from Nexus Thinking to Nexus Doing

REXUS

MANAGING RESILIENT NEXUS SYSTEMS THROUGH PARTICIPATORY SYSTEMS DYNAMICS MODELLING

Deliverable 1.4 – Data Management Plan. First Version.

WP1 – PROJECT MANAGEMENT

www.rexusproject.eu

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101003632.

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Document Information

Grant agreement	101003632	**Acronym**	REXUS
Full Title of the Project	Managing REsilient neXUS systems through participatory systems dynamics modelling		
Horizon 2020 call	H2020-LC-CLA-2018-2019-2020 / H2020-LC-CLA-2020-2		
Start Date	1 May 2021	**Duration**	36 months
Project website	www.therexusproject.eu		
Document URL	Insert URL if it is public		
REA Project Officer	Giulio Pattanaro		
Project Coordinator	José González Piqueras		
Deliverable	D1.4.-Data Management Plan		
Work Package	WP1.-Project management		
Date of delivery	31 October	**Actual**	
Nature	ORDP	**Dissemination Level**	Public
Lead Beneficiary	UCLM		
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Internal Reviewer	Christina Papadaskalopoulou, DRAXIS		
Distribution to	All partners		
keywords	Project Coordination, Deliverables, Management, due date, data, FAIR		

History of changes

Version	Date	Reason	Revised by
0.1	24th September 2021	First draft	J. González and MJ. Rodríguez (UCLM)
0.2	8th October 2021	Second draft	A. Kandarakis (GWP_MED), B. Cerradas (ICATALIS), D. Fenner (UCAM),
0.3	13rd October 2021	Third draft	E. Henao (Agrisat) A. Baquero (WCMC), C. Papadaskalopoulou (DRAXIS), E. Ntzioni (DRAXIS)
0.4	29th October 2021	Final version	E. Ntzioni (DRAXIS), J. González (UCLM)

Executive summary

This report details the data that will be generated along the project, the handling of the research, how they are going to be processed or generated, the methodology, the standards applied, whether the data will be shared under open access and how data will be curated and preserved. The Data Management Plan (DMP) has been prepared in accordance with the "Guidelines on FAIR Data Management in Horizon 2020" and this procedure will be monitored during the project's operation.

The document has a first introductory section explaining the general group of data that have been identified at this stage of the project, distinguishing between maps, databases, and stakeholder's data. On section 2 there is a template distinguishing for different Work Packages, structured on tables attending the following issues:

1. Data Summary
2. FAIR data
3. Allocation of resources
4. Data security
5. Ethical aspects
6. Other issues

This report is a first version of the DMP that must be delivered within the first six months of the project (D1.4). The document includes all the information about REXUS data at the time in which the document has been issued. Since the DMP is expected to mature during the project, more developed versions of the plan will be included as additional deliverables at later stages. Specifically, a final version will be published in M36.

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1 METHODOLOGY

The Data Management Plan (DMP) is a key element of good data management. A DMP describes the data management life cycle for the data to be collected, processed and/or generated by a Horizon 2020 project. The research must provide data **findable, accessible, interoperable and re-usable** (FAIR). The DMP has been based on the updated version of the "Guidelines on FAIR Data Management in "Horizon 2020" version 3.0 released on 26th of July 2016 by the European Commission Directorate General for Research & Innovation [1]

The current deliverable has the scope to ensure proper and sound management of the research data that will be collected, processed, and generated within REXUS. DMP includes information on: i) the handling of research data during and after the end of the project ii) what data will be collected, processed and/or generated iii) which methodology and standards will be applied iv) whether data will be shared/made open access and v) how data will be curated and preserved during and after the end of the project.

The Deliverable 1.4 (1) represents the first version of the Data Management Plan (DMP) of the REXUS project. REXUS is a Research & Innovation Action project funded by the H2020 program of the EC under Grant Agreement 101003632 with a project duration of 36 months. DMP evolves during the whole lifespan of the project, serving as a working document. This one is the first of the two versions to be produced throughout REXUS project duration. In this respect, the 2nd version (D1.5) will be submitted on month 36 (Apr 2024).

