

Co-UDlabs

BUILDING COLLABORATIVE URBAN DRAINAGE RESEARCH LABS COMMUNITIES

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D4.1. Data Management Plan

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BACKGROUND: ABOUT THE CO-UDLABS PROJECT

Co-UDlabs is an EU-funded project aiming to integrates research and innovation activities in the field of Urban Drainage Systems (UDS) to address pressing public health, flood risks and environmental challenges.

Bringing together 17 unique research facilities, Co-UDlabs offers training and free access to a wide range of highlevel scientific instruments, smart monitoring technologies and digital water analysis tools for advancing knowledge and innovation in Urban drainage systems.

Co-UDlabs aims to create a urban drainage large-scale facilities network to provide opportunities for monitoring water quality, UDS performance and smart and open data approaches.

The main objective of the project is to provide a transnational multidisciplinary collaborative research infrastructure that will allow stakeholders, academic researchers, and innovators in the urban drainage water sector to come together, share ideas, co-produce project concepts and then benefit from access to top-class research infrastructures to develop, improve and demonstrate those concepts, thereby building a collaborative European Urban Drainage innovation community.

The initiative will facilitate the uptake of innovation in traditional buried pipe systems and newer green-blue infrastructure, with a focus on increasing the understanding of asset deterioration and improving system resilience.

LIST OF ACRONYMS

Acronym / Abbreviation	Meaning / Full text
СА	Consortium Agreement
DMP	Data Management Plan
DOI	Digital Object Identifier
EC	European Commission
FAIR	Findable, Accessible, Interoperable, Reusable
GA	Grant Agreement
GDPR	General Data Protection Regulation
JRA	Joint Research Activities
NA	Networking Activities
OA	Open Access
ORDP	Open Research Data Pilot
POPD	Protection of Personal Data
RI	Research Infrastructure
ТА	Transnational Access
UDS	Urban Drainage Systems
WP	Work Package

EXECUTIVE SUMMARY

This deliverable is the Data Management Plan (DMP) of the Co-UDlabs project.

This document defines the general principles for data management within the project, the data sources and the persons responsible for the handling of research data during and after the end of the project (including data security, storage and archiving), which data will be made openly available and the definitive list of complete datasets (Annex 1).

This DMP describes how data will be managed during the project according to: i) the FAIR Data Management approach¹ that the EC has recommended to be used in Horizon 2020 actions, ii) the requirements of the article 29 of the Grant Agreement (specifically art. 29.3 - obligation to ensure open access to research data), iii) any national legislation regarding the protection of personal data (POPD, as described in Deliverable 11.1), iv) the protection of Intellectual Property Rights (IPR) and possible commercial confidentiality of Transnational Access users and partners and participants in the Joint Research and Networking Activities. In addition, the project participants will at all times meet their obligations on the access rights and non-disclosure of data as set out in the project Consortium Agreement. Nothing stated in this Data Management Plan removes any rights or obligations as set out in the Consortium Agreement.

The DMP outlines how the partners will collect data, will catalogue it and, when appropriate, how they will make it available on an open access basis during and after the project. The plan also describes the mechanisms the consortium will use to ensure that as much of the data collected during the project is made available as soon as is practicable.

The DMP is intended to be a living document in which information will be updated as the implementation of the project progresses and when significant changes occur.

This document provides an updated version of the DMP which includes the information available at the end of the first reporting period (M1-M18). This document will be updated again at the end of the second reporting period (April 2024 and April 2025). Each version of the DMP will also be reviewed by all partners at each General Assembly meeting.

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



1. CO-UDLABS DATA MANAGEMENT: GENERAL PRINCIPLES

The Data Management Plan defines the general principles for data management within the project, the data sources, and the persons responsible for the handling of research data during and after the end of the project (including data security, storage and archiving), which data will be made openly available and the definitive list of complete datasets and DMP of the project. In the following, we will specify the Co-UDLabs approach to ensure that the data are i) findable, ii) openly accessible and iii) interoperable. In addition, we will describe how we are going to increase the re-use of the collected datasets.

1.1. GENERAL DATA POLICIES

The project participants will at all times meet their obligation on the access rights and non-disclosure of data as set out in the project Consortium Agreement. Nothing in the Data Management Plan removes any rights or obligations as set out in the Consortium Agreement.

