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# **HuMUS**

Healthy Municipal Soils

## Data management plan

### Deliverable D6.2

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## Executive summary

This first version of the HuMUS Data Management Plan (DMP) - originally due at M6 - is released with a 4 months' delay in association with the official launch of the Open Call for Pilot Projects. The Call publication had been originally planned for M12 according to the DoA, but has been put forward by 2 months, in order to allow more time for prospective participants to prepare their applications.

In fact, the connection with the Open Call - a draft text of which started to materialise, at the level of internal discussions within the HuMUS consortium, already during the summer break - had not been covered by the initial version of the DMP delivered by the University of Bolzano as Task Leader and has therefore justified an integration of its contents, under the care of ANCI Toscana as Leader of the WP in charge of managing the Call.

The main aim of the DMP is to ensure that all the (non-confidential or privacy protected) datasets collected during the project will adhere to the FAIR principles (Findable, Accessible, Interoperable, Reusable). Additionally, the HuMUS DoA introduced a tactical connection with the European Soil Observatory (EUSO), involving the University of Hohenheim as partner in charge, to make sure that all knowledge and datasets generated by HuMUS that can be of relevance for EUSO are also shared with EUSO. However, until today, few opportunities for interaction have materialised, and they have been covered by the presence of representatives from ANCI Toscana.

Within the above context, the first version of the HuMUS DMP establishes the guiding principles and provides an overview of the procedures for collection, storage and management of data generated or reused during the project, with a special provision for the data acquired from the participants in the Open Call.

The Plan is intended to be a living document, meaning that further updates will be made as the project progresses and in cases where significant changes occur. While there is no formal delivery at M18, the DMP will be reviewed and updated internally in June 2024, ahead of the project review meeting. According to the DoA, a final version must be released at the end of the project (D6.5, M36).

# 1 Introduction

## 1.1 About HuMUS

As part of the EU Soil Mission, the Healthy Municipal Soils (HuMUS) project engages and activates municipalities and regions to protect and restore soil health. Municipalities are at the forefront of local soil management, regulation, innovation, and community-building and thus are pivotal to deploying the Soil Mission on the ground. In addition to raising awareness about the importance of healthy soils – the basis of all human economies – the project will empower communities to create suitable local solutions for the fulfilment of their own needs.

Using a trans-disciplinary approach and a multi-stakeholder engagement methodology for planning and coordinating soil health governance activities, HuMUS will stimulate social participation and innovation. The participatory approach involves stakeholders from the so-called Quadruple Helix: citizens, farmers, landowners and land managers, consumers, civil society organisations, research institutions, businesses, and public authorities at the regional and local levels. The focus of the project is a holistic definition of soil health, looking beyond only agricultural soil towards all types of soil and land use.

With a 2 months advance on the initially defined publication date, the HuMUS consortium approved on 31 October 2023 the text of its Open Call for Pilot Projects, setting a deadline for applications by 29 February 2024. The target of the Call is to identify and support – both technically and financially – 20 local or regional initiatives of participatory soil health governance, involving a total number of at least 300 Quadruple Helix stakeholders. These initiatives will add to the 13 pilots proposed by the HuMUS partners themselves, the starting dates of which will almost coincide with those of the awarded projects. Globally this means to create a critical mass of 33 initiatives, which are expected to provide substantial evidence that participatory governance methods and tools can promote, procure, and stimulate an increased and more diffused awareness of existing soil health issues and threats at local and regional levels and more effective approaches to their resolution.

In order to facilitate evaluation of received proposals, an application form has been conceived of, structured in 5 sections. The data generated by the participants in the Open Call will provide a good evidence base, suitable for further scientific use within the framework and the provisions outlined in this document.