1.1 DMP Template

The REXUS DMP addresses the following issues:

1. Data Summary
2. FAIR data
3. Allocation of resources
4. Data security
5. Ethical aspects
6. Other issue

To assist the beneficiaries with the completion of the DMP, the EC produced and provided a template that acts as a basis for data description. The template contains a set of questions that beneficiaries should answer with a level of detail appropriate to the project. If no related information is available for a given dataset, then the phrase "Non-applicable" or N/A will be used.

UCLM has provided all work package (WP) leaders with the template that includes all the above-mentioned issues along with instructions to fill the template.

1.2 Data Management Plan (DMP)

The purpose of the Data Management Plan is to provide the consortium to identify the related datasets that will be collected, generated, and processed during the project lifetime. Particularly on the following,

1. The key data collected to conform the Observatory (WP3) such as field data, satellite, climatic, land use, water footprint, energy use and carbon footprint and economic indicators as well.

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

2. Data gathered through the interview-based survey of the project aimed at revealing the needs and requirements of REXUS users and stakeholders (WP2).
3. Data produced in the model simulations, solutions proposed and collected for the evaluation and business process.

1.3 Data Managed through DMP

During the first stage of the project implementation (M6) a general identification of three types of data has been done:

1. Data from Copernicus system and other sources (T3.1), processed to provide land use maps (T3.4), Water footprint (T3.2), and climatic data (T3.5).
2. Databases from published reports (T3.6), energy and carbon footprint (T3.3) and in situ data collected and managed in the activities on WP2 and WP4.
3. Stakeholder's data collected and managed on solutions (WP4, WP5), on the adoption by stakeholders (WP6) and communication and business (WP7).

The DMP template applies to the following issues:

- The data must be findable, including provisions for metadata.
- To be openly accessible.
- Making data interoperable.
- Increase data re-use.

The DMP addresses the existing open standards that are currently available and can be applied in the framework of REXUS, such as the EU Directive 2007/2/EC on Infrastructure for Spatial Information in the European Community (INSPIRE) which addresses spatial data themes required for environmental applications[2].

Other metadata standards have been identified to work with Open Data, that will be applied like the recommendations of the Digital Curation Center (DCC)[3], the Open Data Foundation[4], and Open Knowledge Foundation[5].

For datasets that may not have standards, the consortium will provide metadata to help secondary users understand and reuse them.

Considering that one of the REXUS objective is the commercial use of solutions and procedures, the DMP addresses the open data licenses for any interested party following the "embargo period" indicated in the GA, in the Innovation Strategy (D1.2), in the Knowledge Management (D1.3) or in any other legal procedure. After this "embargo period" open access and data sharing for verification and re-use will be possible through a suitable repository.

[2] http://inspire.jrc.ec.europa.eu/
[3] https://www.dcc.ac.uk/about
[4] http://www.opendatafoundation.org/
[5] https://okfn.org/

2 DMP COMPONENTS IN REXUS

The template applied for the DMP in REXUS follows the "Guidelines on FAIR Data Management in Horizon 2020" and they have been developed in this section. The present document is structured on WPs, but the final version will also information on each pilot area. The DMP distinguishes on Tasks where enough information is available at this point of the project (WP3).

2.1 DMP Components in WP1. Project Management

DMP Component	Issues to be addressed
1. Data summary	**Databases for project coordination** To this point, no data collection is foreseen to take place in the context of WP1 for project coordination.
2. FAIR Data **2.1 Making data findable, including provisions for metadata**	The inclusion of metadata for the current data has not been yet decided.
2.2 Making data openly accessible	The data for project coordination will not be publicly available. They will only be accessible through the different tools created for this purpose: Dropbox, FTP, and OneDrive when necessary. Only the members of the consortium will have access to that material. The administration of the different tools will only be accessible by the coordinator (UCLM) of REXUS, and the databases will be renewed when new data will be available.
2.3 Making data interoperable	N/A
2.4 Increase data re-use (through clarifying licenses)	The data will not be publicly accessible. Deliverables with "Public" dissemination level will be deposited in the project website. Any individual or third party interested in accessing and reusing the data, can download the deliverables from CORDIS or from the project website in *.pdf format.
3. Allocation of resources	All costs related to the databases for project coordination are covered by the project budget with dedicated person-months under the WP1 "Project Management".
4. Data security	The data will be preserved and shared with the members of the consortium through the REXUS Dropbox, FTP and OneDrive when necessary. The data is collected for internal use in the project and not intended for long-term preservation. The WP leader (UCLM) is keeping a backup on a separate disk
5. Ethical aspects	Current EU Ethics principles for data privacy and security of researchers in NEC applicable (D8.1 and D8.2)
6. Other	N/A

