Data Management Plan UPDATE – D9.8

WP9: Management

Authors: Eurac Research

Major updates are highlighted in bold.

Document information

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PROPOSAL NUMBER	101061550
FULL TITLE	Legitimate Crisis Governance in Multilevel Systems
ACRONYM	LEGITIMULT
PROJECT START DATE	1 October 2022
PROJECT END DATE	30 September 2025

Document history

VERSION	DATE	DESCRIPTION	CONTRIBUTORS
0.1	13/01/2023	First incomplete draft for Eurac input	Martina Gianola, Liise Lehtsalu
0.2	26/01/2023	Draft for partner input	Martina Gianola with Liise Lehtsalu, Greta Klotz, Lucia Radici, Martina Trettel
0.3	28/02/2023	Draft after partner input	Martina Gianola with Liise Lehtsalu, Greta Klotz, Lucia Radici, Martina Trettel
0.4	10/03/2023	Final Draft	All WPs
0.5	23/05/2024	Update	Martina Gianola with feedback of WP Leaders

Disclaimer

Contents

This updated version of the Data Management Plan does not contain substantial changes compared to the original version. Latter was drafted by gathering (via survey) information about data management form all partners and extensive internal discussion. The data management of the project was therefore already closely defined from the beginning. Below some of the major updates/ integrations:

- Findability
    - Creation of metadata on Zenodo: it was decided not to use previously defined keywords, but rather using document specific keyword. Affiliation to the project can in any case be deducted through other metadata (i.e. name of project grant)
    - Working drafts are also shared via institutional email, not only on Teams as originally planned. A copy of the draft is however always findable also on Teams.
    - Name coding: Working drafts are saved using a clear title, the addition "draft version" (if applicable) and date of last change (if applicable). Despite originally aimed for, the name of the author is not always included.
    - The original DMP foresaw the upload of pseudonymized personal data on Teams and anonymized on Zenodo. In this version of DMP allows to upload on Teams already anonymized personal data (*ergo* not sharing the pseudonymized version with partners), if appropriate.

- Accessibility
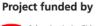   - It was confirmed that the repository is accessible via project website.

- Interoperability
    - Unlike initially indicated, not all the WP are using Harvard citation style. Some WP also use APA. All styles are however commonly used citing formats.
    - So far, no qualified references were indicated when uploading on Zenodo.

All major changes of the DMP are highlighted in bold.

Executive summary

The project *Legitimate crisis management and multilevel governance* (LEGITIMULT) assesses the impact of the measures taken by various international, national and subnational governments on multilevel institutions and intergovernmental relations in the wake of the Covid-19 pandemic. It analyses the effect of these measures on democratic governance, highlighting to what extent multilevel governance influences their impact on democracy, favouring a model of legitimate crisis management. The project assesses all measures taken by 31 European countries in relation to their impact on multilevel governance through the creation of a new dataset highlighting how these procedures link to multiple orders of governance – WHO and EU above the states, and regional and local governments below the national level. The impact of these measures is analysed through the lens of a variety of dimensions that characterize functional democratic governance (Rule of Law and Democratic Participation; Human and Minority Rights; Trust; Economic Sustainability). LEGITIMULT qualifies the different trade-offs required within and across these dimensions in order to effectively and quickly deal with a crisis such as Covid-19, while at the same time maintaining a level of democratic governance and ensuring that any limitations to democratic standards are limited. These final trade-offs within and between the different dimensions of democratic governance in crisis management are gathered in a set of policy recommendations, tailored to different recipients, and developed through extensive consultation with stakeholder groups throughout the project. Citizens, policy makers and practitioners are involved in the experimental phase of the project, where interactive learning and practical tools are tested but also co-designed and co-refined with relevant stakeholders in a participatory way. Policy recommendations and practical tools merge into a toolkit for legitimate crisis management, ready for use in possible futures crises.

I.   Data Management Plan Framework

1. *Obligations for data management*

Partners obligations concerning data management are outlined mainly in Articles 13 (Confidentiality and Security), Article 15 (Data Protection), Article 16 (Intellectual Property Rights (IPR) – Background and results – Access Rights and Rights of Use) and directly addressed Annex 5 of the Grant Agreement. Latter required that:

The partners must manage the digital research data generated in the action ('data') responsibly, in line with the FAIR principles and by taking all of the following actions:

- establish a data management plan ('DMP') (and regularly update it)

- as soon as possible and within the deadlines set out in the DMP, deposit the data in a trusted repository; if required in the call conditions, this repository must be federated in the EOSC in compliance with EOSC requirements

- as soon as possible and within the deadlines set out in the DMP, ensure open access (....)

- provide information via the repository about any research output or any other tools and instruments needed to re-use or validate the data.