The project will follow the H2020 Guidelines² as regards open access and data management and also adhered to the principles of the data management policies of the Co-UDlabs partners and national legislation regarding the Protection of Personal Data (Deliverable 11.1). The consortium will ensure that as much of the data collected during the project is made available as soon as is practicable. Yet, according to the principle "as open as possible, as closed as necessary", certain datasets can remain closed given appropriate justification.

The Data Management Plan will be reviewed by all partners at each General Assembly meeting and a revision will be re-issued every 12 months and at the end of each reporting period (October 2022, April 2024 and April 2025).

1.2. DATA SOURCES

Co-UDlabs will generate data from three different types of activities: a) Networking Activities (NA), b) Transnational Access (TA) and c) Joint Research Activities (JRA). The characteristics of the data generated from these activities are different.

- □ Networking Activities (NA) are mainly aimed at project dissemination and engagement of UDS actors into the Co-UDlabs network of RI, data harmonization procedures within the different RI of Co-UDlabs, training activities and the management of TA proposals. Data generated for and from these activities, such as mailing lists, lists of participants in events, or data related to transnational access project proposals, will be managed with special attention to the Protection of Personal Data. Due to the sensitive nature of this kind of data, we ensure that access to datasets related to NA will be restricted to the consortium.
- □ Joint Research Activities (JRA) experiments are conducted by Co-UDlabs partners either in the different experimental facilities offered by the project or in additional experimental sites, with an emphasis on joint experiments with multiple participants, often trying different tools and techniques as part of a coordinated experimental plan.
- □ **Transnational Access (TA)** data will be generated by user groups external to the project consortium, that are selected in the framework of two calls for proposals (October 2021 and October 2023). The rules

² https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf



and guidelines applied for the management of data generated during the Transnational Access will be in full agreement with those defined by the European Commission for this type of activity. Prior to starting the access period, user groups must produce a project specific Data Management Plan (following the guidelines on FAIR data management in Horizon 2020 and with the support and approval of the facility providers) explaining how the data will be generated, managed and stored so that researchers outside the user team can make use of it, in support of the EU's Open Science Strategy. Only once this DMP is approved by the TA facility provider the User group may then access the facility.

1.3. DATA MANAGEMENT RESPONSIBILITIES and PROCEDURES

In Co-UDLab we define responsible persons for the individual data sources and activities. This ensures that the necessary processes are in place in the various activities to comply with the FAIR principles.

In NA, as a general principle, the responsibility for storage and handling of the data rests with the lead partner of each task which involves data collection. All the project partners have identified a Data Protection Officer as stated in Deliverable 11.1. POPD Requirement No. 1. Deliverable 11.1 also contains a list of activities which specifically imply the collection, treatment, or management of personal data in compliance with the GDPR and identifies the respective WP, lead partners and relevant contact persons in charge of POPD authorizations. These NA activities include:

- The establishment of a database of relevant stakeholders, including staff employed by project partners, communication and dissemination recipients, and/or potential early users or adopters of project outputs (WP1 and WP4);
- □ The open competitive calls for applications and proposals for the Transnational Access to Co-UDlabs' research infrastructures and any related outreach events (e.g., webinars and hackathon events) as developed in WP5 and WP9;
- □ The registration forms for all training events (e.g., webinars, seminars, workshops) developed in WP3 and other events that will be organised by the project (WP4);

In regards to the management of research data in the **JRA** and **TA** activities, the Co-UDlabs consortium has agreed on the following procedure for efficient data management:

- □ Since the large number of research activities in Co-UDlabs make the management of the DMPs a complex issue, each JRA WP and each TA project in Co-UDlabs will require a specific DMP.
- Make use of an online platform such as DMPOnline platform (<u>https://dmponline.dcc.ac.uk/</u>) to create, review, and share the different data management plans for its research activities, by means of a Horizon 2020 DMP template. This tool will assist the different transnational teams which operate remotely to work together.
- The responsible parties stated below will coordinate and ensure that the specific DMPs will be created before the start of the experiments for each JRA and TA activity (Table 1). The project co-ordinator will be the responsible party for checking that specific DMPs and datasets follow the project DMP and H2020 FAIR Guidelines (Table 1).

In JRA, as a general principle, the responsibility for storage and handling of the data rests with the WP leader. It is responsibility of WP leaders or another person delegated by him/her for that task, to co-ordinate data collection with participants of the JRA, to process and validate data. It is responsibility of WP leaders to ensure that one DMP for each JRA is created before the start of the experiments. A definitive version of the DMP will be finished one month after the end of each JRA.

