

DATA MANAGEMENT PLAN

MCRIT





Funded by the European Union





DATA MANAGEMENT PLAN

Deliverable Number	WP / T
D7.1	WP7.T7.3
Lead Beneficiary	Deliverable Author (S)
MCRIT	Andreu Ulied, Oriol Biosca
Beneficiaries	Deliverable Co-Author (S)
Organisation	Guillem Ulldemolins (Ersilia Foundation)
Planned Delivery Date	Actual Delivery Date
28 February 2023	04 April 2023

	R	Document, report (excluding periodic and final reports)	
Type of deliverable	DATA	Data sets, microdata, etc.	
	DMP	Data management plan	<u>x</u>

Dissemination level	PU	Public, fully open, e.g. web (Deliverables flagged as public will be automatically published in CORDIS project's page))	X
	SEN	Sensitive, limited under the conditions of the Grant Agreement	









INDEX

1. Da	ta Summary	7
1.1.	Purpose of the data collection	7
1.2.	Description of the data	7
1.3.	Data utility	9
1.4.	Data reuse	С
2. FAI	R DATA1	1
2.1. 2.1 2.1 2.1 2.2 2.2 2.2 2.2	Making data findable, including provisions for metadata1.1.Identifiability of data1.2.RUSTIK naming conventions1.3.Search keywords1.4.Metadata1Making data accessible1.1.Repository for scientific publications1.2.Data and software repository1.3.Metadata1	1 2 2 3 3 4 6
2.3. 2.3 2.3 2.4. 2.4	Making data interoperable 1 A. Interoperability 1 B.1. Project-specific ontologies and vocabularies 1 Increasing data re-use 1 A. Data licensing 1	5 6 7 8
2.4	.2. Data reuse by third parties	8
3. Otł	ner research outputs1	3
4. Allo	ocation of resources	9
4.1.	Costs associated to fair data1	9
4.2. 4.2	Data management accountability	9 1
5. Da	ta security2	1
5.1.	Long term preservation	2
6. Eth	nics2	2
7. Otł	ner issues23	3
8. BIE	BLIOGRAPHY	4









1.	General outputs metadata	. 25
2.	Geographical outputs metadata	. 26
3.	Categories for datasets	. 27
4.	RUSTIK Informed Consent Form	. 28









Action Number: 101061051

Action Acronym: RUSTIK

Action title: Rural Sustainability Transitions through Integration of Knowledge for improved policy processes

Date: 24/02/2023

Data Management Plan version: 1.0

Project Overview:

RUSTIK (Rural Sustainability Transitions through Integration of Knowledge for improved policy processes) is a four-year transdisciplinary research project. The project aims to enable rural communities' actors and policymakers to design better strategies, initiatives and policies fostering sustainability transitions of rural areas.

The project, funded by the Horizon Europe programme, envisages an analysis of current adaption requirements and the support of effective rural policy-making processes for a better understanding of the different rural functionalities and characteristics as well as the potentials and challenges of rural areas. Environment, climate-energy, socio-economic and digital will be the key transition pathways studied in the project.

Living Labs in 14 European Pilot Regions in 10 European countries will be the central element to generate new insights into rural diversity and societal transformations. RUSTIK's Living Labs will work on the identification of new data, methods of data collection, combined with current data sources to set up relevant policy indicators. The project will also focus on data integration and dissemination, to make information and analysis accessible and valuable for actors and policymakers; and to improve rural impact assessment.

The RUSTIK information system would be a web interface that will provide access to relevant data sets, including indicator sets for functional rural areas, rural transitions, and resilience of rural areas to major shocks at European scale (Core European Dataset) as well as at Living Lab local/regional scales.

The final goal is to enhance policy strategies and governance structures.









Executive Summary:

In line with EU guidelines, RUSTIK has produced this Data Management Plan (DMP), a living document to be updated throughout the project. In accordance with guidelines for FAIR Data Management, the project aims to ensure that research data are Findable, Accessible, Interoperable and Reusable. The Data Management Plan describes what data the RUSTIK project will generate, whether and how it will be exploited or made accessible for verification and re-use and how it will be curated and preserved after the end of the project. The data will be systemically managed and stored for the use in the project in general as well as for future research activities.

The RUSTIK Data Management Plan (DMP) aims to provide a strategy for managing data generated and collected during the project and to optimise access to and re-use of research data. RUSTIK will require the collection, processing and storage of a large variety of data sets. Specially, substantial amounts of data will be collected in WP1-4. As the data identification and collection activities are still ongoing, the initial DMP can currently only provide an incomplete picture of the datasets that are needed in the different Living Labs and in the RUSTIK European Core Database.

MCRIT is responsible for preparing the present document and for reviewing and updating it regularly.

While the focus of the first version of the DMP is mainly on data to be collected, the next version will also report on data produced in the context of the project and non-sensitive data that can be made publicly available in open data repositories and registered at relevant catalogues.









1. Data Summary

1.1. Purpose of the data collection

What is the purpose of the data generation or re-use and its relation to the objectives of the project?

The purpose of RUSTIK data collection is to help achieve the main objectives of the project, which is to enable rural communities' actors and policy makers to design better strategies, initiatives and policies fostering sustainability transitions of rural areas, through advancing our understanding of different rural functionalities, characteristics and future scenarios of rural areas, their potentials and challenges.

It has also instrumental purposes: to investigate how data at different scales can be harmonised and to see how data can be used for strategy design and rural proofing.