## 1.2 Purpose of the deliverable

This Data Management Plan establishes the guiding principles and provides an overview of the procedures for the collection, storage and management of data generated within the framework of the HuMUS project. The Plan is intended to be a living document, meaning that updates will be made accordingly as the project progresses and in cases where significant changes occur. While there will be no formal revision of the document, the Data Management Plan will be reviewed and updated internally in June 2024 (M18), and depending on the results of the project review meeting, again in 2025.

To ensure an effective contribution to the European Soil Observatory (EUSO), the consortium will identify in the DMPs which knowledge and specific datasets might be of relevance to the EUSO and appoint a contact person from UHOH to participate in discussions on data management with the EUSO. Until today, this role has been played by the Project coordinator ANCI Toscana

## 2 Data Management Scope and Responsibilities

### 2.1 Internal Consortium Policy

The DMP activities rest under the responsibility of a specific person for each consortium member, while the overall strategy is designed and managed by UNIBZ with the support of UHOH. The HuMUS project coordinator, ANCI, is responsible for the global coordination of activities and has made available a data repository with restricted access for data to be shared among consortium members. AEU in their capacity of communication and dissemination manager have made a public website available with open access for data and information to be published during the project lifetime.

### 2.2 Data Types

As HuMUS is not a research and innovation project, but a Coordination and Support Action, its focus is not on generating new datasets, but only reusing existing ones, with the exceptions specified here below.

HuMUS mainly reuses pre-existing datasets, supplementing them where necessary with additional information gathered through interviews or questionnaires. HuMUS reuses data and information from online databases such as Scopus, Web of Science, municipal websites and also hard-shell books. The main purposes of data reuse are the creation of a training facility for Soil Stewards and the definition of a participatory framework and approach (the HuMUS methodology) that will be used in the pilot sites to develop a diagnosis of current soil health scenarios and to design territorial agreements for the sustainable transition towards agreed and sustainable futures.

Most data reuse activities are localised in WP1 of the project, which is coordinated by UNIBZ.

A limited number of data will be generated from questionnaires, interviews, and workshops. These are foreseen in WP1 again, and also in the context of WP2 (within the 13 pilot sites coordinated by the project partners), WP4 (within the 20 pilot sites supported financially by the project through the Open Call), and also WP3 and WP5 (within the scope of the consortium's external communication and dissemination activities).

However, most of the data generated during public events will have limited scientific relevance, as they will refer to the personal information of participants stored in attendee lists or registering to receive the project's newsletter or to take part in pilot activities (including the LinkedIn groups and the training sessions).

An interesting window of opportunity is constituted by the data and information that will be stored in the individual applications to the Open Call. The potential research interest stems from the depth and breadth of the inputs requested in the application form, which will provide an extended outline of the situation in the territories formulating a candidature to the Call. Further to that, the high expected number of received applications (certainly a multiple of the 20 available seats) will likely be enough to ensure a statistical significance of the evidence gathered in this way. In January 2024, on the occasion of the next General Assembly of the HuMUS consortium, an internal discussion will be finalised, whether the 13 internal pilot sites should be described using the same template as the participants in the Open Call.

The HuMUS project will generate quantitative and qualitative data. Main formats will be text files (e.g. word, pdf), spreadsheet files (e.g. excel), image and video files (e.g. mp4, jpg).

The size of the data that HuMUS will re-use or generate will range in between 200 Gigabytes and 2 Terabytes.

## 2.3 Summary of Data Types

The main types of data collected by HuMUS are the following:

- Texts from publicly accessible documents and records (WPs 1, 2 & 3)
- Qualitative interview and survey data (WPs 1 & 2)
- Personal data (e.g. names, emails, addresses, etc.) (WPs 2, 3 & 5)
- Data provided by the participants in the Open Call (WP 4)
- Audio-visual data (e.g. photos, videos, audio files) (WPs 1, 2, 3 & 5).

Over the course of the project, HuMUS will use a range of data collection methods to collect and use or reuse the data needed to achieve its objectives. These methods are listed and commented on in the next two sections.



