

Research Data Management Services at the University Library

Coffee Lecture | Geowissenschaftliche Bibliothek | 13.06.2024
University Library | Team Research Data Management
Sibylle Söring

Who We Are



Sibylle Söring
Head



Esther Asef
RDM Consultant



Heinz-Alexander Fütterer
RDM Consultant



Lea-Sophie Orozco Prado
Repl. Fütterer / Project „CARDS“ (BUA)



Dr. Cosima Wagner
Liaison Librarian,
East Asia Studies;
DH/RDM in Libraries



Dr. Andreas Hübner
Liaison Librarian,
Geo Sciences;
RDM, Open Science



Dr. Tobias Kilgus
Audio Visual Research Data



N.N.
Project „FDLink“ (DFG)



N.N.
Project „QUADRIGA“ (BMBF)

What is Research Data?

Research data is...



Research-relevant analogue data, documents and objects to be digitized in the course of research



Genuinely digital data, documents and objects ("born digital") that are created during a research process and are the subject or result of research



Metadata



Source code and software developments

Categorization of Post-Earthquake Damages in RC Structural Elements with Deep Learning Approach

Mertcan Yilmaz , Gamze Dogan , Musa Hakan Arslan  & Alper Ilki 

<https://doi.org/10.1080/13632469.2024.2302033>

PUBLISHED ONLINE:

19 January 2024

Table 4 of 15

Table 4. Data of the earthquakes (USGS 2023).

Earthquake	Date	Magnitude (M_w)	PGA (g)	Death	Intensity	Depth (km)
Nepal	2015.04.25	7.8	0.25	8,500	X	8.2
Tayvan	2016.02.06	6.4	0.22	116	VII	23.0
Ecuador	2016.04.16	7.8	1.40	668	VIII	20.6
Pohang (South Korea)	2017.11.15	5.4	0.58	0	VII	9.0
Duzce (Turkey)	1999.11.12	7.2	1.00	845	IX	13.7
Bingol (Turkey)	2003.05.01	6.4	0.55	177	IX	15.0
Peru	2007.08.15	8.0	0.76	519	IX	39.0
Haiti	2010.01.12	7.0	0.50	100,000	X	13.0
Managua (Nicaragua)	1931.03.31	6.1	-	1,000	VI	15.0
Acapulco (Mexico)	1962.05.11	7.2	0.60	4	VIII	40.0
Caracas (Venezuela)	1967.07.30	6.6	0.57	225	VIII	25.0
San Fernando (USA)	1971.02.09	6.6	1.25	56	IX	8.9
Guatemala	1976.02.04	7.5	1.50	23,000	IX	5.0
Bucharest (Romania)	1977.03.04	7.5	0.46	1,578	VIII	94.0
Mivani (Iran)	1978.06.12	7.7	0.50	28	VIII	44.0

Source: Yilmaz, M., Dogan, G., Arslan, M. H., & Ilki, A. (2024). Categorization of Post-Earthquake Damages in RC Structural Elements with Deep Learning Approach. *Journal of Earthquake Engineering*, 1–32.

<https://doi.org/10.1080/13632469.2024.2302033>

What research data management is about



The FAIR Data Principles

FAIR Principles

Compliance



Findability

Resource and its metadata are easy to find by both, humans and computer systems. Basic machine readable descriptive metadata allows the discovery of interesting data sets and services.

- ✓ F1. Resource is uploaded to a public repository.
- ✓ F2. Metadata are assigned a globally unique and persistent identifier.



Accessibility

Resource and metadata are stored for the long term such that they can be easily accessed and downloaded or locally used by humans and ideally also machines using standard communication protocols.

- ✓ A1. Resource is accessible for download or manipulation by humans and is ideally also machine readable.
- ✓ A2. Publications and data repositories have contingency plans to assure that metadata remain accessible, even when the resource or the repository are no longer available.



Interoperability

Metadata should be ready to be exchanged, interpreted and combined in a (semi)automated way with other data sets by humans as well as computer systems.

- ✓ I1. Resource is uploaded to a repository that is interoperable with other platforms.
- ✓ I2. Repository meta- data schema maps to or implements the CG Core metadata schema.
- ✓ I3. Metadata use standard vocabularies and/or ontologies.



Reusability

Data and metadata are sufficiently well-described to allow data to be reused in future research, allowing for integration with other compatible data sources. Proper citation must be facilitated, and the conditions under which the data can be used should be clear to machines and humans.