Work Package Leaders or another person delegated by him/her for that task, are responsible for supervising adequacy and updates of the corresponding DMP and the supervision of the management of the data within each Work Package, including the curation of the data before uploading datasets to a public repository. Experimental datasets obtained will be made openly available on Zenodo after an appropriate quality check and approval from all the partners involved and a final validation by the project coordinator or another person delegated by him for that task. The project co-ordinator will also be the responsible for checking that specific DMPs and datasets follow the FAIR Guidelines.

In **TA** projects, as a general principle, the responsibility for storage and handling of the data rests with the user group originally collecting it whit the supervision of facility providers. It is the responsibility of Co-UDlabs facility providers to indicate to each user group how to ensure adequate data acquisition, processing and validation, according to Co-UDlabs principles and rules, and that sufficient resources will be made available from the project funds to complete these tasks. User groups should prepare and maintain a specific DMP for their TA project, and the corresponding facility provider will asupervise the DMP development and curation of the generated datasets. A definitive version of the DMP will be finished one month after the end of each TA access period. All data need to be shared between user groups visiting a facility and the corresponding facility provider. The project co-ordinator or another person delegated by him for that task will be responsible for checking that specific DMPs follow the FAIR Guidelines.

The data from Co-UDlabs will be made openly accessible once it had been processed into a final format, organized, catalogued and checked so as to be free of error, subject to any constraints related to compliance with any national legal requirements (e.g., GPDR), the protection of IPR and commercial confidentiality.

Open adoption of standard methods and protocols for data acquisition, validation and data sharing will be developed within WP2, which will include internally- oriented activities to ensure interoperability considering such issues as data formats, and externally-oriented activities to foster smart governance and policy as well as public access to UDS operational data. After a first assessment of the existing sensors and data management systems in the facilities of Co-UDlabs research infrastructures (RIs), a unified metadata structure will be drafted for the main variables recorded in the RIs and will be included in future versions of the DMP.

An understandable data structure will be always used for any data collected. An adequate description of the context, measurement and processing methods will be made available for the data that will be made publicly available. Adequate documentation will be provided so that the open datasets will be searchable by third parties. Each open access dataset will include information on the project activity, experiment id, sensors used (if relevant), their calibration and validation, the file and parameter naming conventions and comments on any issues affecting data quality. If dataset refers to virtual testing, the metadata will include information on the model, the version of the algorithm and parameters and other inputs used. All data will be checked for accuracy prior to being made publicly available.

After generating and preparing a dataset, and the dataset being approved by the co-ordinator, user groups and partners are required to i) upload it to a Zenodo repository, which enabled the dataset to be assigned a unique DOI (Digital Object Identifier), ii) list it in Annex 1 of the Data Management Plan and then iii) state whether the data will be open access following the principles outlined above. If this is not possible then the reason is given as to why the dataset is not to be open access. These decisions will be reviewed periodically at

the subsequent General Assembly meetings. If any objection is raised as to the status of any dataset, this should be discussed at a General Assembly and then a final decision on the status of a dataset is taken by the General Assembly following the decision making process described in the Consortium Agreement.

At M17, UDC drafted and shared with partners a "Guide to upload CO-Udlabs JRA and TA Datasets to ZENODO" (Annex 2) This document is a step-by-step guide to upload datasets generated in the scope of the Transnational Access program or the Joint Research Activities developed in Co-UDlabs project. The project will host the open access data electronically through Co-UDlabs Zenodo а community (http://www.zenodo.org/coudlabs) and all upload datasets will be linked to this project community and to the Co-UDlabs page on OpenAIRE³. In addition to this official project data repository, partners and user groups generating the data may also store this data in a repository located at their institution securely and in line with institution's policies.

The following table summarises the procedure and responsibilities for data management within the different types of activity, as described above.

		Networking Activities	Joint Research Activities	Transnational Access	
1	Create and update DMP	Not Applicable	WP leader	User group leader	
2	Generate and/or collect data	Lead partners involved in each WP. Datasets will be managed according to personal data	Partners involved in each WP.	User group leader.	
3	3 Organize and prepare datasets. Is it suitable for open access?	collection and treatment procedures specified in Deliverable 11.1	One DMP is prepared per JRA WP to manage datasets.	One DMP is prepared per TA project to manage datasets.	
4	Supervising creation, maintenance, and implementation of DMP	Not Applicable	WP leader	Facility provider	
5	Curation/validation of dataset before being published	Not Applicable	WP leader	Facility provider	
6	Check adequacy of DMP and datasets with GA and H2020 FAIR Guidelines	Not Applicable	Project coordinator	Project coordinator	
7	Upload of datasets to Zenodo	Not Applicable	Partners who originally collect data.	User group leader	