2.2 DMP Components in WP2. Learning and Action Alliances

DMP Component	Issues to be addressed
1. Data summary	**Data for participatory activities coordination** The data will contain information about: - Participatory activities: List of attendees, minutes, presentations, etc. - Stakeholders relevant for pilot's challenges - Training activities and resources - Key outcomes of participatory activities. The stakeholders' personal information (gender, name, surname, email and profession) will be handled exclusively by the pilot leader. These data will be shared anonymised with the WP2 and the project coordinators, to generate participation statistics, by age group, gender, etc. The data will have the following formats: *.xlsx, *.doc, *.pdf, *ppts, *mp4, *html. Existing data on the pilots' challenges definition and relevant stakeholders in the territory will be used from other projects where applicable. The total size of these data will be approximately 1 Gb. These data would be useful to all pilot leaders for the correct development of participatory activities and will facilitate internal coordination between REXUS WPs for avoiding stakeholders' fatigue.
2. FAIR Data **2.1 Making data findable, including provisions for metadata**	Unique and persistent identifiers will be used for these datasets. Data shall be stored in the format "*Pilot name _ Activity name _ Date (*YY/MM/DD)*"*. The inclusion of metadata for the current datasets has not been yet decided.
2.2 Making data openly accessible	The datasets with personal data will not be publicly available. They will be anonymised and only accessible for WP2 and project coordinators. On the other hand, the necessary material for the development of participatory activities as well as the main outcomes will be shared with REXUS partners through the different tools created for this purpose: Dropbox, FTP, and OneDrive when necessary. Finally, forums, news and other resources will be available for project's participants through the *LAA Learning Platform* to foster capacity building and cross-fertilization.
2.3 Making data interoperable	Standard vocabularies for all data types present in this dataset will be applied to allow inter-disciplinary interoperability between social, economic, and biophysical areas of knowledge.
2.4 Increase data re-use (through clarifying licenses)	D2.1 will be publicly accessible through the project website. Vulnerable data will be kept confidential for privacy reasons (e.g. participatory activities attendee lists, stakeholder analysis, etc.). Non-vulnerable data will be published for project participants in the *LAA Learning Platform* (e.g. training and cross-fertilization activities).
3. Allocation of resources	All costs related to the datasets for participatory activities coordination are covered by the project budget with dedicated person-months under the WP2 "Learning and Action Alliances" and WP6 "Pilot Implementation".
4. Data security	The data will be preserved and shared with the members of the consortium through the REXUS Dropbox, FTP and OneDrive when necessary. The data is collected for internal use in the project and not intended for long-term preservation. Stakeholders' personal data will be anonymised and only accessible for WP2 and project coordinators.
5. Ethical aspects	Consent for data preservation will be included in activities and questionnaires dealing with personal data. Vulnerable data will not be

	publicly available and vulnerable groups will be addressed according to D8.2 recommendations. Guidelines to minimise risks to project participants (D8.1) will be applied.
6. Other	N/A

2.3 DMP Components in WP3, REXUS Observatory

The DMP components on WP3 data have been structured in the different tasks, taking into account they can be defined at this stage of the project.