- sensitive information with a security recommendation must comply with the additional requirements by the granting authority

2. *Timeline and Template*

The present update of the Data Management Plan is considered deliverable 9.8 (D9.8) of the project, and builds up on the current Data Management Plan (D9.4). At the end of the project, in September 2025, a final report on the DMP (D9.12) will be prepared.

The Data Management Plan was drafted following *Horizon Europe Template* guidelines*,* as encouraged by the Granting Authority.

II. Data Management Plan

1. *Data Summary*

Purpose of the data collection/generation in the LEGITIMULT project is to identify and evaluate the legal measures taken by 31 European governments, in relation to their impact on multilevel governance. This is done through the creation of datasets highlighting how these procedures link to multiple orders of governance – WHO and EU above the states, and regional and local governments below the national level. Datasets will be made available in deliverables 1.2 and 3-6.4. The impact of these measures is analysed through the lens of a variety of dimensions that characterise functional democratic governance (Rule of Law and Democratic Participation; Human and Minority Rights; Trust; Economic Sustainability). Final trade-offs within and between the different dimensions of democratic governance in crisis management are gathered in a set of policy recommendations, tailored to different recipients, and developed through extensive consultation with stakeholder groups throughout the project.

LEGITIMULT research is being carried out through different Work Packages (WP). Each Work Package generates and re-uses previously collected/published data as basis of its research purpose. In most cases re-used data is already publicly available under clear re-use licenses. However, it will be Work Packages' responsibility to enquire and obtain clear access licenses and create data access agreements when appropriate. They will be supported by their institutions competent data management expert, privacy/ data protection officer, or Eurac Research data management team and Legal Office in doing this.

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Data Types and formats

The project generates and re-uses mainly text documents including published research and legal texts, reports, public documents and announcements, government correspondence, media clippings, notes from participant observation, survey data, statistical data, audio visual data from interviews and focus groups, databases (incl. bibliographical databases). Some data are also being produced as part of the communication and dissemination strategy. This mainly consist of interviews, podcasts and short video clips of the researchers' work. **One podcast was already realised, and a second one is being prepared.** They will be permanently accessible on the project website with links to the social networking platforms used.

Below an overview on the data formats used on this project:

Data type	Format	Notes
Textual data	.pdf or .odf .docx Physical data (book)	.docx only for text processing during the project, no long-term storage;
Survey and statistical data	.csv	If proprietary statistical programs (such as Stata or R) are used for processing survey and statistical data, non-proprietary file formats have to be used when exporting data for storage and sharing.
Structured data	.csv .json .xml	
Pictures	.tiff (preferred) .jpeg .png	
Audios	.mp3 WAVE	WAVE in case of long-term storage
Video	.mp4 .AVI	

Data size, origin and utility

Given the different above-mentioned dimensions covered by the research and the fact that each WP has a different thematic focus, the expected size of data generated and re-used can be defined only at the end of the project.

As mentioned above, the project´s data can be divided in reused and newly generated data. In the frame of some activities, data is being generated through desk research, interviews, surveys, workshops, and observation, that will support the interpretation of results. Some of those data are the basis for other WPs research. Most project data is a reuse of legislation, scholarly or practitioner literature (e.g. journal articles, monographs, book chapters), case law and legal databases. The project accesses already existing databases and indexes. **The Oxford Covid-19 Government Response Tracker or Regional Authority Index is for example being used by most WPs.** As mentioned, certain Work Packages build their research also on the findings of other WPs. All data will directly or indirectly serve the end goal of drafting policy recommendations or the development of a number of tools and activities, including an e-learning tool for decision-makers, a practitioner's course and citizen assemblies.

Data might be useful to other researchers, university students, policy makers on all levels (local, regional, European) and citizens.

2. *FAIR Data*

Findability

Data selected for long-term storage are identified by persistent identifiers (DOIs). LEGITIMULT uses primarily the repository Zenodo (https://zenodo.org/) to assign DOIs to data generated by the project. If data re-used by the project already have persistent identifiers (DOI or other), such persistent identifiers will be consistently used when referring to the re-used data.

Metadata are generated using Zenodo metadata fields (Zenodo references the DataCite metadata schema). At a minimum, metadata elements include: persistent identifier, publication date, title, author(s), description, access rights, license, grant, language and keywords. **It was decided not to agree on specific keywords, because the uploads contents vary. It is up do each researcher deciding what the appropriate keywords are. The uploads´ belonging to the project can in any case be deducted from its affiliation to the Zenodo LEGITIMULT community and the metadata including the name of the grant.**

Metadata of objects in the Zenodo repository can be harvested through open protocol (OAI-PMH). All metadata in Zenodo is licensed CC0 (even when the related data files have a different license). Zenodo itself is harvested by OpenAIRE; Zenodo also passes citation information to DataCite and scholarly aggregators.

