D1.4
1ˢᵗ Updated Data Management Plan

Work Package	1
Lead partner	FZJ
Status	Final
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Deliverable abstract

The Data Management Plan (DMP) contains information on the suggested policies, standards, and sustainability activities related to the created data services, including software solutions for the services. This is done in close collaboration with the work packages on FAIR Policies and common technical solutions, to ensure the management of knowledge in the project is maintained following the FAIR principles.

The DMP covers the data, documents and solutions created within the project (i.e. not the data provided by the RIs in their services, which is part of their service policies). It describes the data (including metadata) and software standards, availability, curation and preservation methods, and is based on the Digital Curation Centre model for DMPs.

The first update of the DMP details the tools and systems which are used to maintain personal data and digital assets generated in the project.

DELIVERY SLIP

	Name	Partner Organization	Date
Main Author	Andreas Petzold	FZJ	15 January 2020
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DELIVERY LOG

Issue	Date	Comment	Author
V 0.1	15 January 2020	Final draft sent for comments	A. Petzold
V 1.0	30 January 2020	Final version completed	A. Petzold

DOCUMENT AMENDMENT PROCEDURE

Amendments, comments and suggestions should be sent to the Project Manager at manager@envri-fair.eu.

GLOSSARY

A relevant project glossary is included in Appendix A. The latest version of the master list of the glossary is available at http://doi.org/10.5281/zenodo.3465753.

PROJECT SUMMARY

ENVRI-FAIR is the connection of the ESFRI Cluster of Environmental Research Infrastructures (ENVRI) to the European Open Science Cloud (EOSC). Participating research infrastructures (RI) of the environmental domain cover the subdomains Atmosphere, Marine, Solid Earth and Biodiversity / Ecosystems and thus the Earth system in its full complexity.

The overarching goal is that at the end of the proposed project, all participating RIs have built a set of FAIR data services which enhances the efficiency and productivity of researchers, supports innovation, enables data- and knowledge-based decisions and connects the ENVRI Cluster to the EOSC.

This goal is reached by: (1) well defined community policies and standards on all steps of the data life cycle, aligned with the wider European policies, as well as with international developments; (2) each participating RI will have sustainable, transparent and auditable data services, for each step of data life cycle, compliant to the FAIR principles. (3) the focus of the proposed work is put on the implementation of prototypes for testing pre-production services at each RI; the catalogue of prepared services is defined for each RI independently, depending on the maturity of the involved RIs; (4) the complete set of thematic data services and tools provided by the ENVRI cluster is exposed under the EOSC catalogue of services.

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Preamble

Rationale

The Data Management Plan (DMP) contains information on the suggested policies, standards, and sustainability activities related to the created data services, including software solutions for the services. This is done in close collaboration with the work packages on FAIR Policies and common technical solutions, to ensure the management of knowledge in the project is maintained following the FAIR principles.

The DMP covers the data, documents and solutions created within the project (i.e. not the data provided by the RIs in their services, which is the part of the service policies). It describes the data (including metadata) and software standards, availability, curation and preservation methods, and is based on the Digital Curation Centre model for DMPs accessible at https://dmponline.dcc.ac.uk/.

The initial DMP (ENVRI-FAIR Deliverable D1.3) focused on the tools and systems which are used to maintain personal data of involved project participants. The first updated DMP and further subsequent annual updates of the DMP include the description of data and metadata, software standards, availability, curation and preservation methods used for the data, documents and solutions created within the project.

Data Management Team

The Data Management Team (DMT) is responsible for providing ENVRI-FAIR with Data Management Plans (DMP) during the project period and oversees the DMP revision.

The DMT consists of the Co-coordinator (chair), Project Management Team (PMT) representative, responsible of drafting the DMP text, and WP 5 and 7 leaders. The General Assembly (GA) confirms the membership of the DMT Team during annual GA meeting.

DMT Members confirmed by the GA:

Ari Asmi (co-coordinator)	ari.asmi@helsinki.fi
Daniela Franz (PMT representative)	d.franz@fz-juelich.de
Alex Vermeulen (WP 5 lead)	alex.vermeulen@icos-ri.eu
Zhiming Zhao (WP 7 lead)	z.zhao@uva.nl
Ulrich Bundke (ENVRI-FAIR data manager)	u.bundke@fz-juelich.de

The first update to the DMP is produced as a deliverable of WP1 and subsequent annual updates will be also delivered via WP1.

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Data Management Plan - 1st Update

1. Data Summary

In its initial phase the project data collection and management is exclusively related to personal data of project participants and of members of the ENVRI community. Participation to the project is granted by invitation or on personal request.