1.2. Description of the data

What types and formats of data will the project generate or re-use?

What is the expected size of the data that you intend to generate or re-use?

What is the origin/provenance of the data, either generated or re-used?

Part of the data will be collected from the official statistical and cartographic institutes, including Eurostat, national and regional statistical institutes, the European Environment Agency, land registries and geographic institutes. RUSTIK will also retrieve data by new methods of data collection, including the use of big data (e.g. mobile phones, social media, etc.), citizen science and participatory methods (e.g. via Maptionnaire).

Each dataset will be easily identifiable and machine-readable through an efficient nomenclature used throughout all the project (<u>RUSTIK naming conventions</u>). A DOI (Digital Object Identifier) will be given to all public outputs created by RUSTIK (<u>Identifiability of data</u>).

The tables below set out the structure for the datasets, format and origin that will be generated and collected by RUSTIK, grouped by Work Package (WP). Further distinctions will be made in the second version of this document, once the indicators and data needs of for the different Living Labs will be identified.

Nr	Dataset Name	Format	Source	Diss. Level
1.1	Interviews with key actors	PDF file + audio record	Primary	Sensitive

Table 1 Data produced by WP1: Conceptualising functional rural areas, transition and resilience of rural areas









1.2	New/improved typology of EU functional rural areas in relation to transition	PDF file	Primary	Public
	pathways			

Table 2Data produced by WP2: Co-design of data collection approaches, databases, and RUSTIK informationsystem

Nr	Dataset Name	Format	Source	Diss. Level
2.1	Catalogue including guidance and best practices of new sources of data and new methods of data collection	PDF file	Primary	Sensitive
2.2	Standardised structured data base at EU level	WMS, Shapefile, Raster file	TBD	Public
2.3	Comparative analysis of identified data gaps and information needs in 14 LL	PDF file	Primary	Sensitive

Table 3 Data produced by WP3: Implementing Living Labs in 14 Pilot Regions

Nr	Dataset Name	Format	Source	Diss. Level
3.1	Structured data base in 14 pilot regions	Shapefile, Raster file	Primary / TBD	Public (restrictions may apply)

Table 4 Data produced by WP4: Evidence and Indicators in Practical Strategy & Policy Implementation

Nr	Dataset Name	Format	Source	Diss. Level
4.1	Improved methods for rural proofing and policy impact assessment	PDF file	Primary	Public
4.2	New place-based and enabling process model(s) for intervention logic, strategy and transition responses design at local and regional level	PDF file	Primary	Public

 Table 5
 Data produced by WP5: Refined understanding of rural dynamics, impact assessment, and conclusions

Nr	Dataset Name	Format	Source	Diss. Level
----	--------------	--------	--------	-------------









5.1	User-oriented tools based on the overview of operational use of data, indicators and evidence	PDF file	Primary	Sensitive
5.2	Synthesis report and Policy briefing on functional rural areas	PDF file	Primary	Sensitive

Table 6 Data produced by WP6: Dissemination, exploitation and communication

Nr	Dataset Name	Format	Source	Diss. Level
6.1	4 press releases and communication campaigns	PDF file	Primary	Public
6.2	14 general infographics (one per LL)	PDF file	Primary	Public
6.3	14 short videos for Social Media	Video	Primary	Public
6.4	Dissemination and exploitation plan	PDF file	Primary	Sensitive
6.5	Webpage and related content	Varied digital material	Primary	Public

Table 7 Data produced by WP7: Project management, administration and coordination

Nr	Dataset Name	Format	Source	Diss. Level
7.1	Periodical technical progress reports	PDF file	Primary	Sensitive
7.2	Periodical project accounts prepared and submitted to the commission RPI	PDF file	Primary	Sensitive

1.3. Data utility

To whom might your data be useful ('data utility'), outside your project?

The data generated in the project will be beneficial to a variety of stakeholders including: policy makers, public funders, academics, researchers, urban and rural planners (...).

Information produced from data will help to identify, in a user-friendly and intuitive manner, challenges in rural sustainability transitions and serve as an input for policy design at regional, national, and European level.











1.4. Data reuse

Will you re-use any existing data and what will you re-use it for? State the reasons if re-use of any existing data has been considered but discarded.

The reuse of data is key in our project. It will happen at two scales, for populating databases at EU level and for the 14 Living labs. Despite several datasets are expected to be created, the reuse of data such as satellite imagery; climatic, geologic, elevation, transportation or housing datasets; statistical data for demography, labour market, economy or society; and census such as the 2021 census or the agricultural census.









2. FAIR DATA

The RUSTIK Data Management Plan applies the Findable, Accessible, Interoperable, Reusable (FAIR) approach for the project's results. The general data management policy that is presented in the subsequent chapters has been developed in accordance to Horizon 2020 guidelines for FAIR principles¹ and for open access requirements² ³. It applies mainly to new results that are expected to be produced by RUSTIK and that are to be made available by the project consortium as open source, open science and open data. All the consortium has signed before the start of the project an Informed Consent Form regarding data protection, confidentiality, risks and sharing, aligned with the principles of FAIR data (see Annex 4).

2.1. Making data findable, including provisions for

metadata

2.1.1. Identifiability of data

Will data be identified by a persistent identifier?

All datasets will include metadata covering the characteristics and scale of the dataset, its origin, the methodology by which it was obtained, whether it is already used in a publication (and if so which one), and links(s) to other similar datasets within the project repository as well as external databases.