- ✓ R1. Metadata are released with a clear and accessible usage license.
- ✓ R2. Metadata about data and datasets are richly described with a plurality of accurate and relevant attributes.

The How, Who, and Why: A Research Data Management Policy for Freie Universität

- GWP- and FAIR-compliant recommendations for researchers, teaching staff and students
- RDM-relevant contact persons and responsibilities on campus
- Update 2023
- Future Planning: Open Research Policy / Strategy

Freie Universität Berlin. 2021. „Forschungsdaten-Policy der Freien Universität Berlin“. <https://doi.org/10.17169/refubium-30560> und <https://www.fu-berlin.de/forschungsdatenmanagement/policy>

English version: Freie Universität Berlin. 2021. "Research Data Policy of Freie Universität Berlin". <https://doi.org/10.17169/refubium-32141> und <https://www.fu-berlin.de/en/sites/forschungsdatenmanagement/policy>

Research Data Policy of Freie Universität Berlin

Content

1	Preamble	1
2	Scope	2
3	Definition	2
4	Handling Research Data	2
4.1	Research and Project Planning: Administering and Managing Research Data	3
4.2	Publishing, Licensing, Storing, and Archiving Research Data	3
5	Legal and Ethical Considerations	4
6	Responsibilities	4
6.1	Research and Teaching	4
6.2	Institutional Obligations	5
7	Entry into Force	5
8	References	6
9	Imprint	7

1 Preamble

Today, a responsible approach to digital research data is one of the cornerstones of transparent, high-quality, visible, and sustainable research. Freie Universität Berlin supports its members (researchers, instructors, and students) in implementing the relevant principles in alignment with the German Research Foundation's Guidelines on the Handling of Research Data¹ and Guidelines for Safeguarding Good Research Practice,² Freie Universität Berlin's Statute for Safeguarding Good Scientific Practice,³ Freie Universität Berlin's Open Access Policy,⁴ the FAIR Data Principles⁵ as well as other recommendations⁶ regarding the entire research process, from data collection to the publication of research findings. Above and beyond these basic principles, Freie Universität Berlin believes that in the long term, research data are useful not only in a scientific context, but also have the potential to be used and distributed throughout society in accordance with the principles of open research (open science, open scholarship). The university encourages a culture of dialogue as a basis for developing quality assurance concepts for research data in the various departments and subject areas.

- 1 Deutsche Forschungsgemeinschaft (DFG). 2015. 'Guidelines on the Handling of Research Data'. https://www.dfg.de/download/pdf/foerderung/grundlagen_dfg_foerderung/forschungsdaten/guidelines_research_data.pdf.
- 2 DFG. 2019. 'Guidelines for Safeguarding Good Research Practice. Code of Conduct'. <https://doi.org/10.5181/zenodo.3939502>. and DFG. 2021a. 'Research Integrity'. Accessed 22 October 2021. <https://wissenschaftliche-integritat.de/en/>.
- 3 Freie Universität Berlin. 2020. 'Satzung zur Sicherung guter wissenschaftlicher Praxis (GWP-Satzung)'. Mitteilungs. Amtsblatt der Freien Universität Berlin 2020 (42). <https://www.fu-berlin.de/service/2020docs/amtsblatt/2020/ab422020.pdf>.
- 4 Freie Universität Berlin. 2021. 'Open Access Policy of Freie Universität Berlin'. <https://doi.org/10.37169/refubium-31442>.
- 5 Initiated in 2016, the FAIR principles of findable, accessible, interoperable, reusable for the management of scientific data ('FAIR Principles'. n.d. Accessed 22 October 2021. <https://www.go-fair.org/fair-principles/>) aim to improve the discoverability, accessibility, interoperability and reusability of digital data; see Wilkinson, Mark D., Michel Dumontier, Jibrand Jan Aalbersberg, Gabrielle Appleton, Myles Axton, Arie Baak, Niklas Blomberg, et al. 2016. 'The FAIR Guiding Principles for Scientific Data Management and Stewardship'. *Scientific Data* 3 (1): 160018. <https://doi.org/10.1038/sdata.2016.18>.
- 6 See, e.g., the compilation DFG. 2021b. 'Subject-specific Recommendations on the Handling of Research Data'. Accessed 22 October 2021. https://www.dfg.de/en/research_funding/principles_dfg_funding/research_data/recommendations as well as the subject-specific commentaries of the Code of Conduct – Guidelines for Safeguarding Good Research Practice (DFG 2021a).

