

HANDLING OF RESEARCH DATA AT THE ZBW

Key issues paper

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Preamble

Research data and their handling are becoming ever more important for business, science, politics and society. The topic is also becoming increasingly important for the ZBW. The present paper intends to offer guidance to ZBW employees on how to handle this resource for research.

The ZBW, as the world's largest special library for economics and Germany's most important information infrastructure for economics, generates data: on the one hand through its own research units, on the other through its library services. These data can in turn become the subject of scientific endeavours inside or outside the ZBW. The ZBW follows the definition of research data as it was phrased by the Leibniz Association:

“Research data includes all data that is produced during research and that can be processed digitally. It takes a range of forms – depending in particular on the domain in question. It may include, for instance, measurement, (ongoing) survey and observational data, process-produced data, texts, data from polls, graphic visuals, software and simulations. Among other things, this research data includes raw data, aggregated data, metadata and descriptions of data structures.”ⁱ In addition, there exist numerous data at the ZBW that arise from library processes or that are generated in the form of algorithms and (research) software. The ZBW understands these data to be also research data.

The present key issues paper is closely oriented on the “Principles of Handling Research Data” of the Alliance of Science Organisationsⁱⁱ, the “DFG Guidelines on the Handling of Research Data”ⁱⁱⁱ, the “Guidelines on the Handling of Research Data within the Leibniz Association” (see endnote ⁱ), the FAIR (Findable, Accessible, Interoperable, Re-useable) Data Principles of FORCE11 Joint Declaration of Data Citation Principles^{iv}, the “DFG Guidelines for Safeguarding Good Research Practice”^v and the “Leibniz Code for Good Research Practice”^{vi}. The key issues paper “Openness as area of action for the ZBW”^{vii} has particular significance for the ZBW's commitment to the principles of Open Science.

The ZBW recognises the collecting, processing, publishing and sustainable archiving of data in accordance with scientific and bibliographic standards as an independent task and service. It offers support for the handling of research

data through a number of other activities at national, European and international level in various initiatives and networks, such as “Leibniz Data”, NFDI or EOSC^{viii}.

Handling research data

“Research data management is an active task and supports the activities linked to scientific discovery: the planning, generation, documentation, processing, archiving and, where relevant, publishing, of the data. Research data management is part of good scientific practice and ensures the quality, reproducibility, availability and reuse of research data and results” (see endnote ⁱ).

The reuse of data – also for the purpose of reproducibility of research results – is a key concern for research data management at the ZBW. The ZBW therefore recommends to its employees that they archive and publish research data, according to the documents named above for safeguarding good scientific practice (in their current version), in recognised and trustworthy repositories which comply with modern standards of data security, as far as legal frameworks allow it. The ZBW documents in which repositories it publishes its research datasets. In addition, it documents which of these datasets have been used in publications.

Bibliographic research data will be made persistently usable through the ZBW’s own and federated infrastructures. The benchmark for the period of reusing ZBW research data, no matter which type, are the standards of the respective discipline and the recommendations of the German Research Association (usually 10 years). If possible, data and metadata shall be made accessible with an express mention of a free usage licence. The publication of such research data shall to the greatest possible degree correspond to the FAIR Data Principles, take place in open and machine-readable formats, and well document the data and the research process. The ZBW also recommends that the programme code used or self-developed for the processing of the research data be published under an Open Source licence.

When using metadata, vocabularies, and ontologies for the description of research data, the recommendation is to orient them on the disciplinary standards of the communities and in the library landscape and to use also generic approaches, for instance persistent identifiers to ensure research data can be sustainably referenced.

Responsibilities

The ZBW fosters a responsible, sustainable and transparent handling of research data by supporting its employees in research data management and the publication of data. In this context, the ZBW provides advice on handling research data for its employees. Managers are responsible for sensitising and mentoring employees in the handling of research data and the observance of the specifications of this key issues paper and of ethical and legal framework conditions. If necessary, the Legal Affairs unit and the Data Protection Officer shall be involved. This also includes permission for employees to attend internal and external consulting and training services and to create guidelines. The ZBW welcomes the engagement of employees in initiatives for research data management (e.g. involvement in GO FAIR, RDA, LIBER working groups, NFDI). It encourages its employees to take the initiative for better research data management in their own projects and to take on the role of multipliers.

In the spirit of handling research data as described above, employees shall make research data and metadata available for free reuse as far as possible (“as open as possible, as closed as necessary”). For the best possible after-use, employees are encouraged to check already during the planning of research phases, resp. during the proposal submission for research projects, if resources for research data management must be taken into account. This can include the use of (possibly fee-bearing) services for digital preservation and data publishing in repositories. The ZBW supports its employees in finding respective options for storage and digital preservation of their data. The use of data management planning is suggested in accordance with the “Guidelines on the handling of research data within the Leibniz Association”.

The safeguarding, storing, and sustainable provision of research data requires the implementation of disciplinary standards and compliance with legal requirements, with special attention laid on compliance with data protection laws and the protection of the general right of personality. The ZBW supports its employees in complying with the resulting duties and promotes free access to research data in compliance with ethical, legal, economic, technical and contractual regulations.

The key issues paper will be evaluated regularly and adapted if necessary.

THE ZBW IS COMMITTED TO THE FOLLOWING PAPERS:

- i Guidelines on the Handling of Research Data within the Leibniz Association (2018) https://www.leibniz-gemeinschaft.de/fileadmin/user_upload/Bilder_und_Downloads/Forschung/Open_Science/Leitlinie_Forschungsdaten_2018_EN.pdf [accessed on 21/02/2023]
- ii (German only) Grundsätze zum Umgang mit Forschungsdaten der Allianz der deutschen Wissenschaftsorganisationen. RatSWD Working Paper Series, Working Paper Nr. 156 (2010): https://www.konsortswd.de/wp-content/uploads/RatSWD_WP_156.pdf [accessed on 21/02/2023]
- iii DFG Guidelines on the Handling of Research Data (2015): https://www.dfg.de/download/pdf/foerderung/grundlagen_dfg_foerderung/forschungsdaten/guidelines_research_data.pdf [accessed on 21/02/2023]
- iv Wilkinson, M., Dumontier, M., Aalbersberg, I. et al. The FAIR Guiding Principles for scientific data management and stewardship. *Sci Data* 3, 160018 (2016). <https://www.nature.com/articles/sdata201618> [accessed on 21/02/2023]
- v DFG Guidelines for Safeguarding Good Research Practice (2019): <https://zenodo.org/record/6472827> [accessed on 21/02/2023]
- vi Leibniz Code for Good Research Practice (2021): https://www.leibniz-gemeinschaft.de/fileadmin/user_upload/Bilder_und_Downloads/%C3%9Cber_uns/Gute_wissenschaftliche_Praxis/Leibniz_Code_for_Good_Research_Practice.pdf [accessed on 21/02/2023]
- vii Openness as area of action for the ZBW. Key issues paper 2020 – 2025 (2020): <https://www.zbw.eu/fileadmin/pdf/ueber-uns/2020-openness-area-of-action.pdf> [accessed on 21/02/2023]
- viii More information at <https://www.zbw.eu/en/about-us/key-activities/research-data-management> [accessed on 05/10/2022]