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Research data management policy of Saarland University

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Preamble

Structured research data management is one of the central elements of good scientific practice[1] and is an important part of open science. Saarland University and its researchers, lecturers and students are committed to the adequate handling of research data in accordance with FAIR principles[2] throughout the entire data life cycle from data generation to archiving.

Definition

Research data within the meaning of this policy is understood to mean both genuinely digital data that is collected, generated or obtained during or as a result of research work (which includes, but is not limited to, conducting field or laboratory experiments, conducting experiments, surveys, inter-views or the analysis of data), as well as data that are generated in analogue formats or already exist and are digitized in further processing. Research data also includes those data that document the actual data generation and ensure the reproducibility of the data (metadata).

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[1]Saarland University (2001). "Principles of good scientific practice at Saarland University". https://www.uni-saar-land.de/fileadmin/upload/verwaltung/fundstellen/Forschungsangelegenheiten/DB01-342.pdf. Retrieved 2 December 2022.

[2]The FAIR principles are generic rules set out in 2016 for handling research data that aim to improve findability, accessibility, interoperability and reusability. Please refer to https://www.go-fair.org/fair-principles/ for further information. Retrieved 2 December 2022.

Due to the range of disciplines, the resulting research data is heterogeneous with respect to the data types and formats; these can consist, for example, of text modules, survey data, measurement, observation data, databases, questionnaires, protocols, audio data and audio-visual data, as well as simulation data and software source code, provided that this is a central result of scientific research.

Here, the data life cycle of research data can have various stations which differ in terms of quality states or processing statuses and are fundamentally classified as open, access-restricted and non-public research data depending on their access authorizations. Research data management deals with the organization and documentation of the data, storage, archiving, data security, the protection of personal data as well as publication and sharing with third parties. Adequate and sustainable research data management not only ensures the increased requirements of many third-party funding providers are met as well as developing standards from specialist disciplines taking into account research ethical principles, but also increases the visibility of scientific research and the potential linking of different data sets through the subsequent use of data by researchers.

1 Scope

This policy is aimed at all researchers, lecturers and students at Saarland University. It applies equally to all persons who conduct research at Saarland University or on its behalf or who use facilities of Saarland University. Any requirements of third-party funding providers with regard to research data management that deviate from this policy shall take precedence. In addition, the regulations of Saarland University regarding data protection and IT security are binding. Laws and regulations relating to the handling of research data, in particular regulations for safeguarding good scientific practice, copyright and related rights, commercial intellectual property rights (patent law) and data protection, remain unaffected and take precedence over the regulations of this policy.

2   Research data management

2.1   Management of research data

Research data management covers the entire life cycle of the research data, from data generation to archiving or re-use and includes both the organization and documentation of the generated data, as well as the storage, backup and accessibility (publication) of the data. Adequate research data management ensures that the data can be processed and interpreted in the context of the research project.

Sustainable research data management begins before the actual data generation in the context of the creation of a data management plan that takes into account all the necessary resources for both the storage and the management of the data. In particular, the project-related physical storage media must be described in full, including software solutions that are used here, and also any personnel costs or license fees. Where personal data are processed, they must be anonymized or pseudonymized as soon as the research purpose allows. In the case of pseudonymization, the characteristics with which the personal reference can be restored must be stored separately from the research data. In addition, the data management plan contains information on project managers, the use and publication of the data and agreements on authorship and copyright. During the course of the research project, the data management plan is regularly reviewed and, if necessary, updated. Responsibility for the entire research data management as well as the preparation and regular review of the data management plan lies with the respective project managers.

This data management plan must already be drawn up for many funding applications from third-party funding providers and submitted upon application, for example under the Horizon 2020 programme[3]. Even without these binding requirements from third parties, Saarland University strongly recommends the early implementation of a suitable storage structure, long-term storage and accessibility of research data and their documentation in a data management plan.

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[3] https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/data-management_en.htm. Retrieved 2 December 2022.-

2.2   Storage and publication of research data

In the (long-term) storage of research data, it is important to determine which data should be stored at which quality level, whereby reasons for not storing research-relevant data must be documented in writing in accordance with the principles of good scientific practice. After metadata has been attributed, the data should be stored in sustainable, lossless and open data formats on data storage devices and backed up.

Saarland University supports researchers in ensuring the broadest possible visibility of their research, as well as the subsequent use of the data. Therefore, the metadata of the research project should always be provided with a unique persistent identifier, for example a DOI. The primary data can also be retrieved and stored in a subject-specific repository. When selecting the publication medium, it is recommended that the data is kept freely available for scientific purposes. This can be done by issuing open licenses for usage rights (e.g. Creative Commons CC-BY for data or GNU Affero General Public License for (software) source code). All data collected must be kept in accordance with the specifications of the sponsors and at least for a period of ten years from the publication of the data or from the date of project completion in accordance with the rules of good scientific practice. For clinical studies, additional retention periods apply which must be observed accordingly.

3   Commencement

This policy on research data and research data management was adopted by the Senate of Saarland University in its 15th session on 18 January 2023 and will enter into force the day after its publication in the Saarland University Gazette.