OPEN SCIENCE - DATA MANAGEMENT PLAN (DMP) IN THE FRAMEWORK OF THE PDR

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1. CONTEXT

In an effort to improve Research Data Management (RDM) practices, more and more funding agencies worldwide are requiring data management plans (DMP) from researchers submitting and/or receiving funding applications. In the context of Open Science, the concepts of data sharing and reuse are becoming increasingly important. Science Europe has recently published a "Guidance Document" about Research Data Management, highlighting its importance for the different European Research Performing Organisations (RPOs) and Research Funding Organisations (RFOs) [1].

DMPs typically state which data will be created as part of a research project and offer a plan for its sharing and preservation that is most suitable given the nature of the data and the restrictions that may need to be applied.

2. F.R.S.-FNRS DATA MANAGEMENT PLAN

1. RESEARCH DATA : DEFINITIONS

« Research data » is defined as data underlying a publication and needed to validate research results or any other data specified in the data management plan, including metadata. In the context of the research process, these data can be numerical/statistical data, experimental results, experimental measurements, field observations, survey results, audio/video recordings[2].

2. F.R.S.-FNRS Data Management Plan (DMP)

Data Management plan definition

The data management plan is a document that details the methods of collection and/or production, processing, description and documentation, protection, and dissemination, sharing and conservation, as well as the associated costs during and after the project[3].

[1] Science Europe Guidance Document - Presenting a Framework for Discipline-specific Research Data Management (January 2018) https://www.scienceeurope.org/wp-content/uploads/2018/01/SE_Guidance_Document_RDMPs.pdf

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

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

Legislative provisions of the data management plan

◆ From 2022 onwards (this applies to PDRs starting in 2022 and after), recipients of new fundings from the F.R.S.-FNRS or associated funds in the framework of PDR (research project) research programmes commit to submitting a data management plan written in the same language as the research plan. The DMP must be submitted within a period extending from the beginning of the research project until 2 years after its end, alongside the ex-post data already collected;

◆ The data management plan must describe, **as a priority**, the choices made in terms of types of data collected and/or produced, metadata formats, and the means planned to guarantee the protection of the data, particularly in terms of confidentiality (sections **1, 2, 3** of the default model of the data management plan in the Appendix);

◆ Recipients of PDR funding are **encouraged** to use the F.R.S.-FNRS data management plan template (see Annex) which is based on the template favoured by Science Europe (they will however remain free to draw up their data management plan in any other format they consider relevant to their research project). The generated data management plan will have to be sent to the F.R.S.-FNRS via E-Space and included in the file as an annex document;

◆ The data management plan is an evolving document that will have to be updated during the life of the research project while respecting disciplinary specificities; a final version of the DMP will have to be generated at the end of the project (in practice up to two years after the end of said project) and transmitted to the F.R.S.-FNRS via E-Space.

◆ Recipients of PDR funding whose projects do not result in partial or global dissemination of data must submit a data management plan that describes the management of all data, including those not intended for dissemination;

◆ Recipients of PDR funding are encouraged to structure their data according to FAIR principles to facilitate reuse for research and indexing purposes;

◆ The data management plan is not taken into account in the evaluation of research projects. It responds to the need to change researchers' practices by including research data management in the research process while relieving the researchers concerned of additional administrative burden.

ANNEX. DEFAULT DMP TEMPLATE

The DMP template suggested below is based on the model approved by Science Europe in the document *"Practical guide to the international alignment of Research Data Management"*[4] published in January 2021, in a simplified form.

None of the questions listed below are **mandatory**, so researchers remain free to answer all or only part of them, if they feel that their project does not require it. They also retain the option of using another DMP template, if they consider it more appropriate for their research project.

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1. **Data description and collection or re-use of existing data**
    a. How will new data be collected or produced and/or how will existing data be re-used?
    b. What data (for example the kind, formats, and volumes), will be collected or produced?

2. **Documentation and data quality**
    a. What metadata and documentation (for example the methodology of data collection and way of organising data) will accompany the data?
    b. What data quality control measures will be used?

3. **Storage and backup during the research process**
    a. How will data and metadata be stored and backed up during the research?
    b. How will data security and protection of sensitive data be taken care of during the research?

4. **Legal and ethical requirements, codes of conduct**
    a. If personal data are processed, how will compliance with legislation on personal data and on security be ensured?
    b. How will other legal issues, such as intellectual property rights and ownership, be managed? What legislation is applicable?
    c. What ethical issues and codes of conduct are there, and how will they be taken into account?

5. **Data sharing and long-term preservation**
    a. How and when will data be shared? Are there possible restrictions to data sharing or embargo reasons?
    b. How will data for preservation be selected, and where data will be preserved long-term (for example a data repository or archive)?
    c. What methods or software tools are needed to access and use data?
    d. How will the application of a unique and persistent identifier (such as a Digital Object Identifier (DOI)) to each data set be ensured?

[4] Available here : https://scienceeurope.org/media/4brkxxe5/se_rdm_practical_guide_extended_final.pdf

6. **Data management responsibilities and resources**
    a. Who (for example role, position, and institution) will be responsible for data management (i.e. the data steward)?
    b. What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?