Table 1. Responsible persons for the different sources (top row) and data management procedures (left column)

³ <u>https://explore.openaire.eu/search/project?projectId=corda</u> h2020::282610cf9c591c53387ffeb0e9b2a7d1

2. FAIR DATA PRINCIPLES

2.1. MAKING DATA FINDABLE, INCLUDING PROVISIONS FOR METADATA

The consortium agreed to deposit the data and publications generated by the project in the Zenodo repository, where a project community has been created (<u>https://zenodo.org/communities/coudlabs/</u>). The Zenodo repository complies with the principles of FAIR data, offering several useful features to make data findable.

Zenodo allows third parties to search, find, understand and download data with attribution. Datasets generated or collected during JRA or TA experiments will be identified with a consistent and uniform **naming convention**, to be defined by the consortium as soon as the first research datasets are ready. Concerning **metadata**, domain-specific data models, such as WaterML2.0, and metadata will be supplied to enable re-use. Discoverability of the datasets will be ensured by including a clear abstract / description and relevant keywords, that should include the project name acronym.

2.2. MAKING DATA OPENLY ACCESSIBLE

According to article 29.3 of the Grant agreement, Co-UDlabs partners must:

a) deposit in a research data repository and take measures to make it possible for third parties to access, mine, exploit, reproduce and disseminate — free of charge for any user — the following:

(i) the data, including associated metadata, needed to validate the results presented in scientific publications, as soon as possible;

(ii) other data, including associated metadata, as specified and within the deadlines laid down in the 'data management plan';

b) provide information — via the repository — about tools and instruments at the disposal of the beneficiaries and necessary for validating the results (and — where possible — provide the tools and instruments themselves).

Our policy will be to make all research data resulting from the project openly available, unless there is a legitimate reason to restrict access. It is important to note that, according to the article 29.3 of the GA, the consortium does not have to ensure open access to all research data: exceptions are allowed according to the relevant policy of Horizon 2020.

2.3. MAKING DATA INTEROPERABLE

Data are interoperable when they can be exchanged between and re-used by researchers, institutions, organizations, countries, etc.. To this aim, we will prescribe data models which enforce standard formats units and conventions. Also, we will prioritize open formats and open-source software, whenever possible.

Work Package 2 (WP2) is specifically dedicated to ensuring interoperability by definition of common standards, protocols and methods. More detailed information on interoperability and data models will be provided, if appropriate, in the next versions of the Data Management Plan.

2.4. INCREASE DATA RE-USE

Most of the data being produced by the project will be shared and made accessible under appropriate licenses, e.g. Creative Commons 4.0 CC-By, or CC By-SA, for verification and re-use, according to the provisions foreseen



in the CA, including after the end of the project to avoid possible conflicts or duplication/overlapping of activities with other projects.

Custom licences to restrict access should be avoided. Nevertheless, embargo periods between 6 and 24 months are possible to restrict access to the archived version of the data in the Co-UDLabs digital repository, given appropriate justification.

3. ALLOCATION OF RESOURCES

The research data collected, generated and/or processed by the project will be uploaded and preserved during and after the end of the project in the Zenodo repository. The repository allows uploading data free of charge with the size limited to up to 50 GB per record. Currently there are no costs for preserving data in this repository and, thus, no costs have been foreseen for data storage by the consortium. If any unforeseen costs related to the open access of research data occur, it is possible to be charged on the Program given its eligibility status for reimbursement, according to the articles 6 and 6.2 of GA.

Moreover, each partner has devoted sufficient human resources to respect the requirements set out by this deliverable D4.1 "Data Management Plan". For more information on responsibilities, see section 1.2 of this document.

4. DATA SECURITY

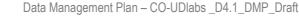
All data will be stored securely to ensure its integrity and, if necessary, compliance with personal data protection regulations, IPR protection and commercial confidentiality. Devices that contain data will be password protected and securely stored when not in use. Datasets available online will be in a password protected environment, such as the project's SharePoint.

The public repository Zenodo has been selected as a long-term secure storage of the Co-UDlabs project research outputs given its features fulfilling technical and legal data security requirements and long-term preservation. Other open access data generated such as training material or webinars will be not password protected and be made available also via the open access data repository Zenodo.

