

Data Management Plan

Water-ForCE. Version 1

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List of Acronyms

AGA	Annotated Grant Agreement
CA	Consortium Agreement
CSA	Coordination and Support Action
DMP	Data Management Plan
EC	European Commission
ERC	European Research Council
FAIR	Findable, Accessible, Interoperable, Reusable
IPR	Intellectual Property Rights
GA	Grant Agreement
GPDR	General Data Protection Regulation
ORD	Open Research Data
PIP	Project Implementation Plan
SDGs	Sustainable Development Goals
WG	Working Group
WP	Work Package



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1.- Executive Summary

The "Water scenarios For Copernicus Exploitation" (Water-ForCE) project is a Coordination and Support Action (CSA) responding to the H2020 Space call: "Copernicus evolution: Mission exploitation concept for WATER", through which it is intended to get a comprehensive understanding of the global water cycle within the scope of Copernicus Services and find the best long-term mission concept to cover current and future, both opportunities and information needs, related to this valuable resource.

To achieve this goal, the Water-ForCE consortium proposed to develop a Roadmap for Copernicus water services. The Roadmap will provide a user and stakeholder driven concept for water services (water quantity, water quality, hydrological parameters, ice, snow, etc.) by assessing the existing and emerging needs, the opportunities presented by the current and future technical capabilities of satellite and *in situ* sensors, and addressing the current disconnects between remote sensing, *in situ* observations and modelling communities. Critically, the Roadmap will deliver the clarity required in relation to the needs and expectations of the core Copernicus mission by the public and private sectors and the wider research and business innovation opportunities.

The Roadmap will contain:

- Analysis of different user communities
- Analysis on how Copernicus WATER services can support policy development and monitoring of their implementation
- Gap analysis of the Copernicus water related services portfolio
- List of the future higher level biogeochemical products



- Technical requirements for the future Copernicus sensors to improve water related services portfolio
- Proposal for organising *in situ* measurement networks in a way that is needed to validate Copernicus remote sensing and modelling products and provide necessary data that cannot be collected by remote sensing
- Proposals on how to define the relationships between Core Services and Downstream services
- Recommendation(s) on the evolution of WATER services.

For the continuous development of the Roadmap along the 36 months of duration of the action, the Water-ForCE consortium will collect and analyse information from different sources; but being a Coordination and Support Action, Water-ForCE will not produce any new research data to meet these objectives.

Water-ForCE will collect and analyze already **existing datasets** in various forms (scientific publications, reports, other relevant project's deliverables, etc.) and will also gather the own knowledge of the Consortium members following the IPR management guidelines agreed by the Consortium and established both in the GA and in the CA.

The only **sources of new data** will be the workshops and questionnaires that Water-ForCE will put in place to gather the opinion, knowledge, concerns and needs from different types of end users, stakeholders and experts inside of the water continuum community.

Water-ForCE Action participates in the Open Research Data (ORD) Pilot. As it is set out in the Article 29.3 of the Grant Agreement, the legal requirements for projects and beneficiaries participating in this ORD Pilot are:

- to deposit the data in a research data repository so that it is possible to access, mine, exploit, reproduce and disseminate the data, free of charge for any user.



- to formulate a Data Management Plan (DMP) to define what datasets the project will generate or process, whether and how these data will be made accessible, and how they will be curated, stored and preserved. The DMP should also provide information on the measures taken to safeguard and protect sensitive data.

This document (Deliverable 8.7) is the first version of the aforementioned DMP of the Water-ForCE project. The DMP is considered a living document, and as such, it will evolve during the course of the Action. The Water-ForCE consortium (through the Coordination Team), will review and update the DMP at any time it is required as the project progresses and whenever any work plan changes arise, to make sure that it still meets Water-ForCE needs.

Disclaimer

The Information, documentation and figures available in this deliverable are written by the Water-ForCE Consortium members and do not necessarily reflect the view of the EC.