Contact us for...



Consulting

- Data management plan
- Publication requirements of research funders and/or archiving strategy
- Documentation and metadata
- FAIR principles etc.

Training

- General RDM introduction
- Thematic training courses (e.g. data publishing, DMP)
- Other formats individually on request (incl. subject-specific formats)

Information

- Data management plan templates
- Handouts on various topics
- Website

Institutional repository

- Publication of research data, papers, dissertations,
- Persistent identifiers (DOI)
- Accessibility guaranteed for 10 years

FUB-IT

Scientific Data Storage

- Storage space
- Group drives

Box.FU - Sync & Share

- Cloud service for storing and synchronizing files
- File and data sharing
- Collaborative access and editing

Archive and Backup Services

- Automated backup service
- Long-term storage of data

High-Performance Computing

- Provides computing capacity
- Procurement and maintenance of scientific software

Get advice and support in...

- Implementing the requirements of research funders and the guidelines of good scientific practice and FAIR
- Creating data management plans, e.g. in the context of third-party funding applications
- Concepting sustainable RDM strategies, e.g. in collaborative research projects
- Publishing, licensing and sustainable accessibility of research data
- Archiving research data
- Metadata and documentation

Research Data at Freie Universität Berlin

The digital transformation has fundamentally altered research processes, methods, and procedures. Huge quantities of data are produced by numerous departments at Freie Universität Berlin every day. Many disciplines and projects use data as the basis or object of their research, not to mention adapting, analyzing, and visualizing them. Researchers are not only faced with the challenge of managing these data, but also making them usable and accessible in the long term, as well as making them available to others for subsequent use. The respective services, tools, and infrastructures are key to research data management, which today forms one of the core aspects of scientific practice. Both advisory and training formats are being continuously enhanced to support researchers in this process.

One of the central research data management services at Freie Universität Berlin is the institutional repository "Refubium", where university members can publish and store their research data.

forschungsdaten management

We offer advice on all aspects of research data management

Planning
Information on the requirements of funding institutions and data management plans.
➤ More

Implementation
Tips on handling research data during the research process, such as on documentation and data backups.
➤ More

Archiving and Sharing
Information on archiving and publishing relevant research data.
➤ More

➤ Image Credits

Research Data Policy

The Research Data Policy of Freie Universität Berlin supports researchers, instructors, and students in applying good scientific practice when handling research data in order to ensure that research findings gain greater visibility and are made available in more sustainable formats. To this end, it provides a wide range of recommendations.
➤ Go to policy
➤ About the policy

Refubium

Members of Freie Universität Berlin are entitled to publish their research data in its institutional repository, Refubium. This service is offered by the University Library and is free of charge for all members of the university. Published data are available for unrestricted use worldwide over the internet and they can be retrieved via different catalogues, search engines, and referencing systems. Along with long-term data storage for a minimum of ten years, the University Library provides persistent identifiers – such as DOIs (Digital Object Identifiers) – to ensure that research data

<https://www.fu-berlin.de/en/sites/forschungsdatenmanagement/index.html>

- Individual consultation
- Project consultation
- Open consultation hours
- Events

Become an RDM expert with us

- Training courses and workshops
 - Generic introductions to research data management
 - Topic-related training courses (data publication, data management plan, etc.)
 - Workshops on open source tools (e.g. OpenRefine)
- Technical infrastructure
 - Refubium: repository for publishing data and documents
 - Tools for the creation of data management plans
 - Persistent identifier service (Digital Object Identifier (DOI), ORCID and many more)
- Information material, handouts, guidelines, and further reading

RESEARCH DATA MANAGEMENT AT FREIE UNIVERSITÄT

ABOUT RESEARCH DATA SERVICES IN PRACTICE POLICY RDM GLOSSARY MATERIALS ABOUT US CONTACT

Research Data at Freie Universität Berlin

The digital transformation has fundamentally altered research processes, methods, and procedures. Huge quantities of data are produced by numerous departments at Freie Universität Berlin every day. Many disciplines and projects use data as the basis or object of their research, not to mention adapting, analyzing, and visualizing them. Researchers are not only faced with the challenge of managing these data, but also making them usable and accessible in the long term, as well as making them available to others for subsequent use. The respective services, tools, and infrastructures are key to research data management, which today forms one of the core aspects of scientific practice. Both advisory and training formats are being continuously enhanced to support researchers in this process.