In addition to this official project data repository, partners generating the data may also store this data in a repository located at their institution securely and in line with the institution's policies. Data security and safety during creation, processing and analysis will be responsibility of the party who generates it, being facility providers responsible for providing secure data storage as part of any Transnational Access. Sensitive data, if any, will be stored and transferred encrypted.

5. LONG TERM STORAGE AND ARCHIVING

Open access data will be uploaded to the Zenodo data archive for long term storage and preservation. In addition, at the end of the project the coordinator will archive any project data (not containing personal data or commercially confidential information) on the project SharePoint, that is a repository protected by a password, and will make this available to all the partners. The data shared through the repository will be preserved as described in the GA (Article 18: for at least five years after the project ends). Storage and archiving of peer-reviewed scientific publications relating to Co-UDLabs must comply with the Open access principles



described in GA (Article 29.2.: Each beneficiary must ensure open access). The partner or user group producing any publication will be responsible for storing these publications in an enduring repository which is compatible with OpenAIRE (it can be institutional, subject-based or centralised) as soon as possible after publication. Such publications will be listed and linked to Co-UDlabs page on OpenAire and also provide links for access on the project website.

6. LEGAL AND ETHICAL ASPECTS

All partners and Transnational Access user groups must follow internal data policies of each institution where data is generated and comply with national legal requirements with regards to the protection of personal data, which can be consulted in Deliverable 11.1 (Protection of Personal Data). This deliverable states that

"In compliance with the requirements of the GDPR, all requests of personal data performed in the execution of the project's tasks and activities will have to be accompanied by a disclaimer clearly stating that anonymised inference based on collected data may be used for statistical purposes and/or periodic reporting on project progress and implementation" and that to safeguard the privacy of personal information submitted by individuals, Co-UDlabs will apply, whenever necessary, anonymisation and pseudonymisation techniques to the data that it collects or is provided with (that contains personal data). Aggregated anonymised personal data may be used in project reports, dissemination, and/or communication activities and products, especially whenever required by compliance criteria in the evaluation of project implementation and achievements".

The Co-UDlabs project partners and Transnational Access user groups must also comply with article 34 concerning ethical principles (including the highest standards of research integrity) and applicable international, EU, and national law (see Deliverable 11.2: Ethics Requirements). Due to the nature of the Urban Drainage Systems data, no fundamental ethical issues that can have an impact on data sharing is foreseen.

7. SUMMARY OF CO-UDLABS DATA MANAGEMENT PRINCIPLES

The following general principles will be followed to support project partners and Transnational Access user groups to create and manage the required data Management Plan (DMPs) within the Co-UDlabs project:

- □ Responsible persons are identified (Table 1) for the different data sources and data management procedures. This ensures that the required processes are installed in the Co-UDlabs project.
- □ Since the large number of research activities in Co-UDlabs make the management of the DMPs a complex issue, each Joint Research Activity and each Transnational Access project in Co-UDlabs will require a specific DMP.
- □ An online tool, such as DMPOnline platform (https://dmponline.dcc.ac.uk/) will be used to create, review, and share the different specific DMPs in order to assist the different transnational teams which operate remotely to work together .
- Pre-defined common identifiers to uniquely distinguish experiments and data management plans in Co-UDlabs will be available to all partners and user groups producing DMPs.

- □ DMPs and good practices will be shared between Work Packages Leaders, facility providers and TA user groups to ensure consistency and synergies along the full project.
- □ The project coordinator will create and maintain a database of DMPs and will check that specific DMPs and datasets follow the project DMP and H2020 FAIR Guidelines.
- □ After generating and preparing a dataset, and the dataset being approved by the coordinator, user groups and partners will be required to i) state whether the data will be open access. A valid justification will have to be provided in case the access to a given datasets needs to be kept closed. These decisions will be reviewed periodically at the subsequent General Assembly meetings. If any objection is raised as to the status of any dataset, this should be discussed at a General Assembly and then a final decision on the status of a dataset is taken by the General Assembly following the decision-making process described in the Consortium Agreement, ii) list each dataset in Annex 1 of the Data Management Plan, and iii) if the dataset is open, upload it to the Zenodo repository where a project community will be created, which enables the dataset to be assigned a unique DOI (Digital Object Identifier).