2.- Data management scheme

This section will describe the identified types of data to be collected and used in the framework of the Water-ForCE workplan and the foreseen plans to manage them in a FAIR way according to the H2020 Guidelines on FAIR Data Management [1]. The information and plans represent the views of the consortium regarding data management in month 6 of the project. As it was already mentioned, the DMP is a living document that will evolve and change throughout the project lifetime to adapt to the needs that can arise during the course of the execution phase. Namely, this section will cover:

- the description of the identified types of data
- the plans to make them Findable, Accessible, Interoperable and Re-usable
- the planned resources allocation for data management
- means to be put in place to secure the data, when needed.

2.1.- Data sources

The main work of Water-ForCE will be to collect and analyze already **existing and publicly available data in different formats** (scientific publications, reports, other relevant projects' deliverables, etc.) and combine them both with the own knowledge of the members of the consortium and with the knowledge and opinion of the Expert's Groups organized in the framework of the project. Water-ForCE will bring together experts on water quality and quantity, in policy, research, engineering and service sectors.

Another primary task inside of Water-ForCE will also be to analyze the needs, expectations and opportunities of a variety of stakeholders and communities, namely:

- the public and private sectors of the core Copernicus mission
- the wider research, innovation and business sectors.
- Policy makers



- Water managers

For that, we are putting in place different types of communication channels and events, being these **the only considered sources of new data**. These communication channels and events will include: thematic workshops, working groups' meetings and a periodic newsletter; besides a dedicated email address, webpage and social media channels.

Inside of the work concept of Water-ForCE, which consists of four overarching WPs and four technical WPs (see Fig.1), the collection, analysis and reanalysis of data can be summarized as follows:

WP1 (Policy, Stakeholders and Service Analysis): will analyze current and coming policies, end-users' needs, innovation needs, need for supporting water related SDG's, etc. In order to gather the needed information, WP1 will collect and analyze publicly available databases and documents and organize open international thematic workshops. The information gathered in every workshop, from this and other WPs, coming from discussions or from any type of questionnaire, will have an internal report as an output.

The so-called technical WP's (WP2-5) (see Fig.1) will analyze the current and future Copernicus services from their specific perspective. All of them will gather a Working Group with experts of their specific domain and organize meetings and thematic workshops. The technical working packages will also collect and analyze all the publicly available information within their own specific field. Water-ForCE does not foresee to generate water quantity or quality related data (e.g. meteorological data, shapefiles of water bodies etc). For the technical WPs, test data, if needed, will be collected from public datasets and databases like LIMNADES, GEMS, GEOSS, ZENODO, MONOCLE, GLEON, CoastColour simulations and *in situ* data, GLaSS, NOMAD database, S3VT database, ILEC WorldLakes database etc. The data will be kept mainly in the original formats or as .xlsx/.csv files.

WP6 (Roadmap for Copernicus Inland Water Services): will summarize the findings of each technical WP and produce the first draft of the Roadmap. WP6



will organize also an open international workshop where the first draft of the Roadmap will be discussed and analyzed together with relevant bodies like the European Commission, ESA, EEA, national space agencies, national monitoring offices, research community and industry.