## 3 Primary Data Collection Methods

Though HuMUS is not a research project, some primary data will nevertheless need to be acquired and analysed to provide a basis for the co-creative distilling of solutions for participatory soil health management.

### 3.1 Open call

HuMUS has launched an Open Call for Pilot Projects at the regional and local levels in Europe. The Call has been prepared and published via a dedicated state of the art platform, GoodGrants™, and is now being actively disseminated via partners' and consortium's communication channels.

An application form template has been created by the WP4 leader ANCI Toscana, where participants will put the data and information describing the details of their candidate proposals. The template has the twin purpose of allowing the execution of evaluation and award procedures on an objective basis - a dedicated committee will be formed after the deadline of the Call, as described in the Call text itself - and forming a dataset with in-depth and broad information on the territorial situations in the applicant territories. This information will be collated in an Excel sheet, which will be used for statistical analyses and made available to the scientific community after the project's end, with the permission of the respective proposers.

An informed consent form has been included in the Call documentation, which applicants will have to sign before submitting their application, which enables the HuMUS partners to use the contents provided for the purposes of evaluation. Additionally the Call winners will be asked to deliver further outputs to the public domain, which will be published on the project website.

As far as the other (non winning) participants are concerned, details of their applications may not be disclosed publicly, but will be maintained on partners' secure servers for as long as necessary for audit purposes.

### 3.2 Surveys and interviews

Surveys and interviews (on- or off-line) will gather responses of key informants identified after a mapping process and will focus on acquiring information on soil health practices and policies as well as ideas and opinions on participatory soil governance in urban and regional contexts, including opportunities, prerequisites, limitations, scenarios, and pathways. Additional information will be concerning projects and approaches identified through the review and analysis of secondary data.

All interviewees will receive the project information sheet and will be asked to sign a consent form. Interview notes and transcript files will be stored on the respective partners' secure server, as well as on the project's online storage platform for easy transfer between the task leaders and the rest of partners conducting interviews as part of the mapping. All data will be deleted within three years of the end of the project, with the exception of files still being exploited for research purposes, but in line with each partners' internal and national data regulations and policies.

Important interviews will be recorded and transcribed. Interview guidelines (.rtf), notes from interviews (.rtf), audio-files (.mp3) and transcripts (.rtf) will be stored locally by the interviewers in accordance with local data protection regulation. Access will be allowed to employees and/or subcontractors of the partners (e.g. for transcription or translation purposes). In case the above mentioned material is in English, it will be shared with the consortium only. All data will be deleted within three years of the end of the project, with the exception of files still being exploited for research purposes, but in line with each partners' internal and national data regulations and policies.



Interview transcript files will be stored on secure servers, as well as on the project's online storage platform for easy transfer between the qualitative analysis coordinators and the rest of partners conducting interviews. All data will be deleted within three years of the end of the project, with the exception of files still being exploited for research purposes, but in line with each partners' internal and national data regulations and policies.

### 3.3 Information gathered during physical and online events

HuMUS will organise a range of events over the course of the project. These include:

- Conferences
- Webinars
- E-lectures
- Workshops
- Focus groups
- LinkedIn groups (the so-called Regional Soil Health Communities)
- Etc.

In the context of these events, the personal data of participants will be collected using online registration forms (e.g. Google Forms), in cooperation with the specific event organisers (depending on whether the event takes place on- or off-line). These forms will collect names, emails, etc. In addition, and depending on the type of event, data necessary to appropriately select different groups will be collected.

The data will be held by the respective partners in charge and shared on private GoogleForms / GoogleSheets or equivalent, secure systems. Normally the online forms and sheets will be deleted after each event, unless special audit requirements apply, and the data will be exported to an Excel format and kept on the respective partners' secure servers. The email addresses will be transferred to the project's MailChimp or equivalent service for the project's newsletter, with the permission of respective data owners/subjects and for a limited time (the duration of the project). After the end of the project, these files will be destroyed and only the related participants' lists will only be kept for audit purposes.