During the lifetime of the project, raw data and working drafts are findable in partners institutional storage, with restricted access to who is actively working on them. Project documentation, literature and/or bibliographies, data processed for analysis, working drafts and pseudonymised **or in some cases (WP5) already anonymized data** are shared on the project's MS Teams. The Teams is accessible to all project collaborators. **Working drafts for revision of partners are often shared also via institutional email.** No name coding system is required for saving documents in the Team folder. Nonetheless, data and documents shall be easily findable and distinguishable by each collaborator and organised by work

package. **They usually include a clear title, the addition "draft version" (if applicable) and date of last change (if applicable).**

Accessibility

Repository

Data selected for long-term storage are deposited in the repository Zenodo (https://zenodo.org/), **where a project-specific Community was created**. The repository assigns DOIs to data and the persistent identifiers resolve to the digital objects which they identify. For file sizes below 50GB per record, no specific arrangements are necessary to deposit in Zenodo.

Some partners may also use institutional repositories for long-term storage. In those cases, data will not be duplicated in Zenodo but a metadata record for those data will also be included in the project Zenodo Community.

Data deposited in Zenodo can be found via direct searches on Zenodo but, more importantly, Zenodo is also harvested by scientific aggregators, including for example openAIRE and DataCite Commons. All datasets the project team deposit in Zendo will also be findable on the project website that is automatically generated within openAIRE Explore. **The repository itself is also accessible from the official LEGITIMULT website.**

Data

The project will make data as open as possible and as closed as necessary.

Data accessibility will occur on three levels:

Accessibility	Type of Data	Notes
Partners' Institutional Storage	Raw data Working drafts	Data security measures foreseen by the partners' institutions have to be followed.
LEGITIMULT Microsoft Teams/Sharepoint	Project documentation Literature and/or bibliographies Data processed for analysis Working drafts Pseudonymised data	Accessible to partners and project collaborators only. Data related to human research subjects (e.g. interviews, focus groups, notes of observations during citizen juries) **can** be shared in pseudonymised form but only through this dedicated workspace. The pseudonymisation keys have to stay with the partners.

Zenodo	Project outcomes Analysed data Literature and/or bibliographies Anonymised data	Long-term storage; Data related to human research subjects will occur only in anonymised form, as stated in the Ethics Plan. Links to relevant data will be accessible on the official LEGITIMULT website. **Those data can be accessed also via project website.**

Accessibility of data collected through human research subjects is subject to their consent to the publishing of their data. Latter can be withdrawn. In such a case, no further data will be collected, and any data related to the participant already collected and not yet anonymized will be destroyed (see Ethics Plan *3. Informed consent procedures*).

Since selected data will be deposited in Zenodo, they will be accessible by using open and standardised access protocol (HTTPS). There are no restrictions on the access of the openly accessible data, therefore the identity of the person accessing those data will not be ascertained. For data processed by partners during the project, and shared between partners via Teams, only those people who have given access rights to the storage medium (partners institutional storage, LEGITIMULT Teams) have access to data.

No data access committee will be necessary for this project and no embargo period for data of this project is foreseen.

Metadata
Metadata of data selected for long-term storage on Zenodo will be made openly available and licensed under the public domain dedication CC0, as per grant agreement.

Data and metadata will remain available and findable in Zenodo also after the project's ending. The project Zenodo Community will be curated by the project Coordinator for 3 years after the end of the project. If access to some data needs to be restricted for whatever reason, the metadata of those data remain available and findable in Zenodo.

Interoperability
Appropriate formats for long-term storage will be used (e.g. pdf/odt for text, csv for spreadsheets, csv/json/xml for structured data, WAVE/mp3 for audio, AVI/mp4 for video).

For sharing bibliographic data, **unlike initially indicated, not all the WP are using** Harvard citation style. **Some WP also use APA. All styles are however commonly used citing formats.** When developing interview/focus group guides and surveys, standard question banks will be considered when possible and their use clearly documented.

No uncommon or project specific ontologies or vocabularies are planned to be generated during the project apart from the abbreviation of the project title itself, LEGITIMULT. **So far, no qualified references were indicated when uploading on Zenodo.**

Reuse
Methodology and tools are being shared alongside data whenever possible, or clearly described in README files deposited together with data. README files will include information about methodology (e.g. participant recruitment, interview/focus group/survey design, decisions taken during data analysis, tools used for data analysis), reference to software needed to access data. **The coding of WP1 comes with a with a codebook in PDF format. Another datasets are codes that include other datasets such as the Covid-19 tracker, LAI, and RAI. They will include an accompanying document (pdf) detailing the sources for the data.** For data re-used by the project, through bibliographies will be provided.

No specific data documentation standards is being followed. Data are made freely available via Zenodo under Creative Commons Attribution License (CC-BY), in line with the obligations set out in the Grant Agreement. Data produced during the project and made publicly available will be useable by third parties also after the end of the project.