DMP Component	Issues to be addressed
1. Data summary	**Task 3.1:** Task 3.1 aims to provide a data repository that will hold all data collected within the REXUS pilot cases. Data collected for the aims of Task 3.1 will be part of the REXUS Observatory and will originate from a variety of data sources that will be identified with the assistance of the consortium partners. The data sources could comprise of, but will not be limited to, web pages, ftp servers, other databases or APIs. The datasets will vary in content and may contain geographical information. Various data types are expected to be collected such as pdf, excel or csv/tsv, zip, xml, html, json, geojson, shp and kml. RestFUL APIs or WMS/WFS services will be used as well. **Task 3.2**: The data generated in Task 3.2 are the inputs and outputs to estimate the water footprint. The information are maps and databases about inventory of crops, time series of satellite images (mainly from Sentinel 2A and 2B), potential, climatic data (Task 3.5), soils, delimitation areas, industry, land use (Task 3.4) and water quality. Results will be presented as maps about water necessities, water footprint spatially distributed or reported in databases. The data will be in the formats: *.xlsx, *.doc, *.shp, *.jpeg, *.tiff, *.hdr **Task 3.3**: Data generated in Task 3.3 correspond to a dataset of inputs and outputs needed for defining the energy and carbon footprint of processes defined in collaboration with the pilots' representatives. The inventory about energy and carbon footprint will contain information about: - Energy technologies - Cultivation areas - Existence of other energy systems (solar and wind infrastructures…) - QGis projections This information will be assessed by applying different methodological approaches such as Life cycle assessment methodology and results will be presented as kWh (energy footprint) and kg CO_2 equivalent (carbon footprint). The energy and carbon footprint will be determined with the software SimaPro. The data will have the following formats: *.xlsx, *.doc, *.pdf, *ppts. Data will be produced only within the time duration in the context of REXUS projects. These data would be useful to all the partners and will facilitate internal communication. **Task 3.4**: The data generated in this task depend mainly on inputs from T3.1 and it will generate the land use maps provided in vector and raster format. **Task 3.5**: The purpose of Task 3.5 is to provide the climate projections for different climatic variables for each pilot. These variables will be:

	the mean temperature, the mean precipitation and the potential evapotranspiration. Data for these variables are retrieved from the Copernicus Climate Change Service (C3S) and the Earth System Grid Federation (ESGF), at a spatial resolution of 12.5 km for all pilots, except the pilot Nima-Cauca where the spatial resolution was lower, from 22 km to 48 km, due to lack of data at higher resolution. After processing these files at NetCDF (.nc) format, aggregated information in the form of diagrams and maps will be generated and presented in report D3.9. **Task 3.6**: Data collected for the aims of Task 3.6 will include demographic, socio-economic, monetary and biophysical data regarding the case studies. The data will have several formats, such as: *.xlsx, *.doc, *.pdf, *.csv, *.shp, *.tif etc. Some of them will be in common/shared with other WP3 Tasks. Data will be used for the development and implementation of socio-economic indicators for assessing the impacts of the various Nexus options identified. Indicators will include, for example, performance indicators reporting biophysical and economic values per units of ecosystem service output as well as indicators measuring distributional and equity effects, such as values per capita.
2. FAIR Data **2.1 Making data findable, including provisions for metadata**	**T3.1:** The exact metadata fields will be decided based on the collected information and the implementation of the REXUS Observatory. The metadata used for each dataset may include some or all of the following fields: - Title - Description - Domain - Sector - Keywords - Source - Date - Access level - Geographical area - Language - Organization - License **T3.2, T3.3, T3.5**: The inclusion of metadata for the current dataset has not been yet decided. **T3.4:** They will include metadata like Title, description, Keywords, Date, and Geographical area. **T3.6**: The inclusion of metadata for the current dataset has not been yet decided. Unique and persistent identifiers will not be used for this dataset.
2.2 Making data openly accessible	The datasets collected in the context of this task will not be publicly available. They will only be accessible through the different tools created for this purpose: REXUS Observatory or other tools of the project (Dropbox, FTP, OneDrive). Only the members of the consortium will have access to that material.
2.3 Making data interoperable	T3.1: In order to ensure interoperability, the data will follow a data vocabulary (when possible) to allow data exchange and re-use between partners and tasks. T3.2: The data will follow a nomenclature and formats to allow exchange and re-use between partners and DoA. T3.3, T3.4, T3.5: Data is going to adhere to standards formats. T3.6: Whenever possible, well-known and preferably open formats will be used for data. Furthermore, a clear description of data and indicators (including keywords) will be made available.