Normally the personal data of participants will not be made available to the scientific community, as they are deprived of any value. A possible exception refers to the contents shared during free talks being recorded and stored during and after the events. In that case, the same provisions of survey and interview results will be applicable.

### 3.4 Information gathered through the project website or email

When completing a contact form on the HuMUS Website or communicating with a HuMUS partner by email, the generic user provides the following information:

- basic identity data such as name, e-mail address, postal address, telephone number, organisation of affiliation, position in the organisation
- the content of the communication, and the technical information accompanying it
- the formulated privacy preferences, e.g. regarding the receipt of the HuMUS newsletters, etc., if applicable
- the profile information on Social Networks made available to the public.

Each time someone uses the HuMUS website, the consortium through Agro Ecology Europe, the WP5 leader, will automatically collect the following data and information with the permission of online visitors:

- Identification of the device that is accessing the website
- browser type,
- geographical location
- operating system
- information about the browsing behaviour, such as the duration of the visit, the links clicked on, the pages which are visited and how often.

A cookie policy warning has been created and published on the website.

Personal data collected on a voluntary basis may include the following:

- Last Name
- First Name
- E-mail address
- Mailing Address
- Phone Number.

None of this personal data and information will be made available to the scientific community, as they are deprived of any value.

### 3.5 Information gathered through the project's training platform

As explained in the previous section, the HuMUS workplan foresees the creation of a training facility for Soil Stewards, which will be offered (free of charge) to the Call applicants and the members of the LinkedIn groups (the so-called Regional Soil Health Communities).

Participants will be asked to sign an informed consent form before starting to confer the following information:

- Name, surname and address of visitors wanting to get registered in the e-courses.
- User Profile Information:
  - Usernames and passwords for account creation and authentication.
  - Personal information such as names, email addresses, and profile pictures.
  - Educational background and interests.
  - Courses enrolled in, including course titles and descriptions.
  - Enrollment data
  - Attendance dates and times.
  - Payment or subscription information for paid courses.

None of this personal data and information will be made available to the scientific community, as they are deprived of any value.

Videos will be created as training materials for Soil Stewards in collaboration with third parties (see§ 4.3 below) .

### 3.6 Summary of primary data collection methods

Related to these types of data, the main data collection methods are:

- Registration forms to public events (including e.g. Stakeholder meetings, Focus Groups, Participatory Sessions, Webinars, and similar)
- Information exchanges on LinkedIn groups (the so-called Regional Soil Health Communities)
- Surveys, interviews and polls
- The applications to the Open Call.

## 4 Secondary Data Collection Methods

This section refers to some secondary data that will be acquired and analysed for the purposes of the project (especially, but not limited to, WP1).

### 4.1 Mapping documents and reports

The project will make use of documents and reports including available datasets from previous or ongoing EU projects and research studies, case evaluations and assessments, periodical surveys and polls, etc. These documents and reports will be identified through case contacts, the European Commission's document database - CORDIS - and various online search engines. More specifically, a mapping framework and criteria will be developed to guide document selection.

### 4.2 Information gathered through the project website

Reports (including approved deliverables) uploaded by any third party will be added to this broad information set. Verification of licensing rules and fees will be done prior to any publication.

### 4.3 Audio-visual materials (e.g. photos, videos, audio files)

This types of data will be sourced from photographers, videographers, podcasters present during the project's events, whether on- or off-line, who will collect the data for the purposes of documenting, communicating and disseminating the project's work. As part of the registration process (see the above point on registration data), participants will be asked whether for their consent to be photographed and/or filmed.

Audio-visual files will be stored on the respective partners' secure servers, as well as on the project's online storage platform for easy transfer between the respective partners. After processing, the files may be published in project communication materials and thereby enter the public domain.

All audio-visual files that have not been used for the purposes of project communication will be deleted at the end of the project. The partners may nevertheless maintain limited copies for institutional reasons.