Quality assurance processes will be further developed during the project and will in any case respect the minimum standards set in the project´s Ethics Plan. Each WP conducted literature review according to the criteria and guidelines set out by each WP leader, also by using internationally recognised tools such as electronic databases (Web of Science, Scopus, **Proquest** and International Political Science Abstracts). Literature review was in relevant cases limited to relevant literature published between February 2020 and December 2022. **The search of literature in WP5 extended to 2007 to include the financial crisis as well. WP6 also used the platform Zotero to identify and remove any duplications. Peer checks among work packages were organised.**

3. *Other Research Outputs*

In addition to the management of data, physical research outputs could be generated during implementation of workshops. Those will be digitalised and uploaded on Zenodo whenever possible. There might also be a re-use of some physical outputs (i.e. non digitalised books). In this case, given the geographic distance among partners, sharing among those will be limited to metadata or scans of relevant parts/chapters.

4. *Allocation of Resources*

Given that all data storages used in LEGITIMULT (Teams, Zenodo) are used for free or already covered by partner´s institutions, there are no additional project costs foreseen to make research outputs FAIR. The only costs occurring indirectly are the data management and community curation human resources costs.

The Project Management Team is responsible for the data management together with each Work Package leader, backed by the respective competent support offices of their home institutions.

At this stage, no time limit is foreseen for the long-term preservation of the data. Zenodo community curation will be continued for 3 years after the projects ending.
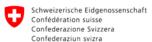
5. *Data Security*

Dara are stored in two locations:

Researchers' institutional platforms

Draft and working versions, as well as first hand interviews or similar data are saved by each collaborator in an institutional storage. It is Work Package leader's and/or each institution's Data Management Expert and Protection Officers' responsibility to ensure that this might be an institutional, safe and backed-up workspace, that allows data recovery. It is also their duty to ensure that personal data and related documentation are processed and stored in an ethical as well as General Data Protection Regulation (GDPR)and national laws compliant manner. As also stated in the Ethics Plan (Chapter 5), confidentiality of all information will be ensured by an anonymization and pseudonymization policy and the storage of confidential data in password protected spaces. Each consortium member which collects identifiable data develops a process of data pseudonymization during the project, and anonymization after the project ends. Raw data (original interviews, audios, videos, transcripts etc) sharing between partners can only happen via LEGITIMULT Teams after **at least** pseudonymization and will respect data subjects' rights and the terms of the Grant Agreement and Consortium Agreement. However, pseudonymization keys are never shared and always retained by the data owning partner.

Project Teams

The official workspace for the   project LEGITIMULT will be a dedicated Microsoft Teams, accessible only to project collaborators upon invitation and with individual login credentials. The Microsoft Teams is covered by Eurac institutional backup. For each new addition, Eurac Project Manager shall be informed. It is meant to be a space for communication, collaboration, sharing of material and literature and short-term data storing. Each deliverable or other output and related data used for the creation of such shall be uploaded in the WP-Teams folder. The general rule is that each collaborator shall work in his/her WP folder only. Access to other Work Package folders is allowed but should be limited for research or coordination purposes. Under no circumstance editing, renaming or moving files of a Work Package folder other than the own is allowed, unless previously agreed with the respective Work Package leader.

If necessary and appropriate, a new, private and/or secured Teams sub-channel is installed. This will occur in agreement with Eurac Management.

After the project ends, personal data will be anonymised. Only anonymised data will be stored on the repository Zenodo.

6. *Ethics*

Ethical aspects concerning data sharing and measures were addressed in the Ethics Plan (Deliverable 9.1). An Ethics Board has been appointed for the project. On the basis of semestral reports submitted by the partners, the Ethics Board **did feedback the management of ethical considerations through an annual ethics report**. Worth to mention is also that, as stated and further specified in the Ethics Plan, for the data collection of interviews and focus groups, consent procedures must include a consent and information sheet as well as the interview/focus group process, data protection guidelines and consent rules before the start of the interview/focus group. For surveys, information sheets about the project and the use of provided data, as well as how to withdraw consent, will be made available online. Participants must be reminded of the consent procedure once they have completed the survey.

Moreover, the Data Management Plan is always to be read in conjunction with the obligations under the Grant Agreement, as well as the consortium's and individual partner organization's obligations under national and international law, such as the GDPR and national data protection laws.

7. *Others*

University of Leiden will additionally follow the Dutch National Center of Expertise and Repository of Research Data (DANS | Centre of expertise & repository for research data (knaw.nl)). It is a repository in line with the European and projects standards.

University of Antwerp follows the university internal research data management policy (https://www.uantwerpen.be/en/research/policy/open-science/researchproces/research-data-management/)