with the European Union, European funding agencies could play a pioneering role.

Thank you for your attention!

Further information: <https://www.fwf.ac.at/en/>

Twitter accounts: [@FWF_at](https://twitter.com/FWF_at) and [@FWFOpenAccess](https://twitter.com/FWFOpenAccess)

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