ANNEX 1 – REGISTER OF PROJECT DATASETS TO DATE (M18)

Date Added to Data Register	Description of Data (Data, metadata, format and size)	Type of activity (NA, JRA, TA)	Status of Data (Open / Restricted)	Justification of Status / Other comments	Location of Data (institution and DOI zenodo)
01/07/2021	Database of Co-UDlabs stakeholders (continuously updated). Text and spreadsheet format. Less than 1 MB	NA			GRAIE EURONOVIA
13/10/2021	List of attendees to the Co-UDlabs Webinar "Introduction to Co-UDlabs" . Text and spreadsheet format. Less than 1 MB	NA/TA			DELTARES UDC
	List of attendees to the Co-UDlabs Workshop on "Urban Drainage Practice and Research Needs ". Spreadsheet format. Less than 1 MB.	NA		Includes personal data (GPDR). Data procedures in D11.1	IKT
, ,	List of attendees to the Co-UDlabs Hackathon on Transnational Access to RIs. Spreadsheet format. Less than 1 MB	TA		Includes personal data (GPDR). Data procedures in D11.1	DELTARES
	List of attendees to the Co-UDlabs 2 5th EJSW - European Junior Scientists Workshop on "Monitoring urban drainage systems and rivers". Spreadsheet format. Less than 1 MB.	NA			INSA DELTARES
	List of attendees to the Co-UDlabs Live Workshop "Strengthening the links between scientists and practitioners to accelerate the transition towards smart and sustainable urban stormwater management – the CoUDLabs project" at CGLE Carrefour des gestions locales. Spreadsheet format. Less than 1 MB.	NA		Includes personal data (GPDR). Data procedures in D11.1	GRAIE
	List of attendees to the Co-UDlabs 1st Early-Stage Researchers Seminar . Spreadsheet format. Less than 1 MB.	NA		Includes personal data (GPDR). Data procedures in D11.1	UDC
	List of attendees to the Co-UDlabs p re-conference workshop on "Urban Drainage Metrology Toolbox" at Sewer Processes and Networks international conference (SPN). Spreadsheet format. Less than 1 MB.	NA		Includes personal data (GPDR). Data procedures in D11.1	INSA

List of attendees to Co-UDlabs Workshop on "Tapping The Value Of Urban Drainage Systems (UDS) Data" at IWA's World Water Congress (WWC). Spreadsheet format. Less than 1 MB.		Includes personal data (GPDR). Data procedures in D11.1	UDC GRAIE
	NA	Includes personal data (GPDR). Data procedures in D11.1	AAU

ANNEX 2 – GUIDE TO UPLOAD CO-UDLABS JRA AND TA DATASETS TO ZENODO

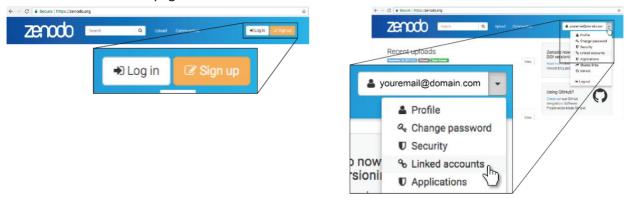
How to upload JRA and TA datasets to Zenodo

Zenodo is a general-purpose open repository developed under the European OpenAIRE program and operated by CERN. This document is a step-by-step guide to upload datasets generated in the scope of the Transnational Access program or the Joint Research Activities developed in Co-UDlabs project. The document is an adaptation of <u>https://instruct-eric.eu/help/other/zenodo-upload-guidelines</u>.

Sign in and new upload

1. Go to zenodo.org. Login to the site or create a new account.

We recommend linking your (new/existing) Zenodo account with an ORCID ID. To link an ORCID ID to an existing account first login as usual, then select "Linked accounts" from the dropdown menu beside your email address on the homepage.



- 2. Click "Upload" to upload a new publication to Zenodo.
- 3. Click "New upload".
- 4. To save an incomplete Zenodo publication at any time click "Save" at the top or bottom of the page. This will not publish your publication unless you click "Publish".

Important note: Once the record is published you will no longer be able to change the files in this upload. This is because a Digital Object Identifier (DOI) will be registered immediately after publishing. You will still be able to update the record's metadata later. If you only want to create a test upload, please do so on Zenodo Sandbox.