ENVRI-FAIR uses the open-source Redmine environment (www.redmine.org) for internal communication, storage of project-related documents and project management. The system is a password-protected and secured system for project data storage. The access is controlled, and can be specified for specific times. See Chapters 3 and 4 for details.

In the course of the project conduction, the following types of data assets will be created:

- Personal contact data, email lists
- Project documents, incl. multimedia
- Surveys, questionnaires
- Digital objects created via the demonstrators defined in the work packages
- Geophysical data sets collected via the RIs during the project
- Software

Personal contact data are collected during the login to the central request by the users. After access has been granted, the user can maintain own personal data individually.

Lists of participants to general project meetings and to work package meetings are collected on site and are kept as internal documents in the respective work package storages of the ENVRI-FAIR Redmine environment.

Further information on storage and stewardship of personal data, project documents, surveys and questionnaires, digital objects, software, and geophysical data sets are detailed in the respective sections of the Data Management Plan.

2. FAIR Data

2.1 Personal contact data and mailing lists

2.1.1 Making data findable, including provisions for metadata
Personal contact data, mailing lists and participation of the individuals to project work packages and working groups is stored. No further information or other metadata is stored.

2.1.2 Making data openly accessible
It is not intended to making the personal contact data of the project participants openly accessible due to privacy reasons.

2.1.3 Making data interoperable
It is not intended to making the personal contact data of the project participants available for external use and analyses.

2.1.4 Increase data re-use
Not applicable.

2.2 Project documents
2.2.1 Making data findable, including provisions for metadata

Project-related documents will be maintained and kept accessible in the ENVRI-FAIR Redmine environment during the lifetime of the project.

2.2.2 Making data openly accessible
Open-access project documents will be made accessible via the Zenodo Environmental Research Infrastructures Community ENVRI at https://zenodo.org/communities/envri/ and/or via the webpage https://envri.eu/home-envri-fair/.

2.2.3 Making data interoperable
It is not intended to making the project documents available for external use and analyses, however, e.g. the deliverable format is controlled via template, and the Zenodo requires some level of metadata (including author names).

2.2.4 Increase data re-use
Zenodo publication makes the documents re-usable for other purposes.

2.3 Surveys, questionnaires
2.3.1 Making data findable, including provisions for metadata
Results from internal surveys of target groups are stored in the respective work package storages in the protected ENVRI-FAIR Redmine environment.

2.3.2 Making data openly accessible
It is not intended to making data from internal surveys openly accessible, however the final results of the surveys (e.g. conclusions or non-personalized answers), can be embedded on project documentation (see 2.2.). Questions of the surveys can be submitted to e.g. Zenodo if not part of the general documentation.

2.3.3 Making data interoperable
It is not intended to making raw data from internal surveys available for external use and analyses. However, the overall results are treated as project documentation (2.2.).

2.3.4 Increase data re-use
Not applicable.

2.4 Digital objects, geophysical data sets and software
2.4.1 Making data findable, including provisions for metadata
- Project-related digital objects will be stored in the respective ENVRI-FAIR Redmine environment, or in case of open access in the Zenodo Environmental Research Infrastructures Community ENVRI at https://zenodo.org/communities/envri/.
- Software developed in the course of project conduction will be stored and maintained at GitLab resources hosted by Forschungszentrum Juelich GmbH. The preparation of the GitLab repository is ongoing at the time of submission of the document.
- Geophysical data sets will be stored at the responsible research infrastructures with a reference link archived in the ENVRI-FAIR Redmine system, or in case of no RI able to host them (e.g. due to their special nature), open access in the Zenodo Environmental Research Infrastructures Community ENVRI at https://zenodo.org/communities/envri/.

2.4.2 Making data openly accessible
Digital objects, geophysical data sets and software considered for open access will be made available the Zenodo Environmental Research Infrastructures Community ENVRI at https://zenodo.org/communities/envri/ or via GitLab, respectively.

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2.4.3 Making data interoperable

The interoperability of digital objects, geophysical data sets and software will be specified in the next DMP update.

2.4.4 Increase data re-use

Digital objects, geophysical data sets and software intended for re-use will be made openly accessible via the repositories at Zenodo and GitLab, together with the respective metadata.

3. Allocation of Resources

The Redmine environment (www.redmine.org) is a free and open source, web-based project management and issue tracking tool. It allows users to manage multiple projects and associated subprojects. It features per project wikis and forums, time tracking, and flexible, role-based access control. It includes a calendar and Gantt charts to aid visual representation of projects and their deadlines. Redmine integrates with various version control systems and includes a repository browser and a document comparison tool (diff viewer).