All open data, publications and open source software produced by RUSTIK will be identifiable and locatable by means of a Digital Object Identifier (DOI) in order to make content easily and uniquely citable. Thereby, RUSTIK relies on the services of Zenodo, since DOIs can only be assigned by DOI registrants through a registration agency⁴.

Open RUSTIK results that are deposited in institutional repositories, repositories of scientific publishers or other data and research repositories will be at least indefinable by a persistent URI. If the institution is a DOI registrant that has an agreement with a DOI registration agency, a DOI will be assigned, too. Whether scientific publications will be assigned a unique identifier (DOI, PII, ISSN, etc.) depends on the open access strategy chosen by the editors and thus also on the respective scientific publisher and the chosen research repository.



¹ <u>https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf</u>

² <u>https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf</u>

³ <u>https://ec.europa.eu/research/participants/data/ref/h2020/other/hi/oa-pilot/h2020-hi-erc-oa-guide_en.pdf</u>

⁴ <u>https://www.doi.org/doi_handbook/8_Registration_Agencies.html</u>





2.1.2. RUSTIK naming conventions

Each dataset will be easily identifiable, machine-readable and citable. Names will include information on the covered area, its source, the collection year, category of the data and the name of the dataset itself.

Geographic area_Data source_Year_Statistical Theme_Dataset

Samples:

- → Europe_EUROSTAT_LUCAS_2018_Land use-land cover
- \rightarrow SMBC-LL_IDESCAT_TURDEST_2022_Tourisme

Statistical themes are defined from EUROSTAT Statistical Sub-themes (see: <u>Categories for</u> <u>datasets</u>). The theme will be defined by the data collector once naming the file. If further categorisation needs to be made, it will be included in later reviews of the present DMP.

2.1.3. Search keywords

Will search keywords be provided in the metadata to optimize the possibility for discovery and then potential re-use?

Search keywords will be provided in the metadata to optimize the possibility for discovery and potential re-use.

All open RUSTIK data deposited in a repository will have search keywords as part of their metadata. Keywords for open data will be selected by the individuals publishing the data, being 5 the optimum number. A controlled keyword list is expected to be developed after the assessment of the data needs (and will be included in the next version of the Data Management Plan).

2.1.4. Metadata

Will rich metadata be provided to allow discovery? What metadata will be created? What disciplinary or general standards will be followed? In case metadata standards do not exist in your discipline, please outline what type of metadata will be created and how. Will metadata be offered in such a way that it can be harvested and indexed?

Rich metadata will be provided to make data findable. RUSTIK outputs will provide as much accurate metadata as possible, as rich metadata significantly improves the data's findability and re-usability. There are many different meta-data standards for many different types of data and it may not be possible to find one that fits all purposes. Therefore, a pragmatic and feasible approach is to agree on a common and minimal catalogue metadata schema for all the datasets that are published in public catalogues and data repositories.

Metadata descriptions will follow EUROSTAT Metadata criteria (see https://ec.europa.eu/eurostat/web/main/data/metadata):









METADATA

ESS Reference Metadata Reporting Standards	A set of international standards for exchange of statistical information between organisations
Classifications	International statistical classifications and nomenclatures
Code lists	Code lists are predefined, organised sets of items that describe one or more statistical concepts
Legislation and methodology	EU legal acts and methodological manuals relating to statistics
Concepts and Definitions	CODED (Eurostat's Concepts and Definitions Database) and other online glossaries relating to survey statistics
National metadata	Links to national methodology webpages: concepts, classifications, survey methodologies, etc.

For Geospatial datasets, a schema shaped after the INSPIRE Metadata Implementing Rules5, based on EN ISOs 19115 and 19119 will be used. For any other dataset, a schema based on the DataCite Metadata Schema Documentation v4.46 will be used. The schemas can be found in the Annex.

For data that is collected or produced by the project but not made available in a public catalogue or data repository (e.g. for licensing or privacy reasons), only metadata according to the internal dataset metadata schema of the RUSTIK data survey will be used.

2.2. Making data accessible

RUSTIK open results will be made accessible according to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020⁵. All open results (data, software, scientific publications) of the project will be openly accessible at Zenodo (Open Access repository). Specifically, research data needed to validate the results in the scientific publications will be deposited in a data repository at the same time as a publication. Non-public research data will be archived at the repository using a restricted access option.

2.2.1. Repository for scientific publications

Providing open access to peer-reviewed scientific publications can be ensured either by publishing in green or gold open access journals with or without author processing fees. Any scientific publications from RUSTIK and the related bibliographic metadata must be made available as open access and announced on the project website. To automate the process of reporting scientific publications and related research data in OpenAIRE, the publication should be deposited in an OpenAIRE-compliant repository, either by the authors of the publication or by





⁵ <u>https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf</u>





a scientific publisher. While additional forms of disseminating open access papers, including academic social network sites such as ResearchGate are possible, an electronic copy of the publication has to be deposited in suitable open access repository in the first place.

According to the European Research Council's Guidelines on Open Access, "Venues such as Research Gate or Academia.edu that require users to register in order to access content do not count as repositories. The posting of publications on a personal, institutional or project specific webpage or the deposit in a publically accessible Dropbox account is not sufficient to satisfy the requirements either."

