



## **BAM Data Policy: Guidelines for handling research data at the Bundesanstalt für Materialforschung und -prüfung (BAM)**

### **Preamble**

As an essential part of scientific knowledge processes, research data are/constitute both the prerequisite and the result of research. Quality assurance of research data management promotes visibility, traceability, reproducibility, and validation of research processes and their results. The sustainable storage and availability of data contribute to accelerate the process of scientific work and knowledge acquisition, which in turn significantly contributes to better visibility and impact of research. The Bundesanstalt für Materialforschung und -prüfung (BAM) recognizes the fundamental importance of research data and its documentation as the basis for maintaining high-quality research and scientific integrity and strives for the highest possible standard in this respect. BAM supports, promotes, and acknowledges all initiatives of its employees to implement and further develop quality-conscious research data management in line with national and international declarations and recommendations 1,2,3,4,5,6.

### **1. Definitions**

**Research data:** Research data include all digital data that are the basis, object, work steps or result of research processes as well as data that serve to describe the former. Typical examples of research data can be found in the recommendations for action for implementing the BAM Data Policy.

**Research data management (RDM):** Management of research data includes planning, acquisition, processing, documentation, storage, archiving, and publication of data. RDM is part of good scientific practice and ensures access, re-use, reproducibility, and quality assurance of all research data which scientific results are based upon.

### **2. Scope of application**

All BAM employees as well as researchers who are not directly affiliated with BAM but who use BAM facilities for their research projects have to comply with the BAM Data Policy. In the case of third-party funded and cooperation projects, this policy should be considered as a guidance as long as it does not conflict with other requirements of funding bodies or cooperation partners. RDM is to be carried out strictly in accordance with the applicable legal provisions, and these always take precedence over this Policy.

- 1) „Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities“  
[https://openaccess.mpg.de/67605/berlin\\_declaration\\_engl.pdf](https://openaccess.mpg.de/67605/berlin_declaration_engl.pdf)
- 2) „Appell zur Nutzung offener Lizenzen in der Wissenschaft“ (DFG)  
[http://www.dfg.de/foerderung/info\\_wissenschaft/2014/info\\_wissenschaft\\_14\\_68/index.html](http://www.dfg.de/foerderung/info_wissenschaft/2014/info_wissenschaft_14_68/index.html)
- 3) „Leitlinien zum Umgang mit Forschungsdaten“ (DFG)  
[http://www.dfg.de/download/pdf/foerderung/antragstellung/forschungsdaten/richtlinien\\_forschungsdaten.pdf](http://www.dfg.de/download/pdf/foerderung/antragstellung/forschungsdaten/richtlinien_forschungsdaten.pdf)
- 4) „Joint Declaration of Data Citation Principles“ (FORCE11) <https://www.force11.org/datacitationprinciples>
- 5) Wilkinson et al. (2016) The FAIR Guiding Principles for scientific data management and stewardship. *Sci. Data* 3:160018
- 6) „Guidelines for Safeguarding Good Research Practice“ (DFG-Kodex 2019)  
[https://www.dfg.de/download/pdf/foerderung/rechtliche\\_rahmenbedingungen/gute\\_wissenschaftliche\\_praxis/kodex\\_gwp\\_en.pdf](https://www.dfg.de/download/pdf/foerderung/rechtliche_rahmenbedingungen/gute_wissenschaftliche_praxis/kodex_gwp_en.pdf)



### **3. Legal aspects**

Rights of use and exploitation can be specified by additional agreements (e.g., in a grant agreement or a consortium agreement). In all matters of RDM, BAM and its employees comply with ethical concerns as well as with issues of data protection and confidentiality.

Prior to data creation, legal issues are to be examined with regard to personal data protection, copyright and patent law, rights of use, employee and employer rights, rights of third parties in cooperation agreements, general contract law and legal requirements. Publicly accessible data are to be provided with an open and valid licence for re-use.

### **4. Handling of research data**

The principles of good scientific practice require that BAM employees prepare and document research data generated and processed within the scope of their scientific activities or in a research project in a sustainable manner and store these data for the long term.

Data management is to be documented in a suitable data management plan (DMP). Research data and their metadata are to be stored and archived in the BAM IT infrastructure, in BAM collections and archives and in external discipline-specific, community-recognized repositories.

Research data and documents shall be stored and kept accessible for as long as necessary in accordance with the requirements of the research funding bodies, as well as within the framework of the applicable legal and contractual provisions. According to the guidelines of the DFG Codex, the minimum retention period for research data and documents at BAM is ten years after the publication of the data or of the relevant work or after the project completion.

BAM supports open access to research data. The publication of research data shall – as far as possible – be in open and machine-readable formats. In accordance with intellectual property rights and provided that no third-party rights, legal provisions, or other property rights prohibit, research data shall be provided with a free licence and made openly available.

If research data and the related documents are to be deleted or destroyed after expiration of the retention period or for other reasons, this may only be done in compliance with all legal provisions and ethical aspects. The deletion must be traceable and documented. The decision to retain or delete data must consider the interests and contractual provisions of third-party funders and other stakeholders, in particular those of contributors and collaboration partners. Aspects of security and confidentiality must be considered.

### **5. Responsibilities**

#### **Responsibilities of the employees**

BAM employees

- i. follow the principles of this Policy in RDM. Research data shall be stored securely within the scope of the technical possibilities and in accordance with the requirements for confidentiality, integrity and availability of the data. They shall be processed in accordance with the established regulations or standards. Throughout the entire research cycle, the research data as well as the tools and practices used shall be documented and stored for the long term to allow access or orderly deletion.



- ii. create, as far as possible, a DMP for each research proposal and maintain it throughout the project. The DMP documents the collection, management, storage, use, and publication of the data used and describes the requirements for integrity and confidentiality of the data.
- iii. agree on procedures and responsibilities with project partners in joint research projects.
- iv. plan, as far as possible, the further use of the data, especially after project completion. This includes both the determination of rights of use and exploitation after the end of the project, including the assignment of corresponding licences as well as the regulation of data storage and long-term archiving in case the employee leaves BAM.
- v. comply with and advocate all relevant organisational, regulatory, institutional, and other contractual and legal requirements in relation to both research data and management of the related research documents (e.g., in the case of information on context or provenance).

### **Responsibilities of the institution**

#### **BAM**

- i. supports its organisational units and provides adequate means and resources for research funding, services, operation of organisational units, infrastructures, and staff qualification.
- ii. advises on RDM and promotes compliance with the recommendations on good scientific practice. To this end, it provides templates for data management plans, conducts monitoring, and offers qualification measures as well as support and advice in accordance with the current policies, contracts with third-party funders, internal regulations, codes of conduct and other relevant guidance documents.
- iii. develops mechanisms and provides services to store, securely retain and archive research data to ensure access to research data during and after the completion of research projects.
- iv. provides access to the services and infrastructures described above so that researchers can comply with the requirements of third-party funders and other legal entities and fulfil their responsibilities as described in this Policy.
- v. cooperates with other scientific institutions and participates in the development of common standards and infrastructures.

### **6. Validity**

This Policy was adopted by the BAM Board of Directors on 25.05.2020 and will become effective on 25.05.2020.

This Policy shall be reviewed by BAM regularly - at least every two years - to ensure that it is up to date and shall be updated if necessary.