2.4 Increase data re-use (through clarifying licenses)	T3.1, T3.5, T3.6: The collected data will be used or reused by consortium partners. Data will be collected and provided through the REXUS Observatory only within the time duration in the context of REXUS project as described in the GA and DoA. The expected size of the datasets will be approximately many GBs. These data would be useful to all the partners and will facilitate internal communication. T3.2, T3.3, T3.4: The dataset will be available for being re-used by all partners involved in REXUS. This information will not be public.
3. Allocation of resources	All costs related to the collected datasets are covered by the project budget with dedicated person-months under the WP3.
4. Data security	The data will be preserved and shared with the members of the consortium through the REXUS Observatory and the data that will not be part of the Observatory will be preserved by the responsible task leader. The WP leader and task leader (DRAXIS) are keeping a data backups on separate secure servers. UNIPD will keep a backup of Task 3.6 data on a separate secure server.
5. Ethical aspects	N/A
6. Other	N/A

2.4 DMP Components in WP4. Advancing Nexus Thinking

DMP Component	Issues to be addressed
1. Data summary	Input data for model development will be drawn from existing national and regional databases and available through the REXUS Observatory (WP3) as well as from stakeholder dialogues and participatory exercises developed in cooperation with Work Package 2. Existing data (e.g., results from sectoral models) might be also re-used depending on the availability in individual pilots. Qualitative models such as causal loop diagrams will be made available to all participating stakeholders (partly for validation). As the project progresses Quantitative models (such as stock flow models) will generate predictive output over a suitable time base for key nexus indicators relating to water, energy and land sectors. These indicators are currently in the process of being defined. The size of such models (without including the input data) is challenging to estimate at this stage, but it is typically rather limited (i.e., less than 1Gb). Regarding PSDM, the project will generate data in different formats. The outputs can be either managed using specific software (e.g., Stella or Vensim) and related file formats, or exported e.g., in .xlsx or .txt format. Model runs, results and linked visualisations will be done in partnership with stakeholders in the co-generation of new knowledge. The data produced will be useful both at project level (i.e., supporting the activities and models of other partners) and in pilot environment (e.g., supporting policy-/decision-makers).
2. FAIR Data **2.1 Making data findable, including provisions for metadata**	As no new primary data currently exists this has to be determined, but it is envisaged published results underpinned by model data sets
2.2 Making data openly accessible	The datasets will not be publicly available. They will only be accessible through the different tools created for this purpose: Dropbox, FTP, and OneDrive when necessary.

	Only the members of the consortium will have access to that material. The administration of the different tools will only be accessible by the coordinator (UCLM) of REXUS and the databases will be renewed when new data will be available.
2.3 Making data interoperable	Models developed in the WP will be interoperable and linked, but are not designed to interface with existing external models.
2.4 Increase data re-use (through clarifying licenses)	The data will not be publicly accessible. Deliverables with "Public" dissemination level will be deposited in the project website. Any individual or third party interested in accessing and reusing the data can download the reports from CORDIS or from the project website in *.pdf format.
3. Allocation of resources	All data costs are covered by the project budget.
4. Data security	Data will be shared and backed up across WP partners IRSA and UCAM and transferred through the REXUS Dropbox, FTP and OneDrive when necessary.
5. Ethical aspects	Participatory activities (e.g., interviews) performed within WP4 will strictly follow the REXUS Ethics requirements. Particularly, the results of the interviews will not be published and will not refer to personal opinions on other stakeholders/institutions. The aggregated analysis of the interviews will be only made public.
6. Other	n/a

2.5 DMP Components in WP5. Incorporating nature-based approaches into Nexus Solutions

DMP Component	Issues to be addressed
1. Data summary	**Task 5.1** Published literature will be reviewed, and relevant information/data extracted and analysed from these secondary sources in order to inform the paper summarising the landscape of nexus-relevant frameworks and approaches for selecting adaptation options. The paper will be produced in .doc and .pdf. **Task 5.2** We will generate a report on EbA solutions that can contribute to a climate resilient Nexus, to be used by a diversity of stakeholders from practitioners to policy makers and landowners. The document will have the following formats: *.doc, *.pdf. The report will use secondary sources of data such as existing relevant sets of EbA solutions and integrated solutions appropriate to the issues and scales of the pilots. **Task 5.4** Information/data assembled from various sources (mostly secondary) will be integrated into the REXUS Solutions Framework, which will guide users in selecting the most appropriate NbS options to address adaptation issues in the nexus. This REXUS framework will be produced in .doc and .pdf. To this point, no data collection is foreseen to take place in the context of WP5
2. FAIR Data **2.1 Making data findable, including provisions for metadata**	The inclusion of metadata for the current dataset has not been yet decided. Unique and persistent identifiers will not be used for this dataset.