If the chosen repository is not fully OpenAIRE complaint, the publications or data must be linked at https://www.openaire.eu/participate/claim with the respective funding agency (European Commission). The journal's visibility and prestige (translated in the Impact Factor) of the journal, together with the speed of publication, should be considered when choosing a journal for publication of a manuscript. According to the EC recommendation, authors of the publication are encouraged to retain their copyright and grant adequate licences to publishers.

2.2.2. Data and software repository *Will the data be deposited in a trusted repository?*

To ensure that data management procedures are unified across the project, a common default Open Access repository for open data and open source software generated within the project has been chosen. In the end, it is up to the owner of the data or software to decide whether he wants to use an institutional repository or the RUSTIK default repository. However, repositories other than the default one should be OpenAIRE-compliant and issue a DOI (see 2.2.1). The default repository of the RUSTIK project for depositing publications, open data and open source software is Zenodo7. It is an EC-co-funded, multidisciplinary repository, for publications and data.

Does the repository ensure that the data is assigned an identifier? Will the repository resolve the identifier to a digital object?

A DOI is automatically assigned to all Zenodo files, which can be uploaded in any file format. Zenodo allows researchers to deposit both publications and research data, while providing means to link them. Data is stored in the CERN cloud infrastructure. Zenodo is compliant with the open data requirements of the EU Research and Innovation funding programme and OpenAIRE. Furthermore, a RUSTIK project page (community) is expected to be set up.

Have you explored appropriate arrangements with the identified repository where your data will be deposited?

There is no need for such an arrangement. Zenodo is OpenAIRE's recommended "catch-all" repository for projects like RUSTIK without ready access to an organized data centre.

Will all data be made openly available? If certain datasets cannot be shared (or need to be shared under restricted access conditions), explain why, clearly separating legal and contractual reasons from intentional restrictions. Note that in multi-beneficiary projects it is also possible for specific beneficiaries to keep their data closed if opening their data goes









against their legitimate interests or other constraints as per the Grant Agreement. Will the data be accessible through a free and standardized access protocol?

The different types of data that are generated during the project are open by default with the following general exceptions:

- → Copyright and permissions for reusing third-party data sets: Processing and combining input data from many different sources may lead to unclear IPR situations regarding the generated output data, therefore such repurposed data (e.g. model output data) can only be made open if any of the underlying data (e.g. model input data) is open, too.
- → Personal data treatment and confidentiality issues: Datasets referring to the quality and quantity of certain elements at risk, such as people and critical infrastructures, are not open by default as their publication may pose privacy, ethical or security risks.
- → **Data-driven business model**: Data that is exploited commercially will not be made open.
- → User-generated content: Data related to individual adaptation scenarios (e.g. adaptation options, performance indicators, criteria, etc.) that is generated by (external) end users will only be made open with explicit permission from the end user.

If there are restrictions on data needed to validate the results presented in scientific publications, access to individuals with legitimate interest will be granted on request

Currently, the Data Manager has no record of a beneficiary having the intention to opt-out from the present DMP provisions. If the situation changes, the DMP will be updated accordingly. On June 2023 a survey on data needs will be carried out by the Data Manager (MCRIT), and in addition to these needs, concerns on confidentiality and permissions will be taken into account.

If an embargo is applied to give time to publish or seek protection of the intellectual property (e.g. patents), specify why and how long this will apply, bearing in mind that research data should be made available as soon as possible.

Research data needed to validate the results of the scientific publications will be made available as open access at the same time as the publication. If an embargo period is imposed by the publisher, the publication and the related data are not made openly accessible until the embargo period has expired. In Horizon 2020, the embargo period must be shorter than 6 months. Information (metadata) about the publication and the related data will be made available at the same time as the publication, regardless of whether an embargo period has been imposed. Details of when the publication and the data will become available will be in included in the metadata.

If there are restrictions on use, how will access be provided to the data, both during and after the end of the project?

When a restriction on open access to research data is necessary, attempts will be made to make data available under controlled conditions to other individual researchers. In the case where restricted or embargoed data is stored in the Zenodo repository, information about the restricted data will be published in the repository, and details of when the data will become available will be included in the metadata.









Metadata for both open, closed, embargoed and restricted records are always publicly available in Zenodo. Data files and data sets for restricted access records are only visible to their owners and to those the owner grants access.

Restricted access allows researchers to upload a dataset and provide the conditions under which they grant access to the data. Researchers requesting access must provide a justification proving they fulfil these conditions. The owner of the dataset gets notified for each new request and can decide to either accept or reject the request. If the request is accepted, the requester receives a secret link which usually expires within 1-12 months.

How will the identity of the person accessing the data be ascertained?

The identity of the person that intends to gain access to restricted data stored in RUSTIK's default repository will be ascertained. Further information will be included in next versions of the DMP.

Is there a need for a data access committee (e.g. to evaluate/approve access requests to personal/sensitive data)?

In case there are any issues regarding the restricted access to research results, RUSTIK's quality assurance and ethics board can act as data access committee and seek clarification.

2.2.3. Metadata

Will metadata be made openly available and licenced under a public domain dedication CCO, as per the Grant Agreement? If not, please clarify why. Will metadata contain information to enable the user to access the data?

How long will the data remain available and findable? Will metadata be guaranteed to remain available after data is no longer available?

Will documentation or reference about any software be needed to access or read the data be included? Will it be possible to include the relevant software (e.g. in open source code)?