One of the central research data management services at Freie Universität Berlin is the institutional repository "Refubium", where university members can publish and store their research data.

forschungsdaten management

We offer advice on all aspects of research data management

Planning
Information on the requirements of funding institutions and data management plans.
➤ More

Implementation
Tips on handling research data during the research process, such as on documentation and data backups.
➤ More

Archiving and Sharing
Information on archiving and publishing relevant research data.
➤ More

➤ Image Credits

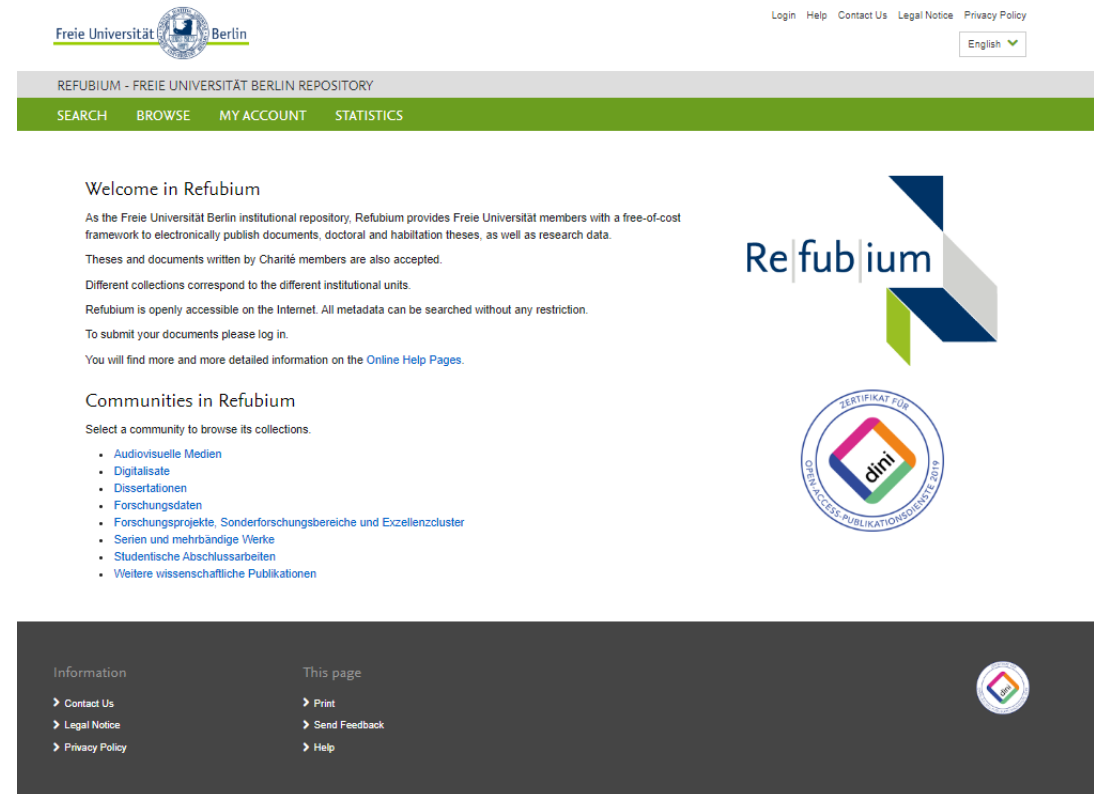
Research Data Policy
The Research Data Policy of Freie Universität Berlin supports researchers, instructors, and students in applying good scientific practice when handling research data in order to ensure that research findings gain greater visibility and are made available in more sustainable formats. To this end, it provides a wide range of recommendations.
➤ Go to policy
➤ About the policy

Refubium
Members of Freie Universität Berlin are entitled to publish their research data in its institutional repository, Refubium. This service is offered by the University Library and is free of charge for all members of the university. Published data are available for unrestricted use worldwide over the internet and they can be retrieved via different catalogues, search engines, and referencing systems. Along with long-term data storage for a minimum of ten years, the University Library provides persistent identifiers - such as DOIs (Digital Object Identifiers) - to ensure that research data

<https://www.fu-berlin.de/en/sites/forschungsdatenmanagement/index.html>

Publish your data with us!