2.2 Making data openly accessible	The datasets used to inform the analysis of later write-ups will not be publicly available. They will only be accessible through the different tools created for this purpose: Dropbox, FTP, and OneDrive when necessary. Only the members of the consortium will have access to that material. The administration of the different tools will only be accessible by the coordinator (UCLM) of REXUS and the databases will be renewed when new data will be available. Only the final deliverables will be made publicly available.
2.3 Making data interoperable	N/A
2.4 Increase data re-use (through clarifying licenses)	The dataset will not be publicly accessible. Deliverables with "Public" dissemination level will be deposited in the project website. Any individual or third party interested in accessing and reusing the data can download the deliverable from CORDIS or from the project website in *.pdf format.
3. Allocation of resources	All costs related to the dataset for project coordination are covered by the project buget with dedicated person-months under the WP5
4. Data security	The data will be preserved and shared with the members of the consortium through the REXUS Dropbox, FTP and OneDrive when necessary. The data is collected for internal use in the project and not intended for long-term preservation. The WP leader (UCLM) is keeping a backup on a separate disk.
5. Ethical aspects	N/A
6. Other	N/A

2.6 DMP Components in WP6. Pilot Implementation

DMP Component	Issues to be addressed
1. Data summary	**Databases for WP6** The data collection aims to create a time-stacked implementation strategy that will be transferred to other pilot cases. WP6 will follow a matrix structure, in which a basic version of each work package will be implemented in each pilot project, while the focus will be on different work packages. The details of this stacked implementation strategy will be finalized during the first months of the project. The five pilot areas have been selected to cover a broad spectrum of Nexus status and application conditions. The proposed solutions will be tailored to the specific character of each pilot area, and the stakeholder component will be tailored to the nexus challenge in the area. WP6 will generate some content and questions for discussion with the stakeholder communities at the Regional Meetings. The main stakeholders of this WP are the partners managing the REXUS pilot areas, and they will be supported by the WP teams corresponding to their area. - The WP has 8 deliverables, of which only two will be made public (D6.1 and D6.4): ***D6.1*** *Baseline Description (AgriSat);* ***D6.2*** *REXUS observatory contents (UCLM);* ***D6.3*** *PSDM scenarios (UCAM);* ***D6.4*** *Climate risk assessment (DRAXIS);* ***D6.5*** *Application of NbS selection framework (WCMC);* ***D6.6*** *Pilot validation report and adoption roadmap (UCLM);* ***D6.7-8*** *REXUS synthesis products (AgriSat).*

	- The information requested by the WPs is structured as follows: General data (study area and challenges); socio-economic data; energy-related data; agricultural data; land data; climate data; water-related data; other data (list of stakeholders, etc.). - The information integrated into the **D6.1 Baseline Description** (stored in .docx, .pdf) will be: General characterization, Major developments, Challenges, Key actors, Relevant policies, Climate data, Water uses, Land uses, Energy infrastructures, Demographic data, and significant EU projects. - The regional teams (Spain, Nima, Isonzo, Pinios, and the Danube) will request or seek the above data from their stakeholders, which can be reused from papers, projects, institutions, and databases. - The size is currently estimated at 1GB. - The usefulness of the data will be for creating a framework that will serve as a guide for the project´s development. The data will help the different work packages better understand the pilot cases and perform better work in the area.
2. FAIR Data **2.1 Making data findable, including provisions for metadata**	All archived descriptive and quantitative data will be written in easily identifiable words. Meaningful metadata (data properties or any modifications, owners) shall be produced.
2.2 Making data openly accessible	REXUS data will be made accessible through reports, blogs, catalogs, web, news. REXUS intends to make some data available to the public. But, for security reasons, most access to data will not be made publicly available for security and privacy reasons. Some data will only be accessible to consortium members and authorized persons.
2.3 Making data interoperable	The data, documents, and information generated on WP6 will allow for easy dissemination and understanding by interested parties. The idea is that everything will be replicable, including the general framework, following the FAIR protocols using appropriate, formal, and understandable language. The data will be provided in standardized formats (GeoTIFF, XML, R, Matlab, etc.
2.4 Increase data re-use (through clarifying licenses)	Partners will publish data as the project progresses and can be reused as it is generated among REXUS participants. Datasets such as imagery (levels and satellites), land use, and soil maps will be reused (this is only for T6.1 and 6.4). For other large datasets, reuse will not be possible and will be for consortium partners only.
3. Allocation of resources	*N/A*
4. Data security	All the information is secure (no personal data). All the info is in an internal AgriSat database, in addition to the REXUS DROPBOX. Also, progress is shared with the different members of the project. In the case of conducting surveys, we do not need personal information from stakeholders.
5. Ethical aspects	Surveys and a series of interviews with different stakeholders will be carried out following the guidelines of the ethics section of the project in