Metadata will be made openly available. Documentation of (open source) software needed to access the data and developed by RUSTIK will be made available on the RUSTIK website and the respective source code and release repositories.

Open source software developed by RUSTIK and hosted in the public RUSTIK GithHub source code management system will be made available together with the respective open data in a repository. Moreover, since the source code of the software is stored on GitHub, releases can automatically be published in a supported repository.

2.3. Making data interoperable

2.3.1. Interoperability

What data and metadata vocabularies, standards, formats or methodologies will you follow to make your data interoperable to allow data exchange and re-use within and across disciplines?









Producing interoperable data is allowing data exchange and re-use between researchers, institutions, organisations, countries, etc. (i.e. adhering to standards for formats, as much as possible compliant with available (open) software applications, and in particular facilitating recombinations with different datasets from different origins.

It must be noted that the data collection is still in progress. However, it is expected that datatsets will be distributed in the NetCDF . It consists of self-describing, machine-independent data formats that facilitate the exchange and reuse of scientific data. Many (open source) software applications do exist that are able to read and generate NetCDF datasets.

1.1.1.1. Metadata interoperability

The following standard vocabularies will be used in the default metadata schema for all types of open data:

- → License: Open Definition (<u>http://opendefinition.org/</u>)
- → Funders: FundRef (<u>https://www.crossref.org/services/funder-registry/</u>)
- → Grants: OpenAIRE (<u>http://api.OpenAIRE.eu/</u>)

Vocabularies for keywords and other metadata properties have yet to be selected. Additional vocabularies used will be reported in future versions of the data management plan.

1.1.1.2. Web interoperability

Web interoperability is a crucial factor for the functionality and usability of any tool. Proper design, development, testing and maintenance are required in order to provide a compatible website or portal independent of platforms, browsers, operating systems and devices. International interoperability standards for web design, established by the World Wide Web Consortium (W3C), will be followed by RUSTIK in order to deliver compliant tools and services. We will use state-of-the-art development and maintenance procedures to ensure full compatibility for all users. We will additionally follow the guidelines set out in 'A Conformance to Web Content Accessibility Guidelines 2.0' 4. Our experienced software engineering team will stress test the produced pages to ensure compatibility with all Internet Browsers/devices.

2.3.2. Project-specific ontologies and vocabularies

In case it is unavoidable that you use uncommon or generate project specific ontologies or vocabularies, will you provide mappings to more commonly used ontologies? Will you openly publish the generated ontologies or vocabularies to allow reusing, refining or extending them?

RUSTIK will contribute to a refined understanding of rural diversity and dynamic across Europe by policymakers and rural actors, by conceptualising functional rural areas, rural transitions and resilience and by developing new methods of data collection and analysis, and new information systems suitable to capture the concepts. The RUSTIK project will result in a catalogue with detailed explanations, guidance and best practices of new data sources and data collection methods, that are expected to fill existing gaps of information on the rural diversity in Europe. Further information will be included in next versions of the DMP as the project evolves.







2.4. Increasing data re-use

2.4.1. Data licensing

Will your data be made freely available in the public domain to permit the widest re-use possible? Will your data be licensed using standard reuse licenses, in line with the obligations set out in the Grant Agreement?

Owners of open results arising from the RUSTIK project are encouraged to release their work under a Creative Commons license, preferably Creative Commons Attribution CC-BY-4.0⁶.

Authors of scientific publications arising from the RUSTIK project are encouraged to seek an agreement with the scientific publisher of the publication that allows the authors to retain the ownership of the copyright for their work and deposit the publication in an Open Access repository.

How will you provide documentation needed to validate data analysis and facilitate data re-use (e.g. readme files with information on methodology, codebooks, data cleaning, analyses, variable definitions, units of measurement, etc.)?

Readme flies will be included in the case of software development. In the case that other clarifications are needed, they will be reviewed in future versions of this DMP.

2.4.2. Data reuse by third parties

Will the data produced in the project be useable by third parties, in particular after the end of the project? Will the provenance of the data be thoroughly documented using the appropriate standards? Describe all relevant data quality assurance processes.

Open results produced by the project and deposited in a respective repository are usable by third parties after the end of the project. If confidentiality, security, personal data protection obligations or IPR issues related to specific research data that is needed to validate a scientific publication forbid open access, the data will be deposited in a restricted repository and access may be granted only upon request and under the conditions of a restricted license.

Further to the FAIR principles, DMPs should also address research outputs other than data, and should carefully consider aspects related to the allocation of resources, data security and ethical aspects.

Public documentation produced by the project will be posted both in the Zonodo repository and, when considered relevant, in the project website (<u>rustik-he.eu</u>).

3. Other research outputs

In addition to the management of data, beneficiaries should also consider and plan for the management of other research outputs that may be generated or re-used throughout their





⁶ <u>http://opendefinition.org/licenses/cc-by/</u>





projects. Such outputs can be either digital (e.g. software, workflows, protocols, models, etc.) or physical (e.g. new materials, antibodies, reagents, samples, etc.).

Beneficiaries should consider which of the questions pertaining to FAIR data above, can apply to the management of other research outputs, and should strive to provide sufficient detail on how their research outputs will be managed and shared, or made available for re-use, in line with the FAIR principles.

No outputs of this kind are expected to be produced as part of the RUSTIK project. Additional details will be reported, if needed, in future versions of the DMP.