- ReFUBium, the institutional repository of Freie Universität Berlin for research data, papers, dissertations, habilitations, and student theses
- No restriction to specific disciplines or file formats
- Open for all types of research data
- DOI assignment



The screenshot shows the ReFUBium website interface. At the top left is the Freie Universität Berlin logo. The top right contains navigation links: Login, Help, Contact Us, Legal Notice, Privacy Policy, and a language dropdown set to English. Below this is a green navigation bar with links for SEARCH, BROWSE, MY ACCOUNT, and STATISTICS. The main content area is titled "Welcome in Refubium" and includes a brief description of the repository's purpose, a list of accepted document types, and a link to the Online Help Pages. A section titled "Communities in Refubium" lists various research communities. On the right side, there is a large "Re|fub|ium" logo and a circular "CERTIFIKAT FÜR OPEN ACCESS PUBLIKATIONEN 2019" logo with the "dini" logo inside. The footer contains two columns of links: "Information" (Contact Us, Legal Notice, Privacy Policy) and "This page" (Print, Send Feedback, Help). A small circular logo is visible in the bottom right corner of the footer area.

<https://refubium.fu-berlin.de/?locale-attribute=en>

[Home](#) > [Forschungsdaten](#)

Forschungsdaten

Browse

Author	DDC	Department/Institution	Type of publication	Keyword	Title
--------	-----	------------------------	---------------------	---------	-------

Full-Text Search within this community and its collections:

Full-Text Search within this community and its collections:

Sub-communities within this community

- [Geosciences](#)

Collections in This Community

- [Alle Forschungsdaten](#)
- [Turbulent wall-bounded flows](#)

Recent Submissions

Dataset 2024

Replication Data for: Bringing sustainability to the ground: Responsible Research and Innovation-based management and decision-making for the German agri-food transition

Mangelkramer, Delia

This data set contains new results on how organisations can capture sustainability and manage innovation to contribute to changes in socio-technical systems characterised by greater sustainability. While drawing from sustainability transitions research can help to establish sustainability criteria that innovative organisations must meet with their sustainable innovation practices to contribute to complex and long-term ... [View more >](#)

Dataset 2024

Public Attitudes towards the Liberal Script (PALS) Survey Wave 2

Giebler, Heiko; Antoine, Lukas; Ollroge, Rasmus; Gerhards, Jürgen; Züm, Michael; Giesecke, Johannes; Humphreys, Macartan

The comparative public opinion survey "Public Attitudes towards the Liberal Script" (PALS) is part of the Cluster of Excellence "Contestations of the Liberal Script (SCRIPTS)". The goal of PALS is to measure citizen attitudes towards what we call the liberal script, a specific understanding of how society should be organized around liberal principles. After having conducted a first wave in 26 countries from December ... [View more >](#)

Dataset 2024

Direct numerical simulation of turbulent Ekman flow with cubic small-scale surface roughness (Re=1000)
Neutral density stratification (Re=1000)
Direkte numerische Simulation der turbulenten Ekmanströmung mit kubischer kleinskaliger Oberflächenrauigkeit

Kosteletzky, Jonathan

This dataset contains four simulation cases (identifier: s, r1, r2, r3), one smooth case (s) and three cases with small-scale surface roughness (r1, r2, r3). The netCDF file names in the dataset include grid information and the date of creation of the data on the High-Performance Computing (HPC) system. The Reynolds number in this simulation is Re=1000, based on the laminar Ekman layer thickness, the geostrophic wind ... [View more >](#)

Dataset

Replication Data for: Partitioning dataset of 20 base elements between liquid metal and silicate melt at high pressure and high

Watch this space: RDM support through projects

Berlin University Alliance 

Concept Development for Collaborative Research Data Management Services

(BUA-FDM, 2021-23)

Collaboratively Advancing Research Data Services (CARDS)

(2024-2026)

 = Start 2024

Berlin-Brandenburgische Kooperationen

FDNext

Weiterentwicklung der Forschungsdatenpraxis: Werkzeuge zur Qualitätsentwicklung für Serviceeinrichtungen in Kooperation mit Fachbereichen und Forschungsverbänden (2020-23, DFG)

FDLink

Rahmenbedingungen für Kulturwandel und gemeinsame Servicelandschaft stärken (2024-27, DFG)

QUADRIGA

Berlin-Brandenburgisches Datenkompetenzzentrum für Digital Humanities und Verwaltungswissenschaft (2024-27, BMBF)



Get in touch!

E-Mail: forschungsdaten@fu-berlin.de

Web: <https://www.fu-berlin.de/forschungsdatenmanagement>