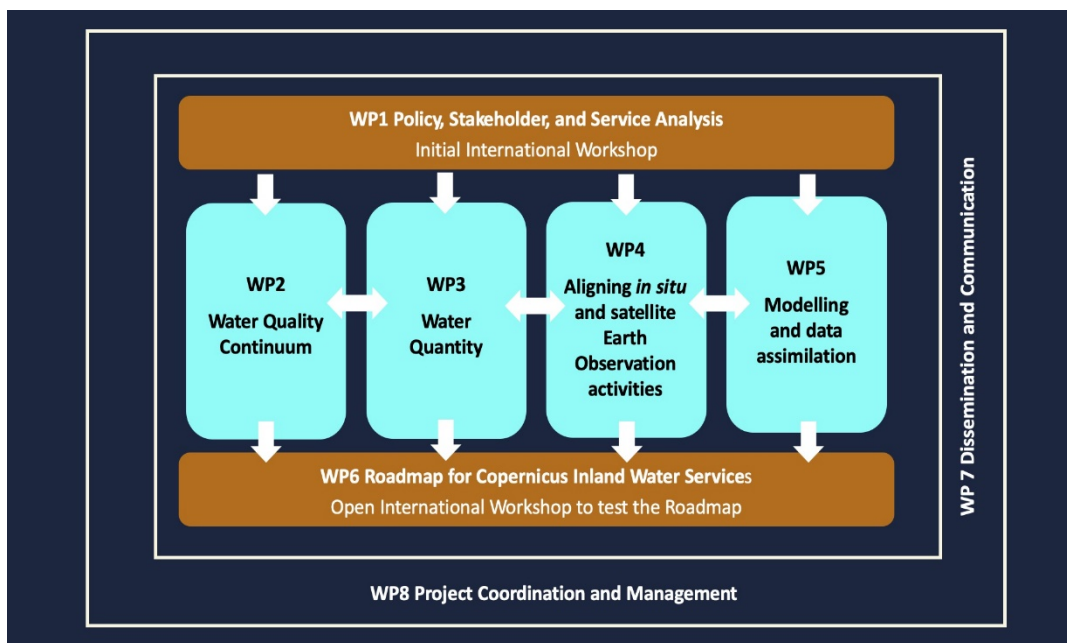


Figure 1.- Schematic workplan of Water-ForCE

WP7 (Dissemination and Communication): the Water-ForCE external contacts database will be jointly managed by the Consortium through a dedicated CRM Tool (Hubspot). This database will be used for Dissemination and Communication activities in a GDPR compliant way (see Ethics section)

WP8 (Coordination and Management): will gather the personal data from the consortium members needed for internal organization and administrative purposes.

2.1.1 Types of data

The foreseen types of data to be managed inside of the Water-ForCE are:

Personal data

- External contacts database
- Consortium members database

Documents from external sources

- Scientific publications
- Reports
- Relevant projects' deliverables

Documents generated inside of Water-ForCE

- Deliverables (final version)
- Deliverables intermediate drafts
- Internal reports
- Meeting minutes and recordings
- Presentations (oral communications, posters)

2.1.2 Making data Findable

All the deliverables with a public dissemination level in the GA will be made available both through the Water-ForCE webpage and CORDIS by means of a Uniform Resource Locator (URL)

Water-ForCE, through every technical WP, will deliver a series of reports which content will be of interest of the wider EO and water continuum community. Those reports will be deposited in the Water-ForCE webpage both in intermediate draft version, to be discussed and reviewed by the external experts working groups, and eventually in their final version.

This last version will be also made available through the Open Access repository Zenodo. Zenodo assigns a Digital Object Identifier (DOI), to make them citable and trackable.



The metadata associated with every report to be made public will follow Zenodo's controlled vocabulary scheme for description, containing as a minimum requirement:

- **Type of deposit:** publication, poster, presentation, dataset.
- **If publication, type:** book, section, conference paper, DMP, Journal article, deliverable, milestone, technical note, working paper.
- **Publication date:** date of publication in ISO8601 format
- **Title:** Title of deposition
- **Creators:** Authors of the deposition (name, affiliation, ORCID (optional))
- **Description:** Abstract or description for deposition
- **Access rights:** Open, embargoed, restricted, closed.
- **DOI:** Digital Object Identifier whether assigned by a publisher or by Zenodo.
- **Keywords:** free form keywords for the deposition
- **Contributors:** name, type (data collector, data curator, data manager, distributor, editor, funder, hosting institution, project leader, project manager, project member, researcher, research group, rights holder, work package leader), affiliation, ORCID (optional).
- **grants:** grants id

2.1.3 Making data openly Accessible

Water-ForCE results will be made accessible following the rules on Open Access to Research Data and Open Access to Scientific Publications in H2020 (Article 29 AGA– dissemination of results – open access – visibility of EU funding).

Water-ForCE open results, in the form of public reports and deliverables, presentations and/or posters, will be made fully accessible by means of an **Open Access Repository (Zenodo)**.

Water-ForCE does not foresee to produce **peer reviewed articles** for publication in scientific journals during the course of the action. Publications to be produced after the project, will be submitted to Open Access journals (**Gold Open Access**).