4. Allocation of resources

4.1. Costs associated to fair data

What will the costs be for making data or other research outputs FAIR in your project (e.g. direct and indirect costs related to storage, archiving, re-use, security, etc.) ?

There are no immediate costs anticipated to make the open results generated in RUSTIK. Especially no costs are foreseen for storing open results in the project's default repository (Zenodo). Additional details will be reported, as needed, in future versions of the DMP.

How will these be covered? Note that costs related to research data/output management are eligible as part of the Horizon Europe grant (if compliant with the Grant Agreement conditions)

As part of the Living Lab activities in WP3, each of the Practice Region Partner (PRP) (except for Galicia: LLC) has a budget of 30,000€ to subcontract service providers for data collection. Any unforeseen costs related to open access to research data in Horizon Europe are eligible for reimbursement during the duration of the project under the conditions defined in the Grant Agreement.

4.2. Data management accountability

Who will be responsible for data management in your project?

Data management activities concern the whole project and needs to be coordinated and monitored both at project and work package level. Data management is also linked to publication of project results and thus dissemination activities. Therefore, the following roles and responsibilities can be identified:

Project Data Manager (MCRIT)

Developing the data management plan and policy in cooperation with the project management in WP7 and the technical partners.







Coordinating the technical realisation (data survey, data repositories, metadata catalogues ...).

Monitoring data management activities (both collection and publication) and deadlines and sending reminders to WP data managers.

Providing support to WP data managers, a role assigned to the WP Leaders.

Providing solutions for specific issues in accordance with project management.

Work package Data Managers (WP Leaders)

Implementing the data management policy in their respective WPs.

Monitoring data management activities and deadlines and sending reminders to partners.

Offering customized help and further guidance for filling out the WP data surveys.

Asking partners for missing information or clarifications.

Providing input to the data management plan by analysing and summarising the WP-specific data surveys.

Offering customized help and further guidance for publishing open data and open source software.

Monitoring that open results (data and software) are deposited in the default repository or a complementary OpenAIRE-compliant repository and sending reminders to partners.

Contacting the quality assurance and ethics committee in case of questions and ethical and privacy issues that may forbid a publication of the data.

Dissemination Manager (FEUGA)

Offering assistance in choosing the right publication path.

Offering customized help and further guidance for publishing scientific publications

Ensuring that the open access policy of the journal complies with the H2020 open data requirements before the researcher submits a manuscript.

Monitoring that green access (self-archiving) publications are deposited in repositories and sending reminders to partners.

Monitoring that metadata about publications is made available in the R&I Participant Portal









(preferably automatically through OpenAIRE) and on the RUSTIK website

Monitoring that research data related to a publication is made available in repositories and linked to respective publication

Quality Assurance and Ethics Manager (IfLS)

Performing a quality assurance and ethics assessment of open data before their publication.

Keeping contact with data managers and decide together with the project management on critical Issues.

Data Provider / Scientist (Partners uploading data)

Informing the data & dissemination managers when new open data / papers ready for publication are available.

Describing the data (by means of appropriate metadata) or scientific publication in accordance to the RUSTIK data management and with help of the tools provided by the project.

Depositing (publishing into a repository) the data or scientific publication in accordance to the RUSTIK data management policy and with help of the tools provided by the project.

4.2.1. Long term preservation

How will long term preservation be ensured? Discuss the necessary resources to accomplish this (costs and potential value, who decides and how, what data will be kept and for how long)?

No immediate costs are anticipated for open data that is stored for long-term preservation. Additional details will be reported, as needed, in future versions of the DMP.

5. Data security

The data will be protected and managed to the General Data Protection Regulation of the EU. (The task will furthermore include management of knowledge and IPR issues according to the rules and agreements stated in the Consortium Agreement). Critical risks will be assessed by IfLS and their handling and mitigation will be agreed and regularly updated in a risk register.

What provisions are or will be in place for data security (including data recovery as well as secure storage/archiving and transfer of sensitive data)?







RUSTIK will follow and respect the European regulation on data protection throughout the contract and adhere to the Guidelines concerning web services. Hence, careful consideration will be given to Data Protection Regulation (EC) No 45/20011, on the protection of individuals with regard to the processing of personal data, applicable until 25 May 2018, General Data Protection Regulation (EU) 2016/6792, on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, applicable after 25 May 2018 and Guidelines of the European Data Protection Supervisor (EDPS) on Web Services⁷.

In the case of data published in Zenodo, it is stored in CERN's EOS service⁸ in an 18 petabytes disk cluster. Each file copy has two replicas located on different disk servers. For each file, two independent MD5 checksums are stored. The servers are managed according to the CERN Security Baseline for Servers⁹.

Security is a critical requirement since a site/portal installation must be secured from all types of attacks (intrusion, denial of service, interception of content etc.) threatening the system availability and the data integrity. For this reason, security will be ensured in three different layers, i.e. the user session (securing data exchanged between the server and the users), the application (restricting the user access depending on the corresponding user rights) and the data (securing access to the content repositories).

These provisions will apply for data retrieved at European level but also for data retrieved and generated in the Living Labs.

5.1. Long term preservation

Will the data be safely stored in trusted repositories for long term preservation and curation?

Open results deposited in the Zenodo repository are safely stored for long time preservation.

6. Ethics

Are there, or could there be, any ethics or legal issues that can have an impact on data sharing? These can also be discussed in the context of the ethics review. If relevant, include references to ethics deliverables and ethics chapter in the Description of the Action (DoA).