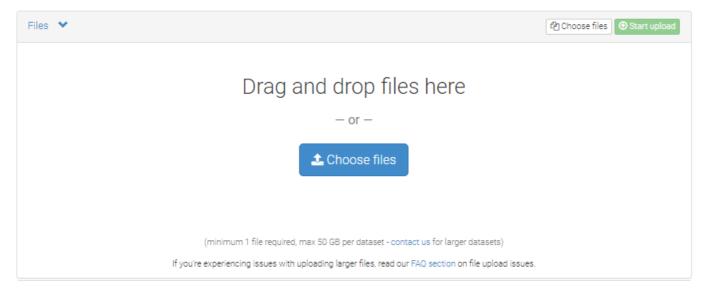
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Files

5. Attach the files for your publication by dragging and dropping, or by clicking *choose files* to browse your local files for uploads. There is a maximum of 50 GB per dataset, if more is necessary contact Zenodo explaining the nature of the dataset and the space needed or split the dataset.

Data Storage Report should be included within the dataset in order to make data more interoperable and reusable. Please, follow Co-UDlabs Data Storage Report <u>Example</u>. The data structure, files naming and metadata must be clear to ensure the use of the data by outsiders.

Files must be uploaded to zenodo by clicking 'Start upload' button (up-right corner in green) before final publication.



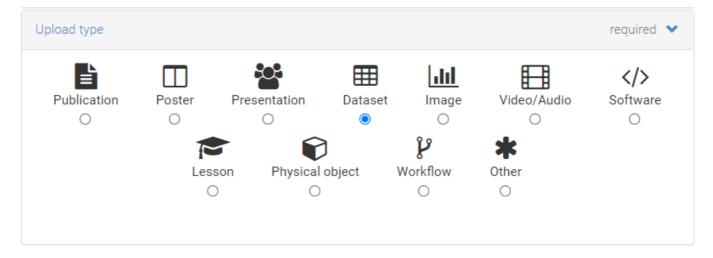
Communities

6. Include at least Co-UDIabs and EC funded research (OpenAire) communities. Feel free to also include communities of authors' institutions. The work will be verified by a 'curator' for the listed communities. A curator is someone who confirms the publication as linked to their community. After the approval of the curator, the work will be tagged with that community.

Communities 🕑			recommended 💙
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Start typing a community name			Q
×	×	× UNIVERSIDADE DA CORUÑA	Water and Environmental Engineering Group
Co-UDlabs. Building Collaborative Urban Drainage research lab co	European Commission Funded Research (OpenAIRE)	Universidade da Coruña	GEAMA: Water and Environmental Engineering Group

Upload type

7. Select 'Dataset'.



Basic information

8. Create a new DOI for your Dataset leaving empty Digital Object Identifier. Datasets uploaded within the scope of the Co-UDIabs project are assumed to be original without a prior DOI. If for some reason the work already has a DOI, please indicate it in this section.

The DOI will be assigned once the work has been definitely submitted. if DOI is needed in advance, use the reserve DOI button.

- 9. Default date is the day of uploading. If the work has already been published elsewhere, enter the original publication date in the text box provided (this is more for publications and communications already published elsewhere)
- 10. Enter the title of the publication in the text box provided. The tittle should follow the next naming convention:

Transnational Access (TA) datasets: 'Co-UDlabs_TA_TAcode DatasetTittle'

Example:

Co-UDlabs_TA_UDC-01-STREET Hydraulic, wash-off and sediment transport experimental data obtained in an urban drainage physical model

<u>Joint Research Activities (JRA) datasets</u>: 'Co-UDlabs_WPX_TXYZ_institution_DatasetNumber Dataset tittle' (Dataset number should be coordinated according the specific DMP for each of the JRA)

Example:

Co-UDlabs_WP8_T812_UDC_001 Identifying sediment deposits from temperature signals

Basic information	required 💙
IIII Digital Object Identifier	e.g. 10.1234/foo.bar
	Optional. Did your publisher already assign a DOI to your upload? If not, leave the field empty and we will register a new DOI for you. A DOI allows others to easily and unambiguously cite your upload. Please note that it is NOT possible to edit a Zenodo DOI once it has been registered by us, while it is always possible to edit a custom DOI.
	IIII Reserve DOI
🛗 Publication date *	2022-07-11
	Required. Format: YYYY-MM-DD. In case your upload was already published elsewhere, please use the date of first publication.
🖉 Title *	Co-UDlabs_TA_UDC-01-STREET Hydraulic, wash-off and sediment transport experimental data obtained in
	Required.

11. Enter each of the authors of the dataset in the text boxes provided. The affiliation and ORCID ID should be entered for each author where possible.