*Table 1. Types of audio-visual materials*

Type	Specificities	Partners
Photos (e.g. jpeg, png, cr2, etc.)	Produced at project events & disseminated via project and consortium communication channels	All
Videos (e.g. mp4, avi, etc.)	Filmed at project events & disseminated via project and consortium communication channels Data will be shared with contracted editors for the creation of project videos	All
Podcasts/Sound files (e.g. mp3, wav, flac, etc.)	Recorded at project events and in other settings, edited within the consortium, & disseminated via project communication channels	Primarily AEU, contributions by other partners

*Note: For more details on the types of multimedia outputs generated by HuMUS, please refer to the project's Communication & Dissemination Plan.*



#### 4.4 Summary of secondary data collection methods

Related to these types of data, the main data collection methods are:

- Database or online search activities
- Uploading by third parties to the HuMUS website
- Sourcing from audio-visual content creators.

## 5 Provisions to ensure FAIRification of data

### 5.1 Making data findable

As HuMUS is primarily focused on communicating and disseminating solutions for cities and regions, all of its public data will be shared broadly. HuMUS data of scientific relevance will be made findable via standard search engines (e.g. Google) on the official project website, as well as via other organisations' websites. Specific forms of meta-data, versioning, and the likes are not considered relevant in the context of this non research-oriented project. HuMUS will generate publications that will possess a persistent identifier (e.g. DOI). The HuMUS website is also identified persistently.

HuMUS will create rich metadata for few WPs (1, 2, 3). The metadata types are spreadsheet files which will be created through online research and self input into the file.

### 5.2 Making data openly accessible (Open Research Data Pilot)

The main results from the project will be made accessible via the project website and its social media channels (e.g. Twitter, LinkedIn, Instagram, etc.), as well as those of the individual partners. All of these channels are intended to outlive the HuMUS project and remain accessible for at least five years after project end. As HuMUS is not a research project, the issue of Open Access publications is not considered relevant, as all outputs will be provided free of charge on open online platforms, thereby ensuring their accessibility.

For all research outputs to be shared, Zenodo<sup>1</sup> will be used, the general-purpose open-access repository developed under the European OpenAIRE program and operated by CERN. Zenodo places no restriction on the file type that researchers may upload and accepts datasets of up to 50 GB.

Wherever possible, each dataset will be assigned a DOI (Digital Object Identifier).

### 5.3 Making data interoperable

HuMUS data will be made interoperable. Metadata will use a formal, accessible, shared, and broadly applicable language for knowledge representation. HuMUS is not producing non-standard data types. The project outputs will use standard formats (e.g. xls, doc, ppt, pdf, jpeg/png, mp3/4), which are fully interoperable, including via open source software. In the case HuMUS uses uncommon ontologies, HuMUS will provide an openly available vocabulary.

### 5.4 Increasing data re-use

There are no barriers to the reuse of HuMUS data, with the only exception of the privacy policy.

Access to and reuse of data produced in the project will be done free of any charge and without any limitation. The licence used will be Creative Commons CC BY 4.0 as for the other project outputs. In the case HuMUS uses uncommon ontologies, HuMUS will provide an openly available vocabulary.

### 5.5 Data security

HuMUS will follow strict data security rules. Apart from this, the consortium partners regard privacy and data protection as a fundamental principle and hence apply a strict policy on this matter.

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<sup>1</sup> <https://zenodo.org/>

## 6 Conclusions

The first version of the HuMUS DMP establishes the guiding principles and provides an overview of the procedures for collection, storage and management of data generated or reused during the project, with a special provision for the data acquired from the participants in the Open Call.

The Plan is intended to be a living document, meaning that further updates will be made as the project progresses and in cases where significant changes occur.

While there is no formal delivery at M18, the DMP will be reviewed and updated internally in June 2024, ahead of the project review meeting. According to the DoA, a final version must be released at the end of the project (D6.5, M36).