No ethical or legal issues where identified in an ethical clearance that took place during the Grant Agreement preparation. Additional details will be reported, if needed, in future versions of the DMP.

Will informed consent for data sharing and long term preservation be included in questionnaires dealing with personal data?





⁷ <u>https://edps.europa.eu/sites/default/files/publication/16-11-07_guidelines_web_services_en.pdf</u>

^{8 &}lt;u>http://eos.web.cern.ch/content/about-eos</u>

⁹ <u>http://about.zenodo.org/infrastructure/</u>



RUSTIK project partners will be informed about when and where approvals are needed and how to deal with personal data. Further on, it is communicated where informed consent is needed and how to get them, e.g. addressing informed consent procedure for communication with stakeholders.

7. Other issues

Do you, or will you, make use of other national/funder/sectorial/departmental procedures for data management? If yes, which ones (please list and briefly describe them)?

Currently, the project does not make use of procedures for data management other than those described in this data management policy.

Note: public/governmental institutions and other RUSTIK partners may have their own obligations / policies for data management, but in the project (for data collected and produced by the project) we currently only follow the EC procedure.









8. BIBLIOGRAPHY

- → European Comission (2021). Data Management Plan Template. <u>https://enspire.science/wp-content/uploads/2021/09/Horizon-Europe-Data-Management-Plan-Template.pdf</u>
- → European Research Council Executive Agency (2016). H2020 Programme Guidelines on → FAIR Data Management in Horizon 2020.
- https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilo t/h2020-hi-oa-data-mgt_en.pdf
- → European Research Council Executive Agency (2017). Guidelines on Implementation of Open Access to Scientific Publications and Research Data in projects supported by the European Research Council under Horizon 2020 <u>https://ec.europa.eu/research/participants/data/ref/h2020/other/hi/oa-pilot/h2020hi-erc-oa-guide_en.pdf</u>
- → DOI Foundation. What are registration agencies? <u>https://www.doi.org/the-community/what-are-registration-agencies/</u>
- → Eurostat. EU and National metadata. <u>https://ec.europa.eu/eurostat/web/international-trade-in-goods/methodology/eu-and-national-metadata</u>
- → European Commission; Directorate-General for Research & Innovation (2017). H2020 Programme Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020. <u>https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilo</u> <u>t/h2020-hi-oa-pilot-guide_en.pdf</u>
- → Crossref. Funder Registry. <u>https://www.crossref.org/services/funder-registry/</u>
- → OpenAIRE Graph. The OpenAIRE. <u>http://api.OpenAIRE.eu/</u>
- → Open Knowledge Foundation. Creative Commons Attribution License (cc-by) <u>https://opendefinition.org/licenses/cc-by/</u>
- → RUSTIK: Rural Sustainability Transitions through Integration of Knowledge for improved policy processes (2023). <u>https://rustik-he.eu</u>
- → EDPS, European Data Protection Supervisor (2016). Guidelines on the protection of personal data processed through web services provided by EU institutions. <u>https://edps.europa.eu/sites/default/files/publication/16-11-07 guidelines web services en.pdf</u>
- → CERN (2021). EOS Open Storage. <u>https://eos-web.web.cern.ch/eos-web/</u>
- → CERN Data Centre & Invenio. About Zenodo. <u>http://about.zenodo.org/infrastructure/</u>









1. General outputs metadata

Mandatory fields that the metadata of the RUSTIK outputs have to contain. Additional fields can be included, from DataCite's metadata schema.

GENERAL OUTPUTS METADATA			
Tittle	Title of the deposition.		
Description	Abstract or description for deposition.		
Files	Deposition files identifiers, filenames, size of the files in bytes and MD5 checksum of files		
Upload type	Type of the deposition from a controlled vocabulary (publication, dataset, software).		
Publication date	Date of publication in IS08601 format (YYYY-MM-DD).		
Creators	The creators/authors of the deposition.		
License	Open license from controlled vocabulary "Open Definition Licenses Service"		
DOI	Digital Object Identifier assigned by the DOI registrant (e.g. Zenodo), also used for versioning.		
Keywords	Free form keywords for this deposition.		
Related identifiers	Persistent identifiers of related publications, datasets and software		
Communities	List of communities the deposition to appears in (https://zenodo.org/communities/clarity/)		
Grants	List of European Commission FP7 grants which have funded the research for this deposition (730355). Needed to establish the relationship to RUSTIK.		









2. Geographical outputs metadata

Mandatory fields that the metadata of the RUSTIK outputs have to contain. Additional fields can be included, from INSPIRE's metadata schema.

GEOGRAPHICAL OUTPUTS METADATA			
Tittle			
Description			
Туре			
Locator			
Unique Identifier			
Language			
Topic category			
Keywords			
Originated Controlled Vocabulary			
Geographic location: Bounding Box			
Reference System (EPSG)			
Temporal extent			
Date of publication			
Spatial Resoultion			
Condition applying to access and use			
Responsible party (role)			
Contact			







3. Categories for datasets

Source of the categories: EUROSTAT Statics Explained.