	Required.		
🛔 Authors *	Author 1	Affiliation	(b) ORCID (e.g.: 0000-0002-1825-0097) 🗘 🗴
			Optional.
	Author 2	Affiliation	(© ORCID (e.g.: 0000-0002-1825-0097)
			Optional.
	Author 3	Affiliation	(D) ORCID (e.g.: 0000-0002-1825-0097) 🗢 🗙
			Optional.
	+ Add another author		

- 12. Provide a description of the dataset in the "Description" text box. This description can be modified after publication to link derived publications or include further details if authors find it interesting. Description should include at least the following points:
 - It must include that the data published in the dataset have been obtained within the scope of the Transnational Access (TA) programme or the Joint Research Activities (JRA) of the Co-UDlabs project (Building Collaborative Urban Drainage research labs communities).

Please, in case of TA specify the title of the project and the number of the call in which the project was granted. For JRA indicate the corresponding Join Research Activity and number of Task stating briefly their main objectives.

- Brief abstract of the content of the dataset.
- Users must acknowledge in their publications that their work was financially supported by the European Union's Horizon 2020 Research and Innovation Programme as follows: "The

authors acknowledge financial support from the European Union under the Horizon 2020 program within a contract for Integrating Activities for Starting Communities (Ref. 101008626)".

• A list of derived publication may be also included in the future (Zenodo allows modifying it after the publication of the dataset).

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- 13. Leave 'Version' empty by default, Zenodo will manage the versions of the datasets in case of updating or modifying the dataset in the future. Only use in particular cases and softwares.
- 14. Language of the dataset. Co-UDlabs datasets should be preferably in English.
- 15. Include Keywords of the dataset. Meaningful keywords to describe your document are extremely important for search of users. You can also put this and additional information in the field "description".

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Service Servic		
	Optional. Mostly relevant for software and dataset uploads. Any string will be accepted, but semantically-versioned tag is recommended. See 🕜 semver.org for more information on semantic versioning.	
Q Language	English 🗸	
	Optional. Primary language of the record. Start by typing the language's common name in English, or its ISO 639 code (two or three-letter code). See 🗗 ISO 639 language codes list for more information.	
🚯 Keywords	Urban drainage 🗢	×
	physical model \$	×
	Wash-off 🗧	×
	Sediment transport	×
	Runoff pollution	×
	+ Add another keyword	
Additional notes]
	Optional.	



22/23

License

16. In this section you can choose what access will be given to your publication. The publication of datasets within TA or JRA during the project should be open access. Only TA datasets involving SMEs may have some well justified restrictions.

License	required 💙
Access right *	● P Open Access
	○ Ø Embargoed Access
	🔿 🔍 Restricted Access
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	Required. Open access uploads have considerably higher visibility on Zenodo.
License *	Creative Commons Attribution 4.0 International
	Required. Selected license applies to all of your files displayed on the top of the form. If you want to upload some of your files under different licenses, please do so in separate uploads. If you cannot find the license you're looking for, include a relevant LICENSE file in your record and choose one of the <i>Other</i> licenses available (<i>Other (Open), Other (Attribution)</i> , etc.). The supported licenses in the list are harvested from opendefinition.org C and spdx.org C . If you think that a license is missing from the list, please contact us.

Funding

17. European Commission project/grant information must be included to associate your work with Co-UDlabs via OpenAIRE. Select European Commission (EU) from the list if it is not already selected. Enter the grant number for the Co-UDlabs project in the neighbouring text box (101008626). Further funding can be additionally added by clicking 'Add another grant'

Funding	recommended 💙	
Zenodo is integrated into reporting li research, and we will let your funding	es for research funded by the European Commission via 🗷 OpenAIRE. Specify grants which have funded your agency know!	
Image: Contemporary Contempo	European Commission (EU)	
	Optional. OpenAIRE-supported projects only. For other funding acknowledgements, please use the Additional Notes field. Note: a human Zenodo curator will need to validate your upload - you may experience a delay before it is available in OpenAIRE.	
	+ Add another grant	

Publish or save for later

18. Once the files have been uploaded and all the information covered, the dataset is ready to be uploaded by clicking on the 'Publish' button at the top of the page. It is also possible to save the draft dataset for later publication by clicking on the Save button.

Once the record is published you will no longer be able to change the files in this upload. This is because a Digital Object Identifier (DOI) will be registered immediately after publishing. You will still be able to update the record's metadata later.

If you only want to create a test upload, please do so on Zenodo Sandbox.