The implemented Document Management System Features (DMSF) include directory structure, document versioning and revision history, email notifications for directories and/or documents, document locking, configurable document approval workflow, document access auditing and document content full text search.

Project participants use the internal ENVRI-FAIR Redmine environment for communication and sharing of documents. This ensures that communication and related documents are stored in the Redmine archive and can be accessed throughout the lifetime of the project. Redmine includes version control of documents and keeps the previous versions so that continuing version control is in place. Notably, the control of each individual section is limited to only those project participants which need the access. The access controller is the ENVRI-FAIR data manager (see below).

The ENVRI-FAIR Redmine system is hosted at Forschungszentrum Juelich GmbH and administrated by the ENVRI-FAIR data manager Ulrich Bundke, email u.bundke@fz-juelich.de. The ENVRI-FAIR data manager is responsible for the implementation of the DMP and related data management activities. The Data Management Team is responsible for the review and of the DMP and oversees the DMP revision.

Hardware resources required for the delivery of the DMP are provided in-kind by Forschungszentrum Juelich GmbH. Staff resources are covered by project funding.

The ENVRI-FAIR Redmine system will be kept online minimum one year after the project. This period can be extended on request by the ENVRI community to ensure the continuation of the ENVRI-FAIR work beyond the project lifetime.

4. Data Security

The ENVRI-FAIR Redmine environment is hosted at a local Linux cluster of the Institute of Energy and Climate Research 8 of Forschungszentrum Juelich GmbH which is coordinating the project. The Linux cluster is backed up daily by the IT Services of Forschungszentrum Juelich GmbH.

Retention times of data assets are planned as follows:

- Personal contact data of the project participants will be maintained and kept accessible in the ENVRI-FAIR Redmine environment during the lifetime of the project.

- Personal information contained in surveys is destroyed latest on the project end, preferably immediately after the conclusions of the study are finalized.

- Project internal data assets like internal reports will be maintained and kept accessible in the ENVRI-FAIR Redmine environment past the lifetime of the project; the exact retention time will be specified during the duration of the project.

- Openly accessible data assets will be kept accessible via the Zenodo Environmental Research Infrastructures Community ENVRI and/or via the ENVRI community webpage past the lifetime of the project.

5. Ethical Aspects

Based on the self-assessment presented in the ENVRI-FAIR document D12.1 "POPD Requirement No. 1" [1], ENVRI-FAIR involves processing of personal data only on the level of collecting contact information of participants to meetings and workshops, and within a survey of target groups' needs; participants will be provided in writing with details of what personal information will be processed ant with other relevant information on processing of their personal data as required by General Data Protection Regulation (Regulation EU 2016/679).

Forschungszentrum Juelich GmbH ensures the required ENVRI-FAIR related file keeping of

- detailed information on the procedures for data collection, storage, protection, retention, an destruction, and confirmation that they comply with national and EU legislation;

- detailed information on the informed consent procedures in regard to the collection, storage, and protection of personal data;

- templates of the informed consent forms and information sheets.

6. Other

Further details of the procedures for data management used in ENVRI-FAIR are described in

- ENVRI-FAIR D12.1 POPD Requirement No. 1

- Declaration of Conformity with Requirements of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of Natural Persons with Regard to the Processing of Personal Data and the Free Movement of such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation); issued by FZ Juelich data Protection Officer in July 2018 (Appendix to ENVRI-FAIR D12.1)

- ENVRI-FAIR Deliverable D1.3 Initial Data Management Plan

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[1] The self-assessment was prepared according to the Ethics Self-Assessment Guidance: Horizon 2020 Guidance — How to complete your ethics self-assessment: V6.1 – 04.02.2019

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Appendices

List of Acronyms

BEERi   Board of European Environmental Research Infrastructures - is an internal advisory board representing the needs of environmental Research Infrastructures

CA   Consortium Agreement - Legal contract between the ENVRI-FAIR beneficiaries

DL   Deliverable / Deadline

DMP   Data Management Plan

DMT   Data Management Team

DoA   Description of Action

DPO   Data Protection Officer

EB   Executive Board - supervisory body for the execution of the Project

EC   European Commission - is the executive body of the European Union responsible for proposing legislation, implementing decisions, upholding the EU treaties and managing the day-to-day business of the EU

ESFRI   European Strategy Forum on Research Infrastructures

GA   (1) Grant Agreement - Contract between Coordinator and Commission

        (2) General Assembly - GA is the ultimate decision-making body of the consortium

GDPR   General Data Protection Regulation

JSC   Juelich Supercomputing Centre

PM   Person Month

PMT   Project Management Team

POPD   Protection of Personal Data

PWG   Policy Working Group

RI   Research Infrastructure

ToR   Terms of Reference

WP   Work Package