Table 8 Thematic categorisation of the datasets

Transport	Trade	Environment and energy
Transport	Goods	Energy
	Services	Environment
Science, technology and digital society	Agriculture, forestry and fisheries	General and regional statistics/EU policies
Digital economy and society	Agriculture	Non-EU countries
Science and technology	Fisheries	Regions and cities
	Forestry	Sustainable development goals
		Policy indicators
Economy and finance	Industry and services	Population and social conditions
Balance of payments	Short-term business statistics	Migration and asylum
Comparative price levels	Structural business statistics	Crime
Consumer prices	Business registers	Culture
Exchange rates and interest rates	Globalisation in businesses	Education and training
Government finance	Production statistics	Health
National accounts (incl. GDP)	Tourism	Labour market
		Living conditions
		Population and demography
		Social protection
		Sport
		Youth









4. RUSTIK Informed Consent Form

Informed Consent Form for participating in the project titled: Rural Sustainability Transitions through Integration of Knowledge for improved policy processes (RUSTIK)

Project partner: [name]

Name of sponsor: European Commission, Horizon Europe (Destination: Resilient, inclusive, healthy and green rural, coastal and urban communities).

This Informed Consent Form has two parts:

- Part I: Information Sheet (to share information about RUSTIK)
- Part II: Certificate of Consent (for signatures if you choose to participate)

You will be given a copy of the full Informed Consent Form.

Part I: Information Sheet

Introduction:

We approach you in name of the European RUSTIK project. This research and innovation action is funded by the European Commission's Horizon Europe programme. The project does not reflect the opinions of the European Commission. The overall objective of RUSTIK is to develop and apply a participatory, multi-actor process to (a) advance understanding of different characteristics and future scenarios of rural areas, and their potentials and challenges, that will then be used to (b) enable rural communities' actors and policy makers to design better strategies, initiatives and policies fostering sustainable transitions. The project is international and takes place over a four-year period across 12 European countries (Austria, Bulgaria, Germany, Spain, Finland, France, Italy, Poland, Sweden, Slovenia, Serbia, and the UK). We invite you to read this consent form as we would appreciate to discuss and share your specific experiences with and thoughts on the key topics of our project, about which you may talk to anybody you feel comfortable with. Please take some time to reflect on whether you would like to participate or not. If there's anything you don't understand in this Information Sheet, feel free to ask any questions at any time.

Participant selection

You are invited to contribute to RUSTIK due to your experiences as a representative of the [stakeholder description] and take part in [project activity description]. This experience may help us to understand [aspects].

Voluntary participation

Your participation in this research is entirely voluntary. You can choose to participate or not.

Procedures

The information collected is confidential. In the case of recorded information, the [audio/video] data will be kept safe in a locked filing cabinet. All audio recordings of interviews and any other









tangible data (i.e. notes during the interview) will be destroyed within five years after the closure of the project.

Risks

The RUSTIK project activities might potentially include sensitive and personal issues (i.e. political opinions, cultural values). This kind of personal data shall be processed fairly and lawfully and shall be obtained only for [add a specified and lawful purpose], and shall not be further processed in any manner 2 incompatible with that/those purpose/s. Moreover, you do not have to answer any question if this makes you feel uncomfortable.

Benefits and reimbursement

You may benefit from the results of our RUSTIK project in the sense that its outcomes will provide more detailed insights into sustainable rural transitions, and as such aims to contribute to capacity building among rural actors, including policy-makers, academics and representatives of businesses and civil society for fostering such sustainable transitions. There will be no reimbursement for your contribution.

Confidentiality

All collected data material will be stored in a way that will guarantee anonymity. Nobody will be named at the analysis of data, although direct quotes from the interviews might be used in reporting activities and publications. Also other forms of communication of project findings may set certain limits to confidentiality. However, this research does not deal with any sensitive subjects, so the likelihood of such experiences is very small.

Data storage

All partners will store data for five years, counting from the end of the project, to make these data available to other research and practice partners at specific request.

Unexpected/incidental findings

In the event of unexpected or incidental findings, these will be jointly reflected by participants and researchers. For example, such reflection will be an integral part of joint evaluation phases foreseen in the RUSTIK Living Labs.

Sharing the results

The project findings are expected to be published in multiple ways, including events/conferences/fairs, (non-) scientific publications, dissemination workshops, a RUSTIK practice guide, and a RUSTIK final conference.

Who to contact

If you have any questions, please contact the RUSTIK partners in your national, regional or local setting [partner address + e-mail of team leaders]. If these are not responding adequately, feel free to contact the overall European project coordination:

Project leader: Simone Sterly Institute for Rural Development Research at Goethe University Frankfurt (IfLS) Kurfürstenstraße 49, 60486 Frankfurt am Main, Germany sterly@ifls.de









This proposal has been reviewed and approved by the [name of partner/responsible institution], whose task it is to make sure that research participants are protected from any harm.

Part II: Certificate of Consent

I, the undersigned, confirm that (please tick box as appropriate):

1.	I have read and understood the information about the RUSTIK project, as provided in the Information Sheet (Part I)	
2.	I have been given the opportunity to ask questions about the project and my participation.	
3.	I voluntarily agree to participate in the project.	
4.	I understand I can withdraw at any time without giving reasons and that I will not be penalised for withdrawing nor will I be questioned on why I have withdrawn.	
5.	The procedures regarding confidentiality have been clearly explained (e.g. use of names, anonymisation of data, etc.) to me.	
6.	The use of the data in sharing, archiving, dissemination and publications has been explained to me.	
7.	I, along with the RUSTIK project partner, agree to sign and date this informed consent form.	

Participant:

Name	Signature	Date
Researcher:		
Name	Signature	Date