	compliance with H2020 regulations, protecting the confidentiality of the participants (consent forms must be signed, and participation will be voluntary).
6. Other	*N/A*

2.7 DMP Components in WP7. Pathways to Impact

DMP Component	Issues to be addressed
1. Data summary	WP7 will not generate scientific/research data per se, therefore the FAIR principles are not strictly applicable. However, a description follows of the data that will be collected and the extent to which it can follow the spirit of FAIR data management. WP7 data will take the form of: - project deliverables that will be uploaded and freely available on the project website. Secondary data will be collected and displayed Communications materials - website content with secondary data collated on pilot areas, details on the project and future activities, etc. - website and social media updates on the project's development, including records of project meetings, milestones, achievements, etc. - interviews, including photos and videos, documenting the project's progress and with testimonies by the project's stakeholders. The above data will be grouped under clear categories to the extent possible, to make them easily searchable. For example, news items will include tags for content categories, to facilitate retrieval based on topic of interest. The project's communication and dissemination material to be created will aim not only to advance the REXUS project, but also further broader understanding of the Water-Energy-Food Nexus scientific approach. In this spirit, materials will be developed to assist audiences to get acquainted with these concepts, that can be reused beyond the scope of the REXUS project. To this point, no data collection is foreseen to take place in the context of WP7
2. FAIR Data **2.1 Making data findable, including provisions for metadata**	Clear titles using popular related search terms and organised display on the website will make the deliverables, news items, videos etc. easily searchable on the internet.
2.2 Making data openly accessible	All data on the website and social media platforms will be freely accessible.
2.3 Making data interoperable	N/A
2.4 Increase data re-use (through clarifying licenses)	Where possible, files will be available in high resolution to encourage reuse in other platforms. (For example, diagrams/infographics explaining aspects of the Water-Energy-Food Nexus approach, specific case studies, and other such materials will be made available for reuse).

3. Allocation of resources	Covered within the budgeted person-months.
4. Data security	Data is stored on the website, with secure hosting and backup servers,
5. Ethical aspects	N/A
6. Other	N/A

2.8 DMP Components in WP8. Ethics requirements.

DMP Component	Issues to be addressed
1. Data summary	The purpose of this WP is to establish the rules and procedures to guarantee Ethics requirements for Non European Countries (NEC) and involvement with humans during the project activities and beyond. This WP will be the documents with the procedures in pdf format. To this point, no data collection is foreseen to take place in the context of WP7
2. FAIR Data **2.1 Making data findable, including provisions for metadata**	The docs will be identified with clear titles.
2.2 Making data openly accessible	Only the members of the consortium will have access to that material.
2.3 Making data interoperable	No data will be generated in this WP
2.4 Increase data re-use (through clarifying licenses)	The dataset will not be publicly accessible. Any individual or third party interested in accessing and reusing the data can download the deliverable from CORDIS or from the project website in *.pdf format.
3. Allocation of resources	All costs related in this WP are included in project coordination. They are covered by the project budget with dedicated person-months under the WP1 “Project Management”.
4. Data security	The docs are collected for internal use in the project. The WP leader (UCLM) is keeping a backup on a separate disk.
5. Ethical aspects	Current EU Ethics principles applicable for data privacy and security of researchers in NEC.
6. Other	N/A

3 CONCLUSION

This document is the first version of the deliverable, that indicates the data management strategy and the procedure at the beginning stage of the project. All the information is at the time in which the document has been issued.

The DMP will be completed, and missing information will be further clarified in the final version due to month 36.