All the Scientific Publications that can come up as a result of the action will be available in the project webpage (www.waterforce.eu), in CORDIS and deposited in Zenodo as an OpenAIRE-compliant repository within 6 months of publication, ensuring open access to the bibliographic metadata of the publication.

2.1.4 Making data Interoperable

Project data and documents will be made available and stored in interoperable formats (.docx, .pdf, .xls) that can be opened by anyone authorized to do so.

The controlled vocabulary for metadata in case of funding will follow **Crossref Funder Registry** standards, which provides a common taxonomy of international funding body names, normalizing funder names and IDs for deposit, and **Open Definition** vocabulary in case of licensing.

2.1.5 Increase data re-use

All public reports generated during the project will remain available for download and re-use with no restrictions or embargo foreseen.

2.1.6 Allocation of resources and data security

The only costs that Water-ForCE has incurred in case of Data Management are those dedicated to a license of a CRM Tool (Hubspot) in order to manage the contact's personal data in a secure and GPR compliant way. The total cost dedicated to this is 552 €/year.

No specific costs have been considered in Water-ForCE budget for data management. The foreseen volume of data to be managed fall into the capacity of the project's internal repository. Water-ForCE works through a shared document space in the cloud using Google Drive Shared Units feature. It is used for exchanging all official project documentation, calling notices, agenda, meeting minutes, working documents and deliverables (drafts and final versions). This



project's workspace works as a sharing platform for the consortium members for collaborative content management.

The access to the Water-ForCE shared units is restricted to the consortium members, being the access rights levels controlled by the Project Manager.

As Water-ForCE will not produce, collect or analyze any extensive research datasets, no dedicated costs have been considered for data curation or quality control. The deposition of the Open Data in the Open Access Repository Zenodo secures their storage for long term preservation.

The data management roles in Water-ForCE are shared between the consortium members, with the main following responsibilities identified in this first version of the DMP (Month 6):

- **Coordination Team (WP8 leader and co-leader):**
 - To develop the DMP and data policy
 - To write and update the DMP (D8.7, D8.8, D8.9)
 - To Develop de Water-ForCE policy for Protection of Personal Data (POPD)
 - To write the documents required inside of the H2020 Ethics Appraisal Process describing the means put in place to safeguard the basics rights to privacy and data protection (D9.1, D9.2 and D9.3)
 - To assist any project member regarding the implementation of the data management policy.

- **Workpakage leaders:**
 - To apply the Water-ForCE data management policy within their WP
 - To give feedback to the Coordination Team for the DMP updates following the progress of their WP.
 - To monitor that the open results are deposited timely in the Open Access Repository (default Zenodo).
 - To monitor that the metadata of every deposition is correct and complete.



- **Dissemination Team (WP7 leaders):**
 - Make all the public documents openly available and easily accessible in the project webpage.

3.- Water-ForCE Datasets

After describing in the previous sections the general Data Management Policy and strategy of Water-ForCE; a specific description for every identified dataset inside of Water-ForCE has to be done. These descriptions will maintain the same scheme, following the Guidelines on FAIR Data Management in H2020.

All the datasets and the data management provisions reflect the views of the consortium in month 6 of the project about what, how and when the data will be produced, and can be changed in following versions of the DMP, as the project evolves.

This description of the datasets will follow the scheme reflected In the ERC Data Management Plan Template. Version 1.0, and cover the following points (whenever they are already identified in this project phase):

- **SUMMARY:** Origin an expected size of the data generated/collected; data types and formats.
- **MAKING DATA FINDABLE:** metadata, persistent and unique identifiers.
- **MAKING DATA OPENLY ACCESSIBLE:** which data will be made openly available and if some datasets remain closed, the reasons for not giving access. where the data and associated metadata, documentation and code are deposited. how the data can be accessed.
- **MAKING DATA INTEROPERABLE:** which standard or field-specific data and metadata vocabularies and methods will be used.
- **INCREASE DATA RE-USE:** what data will remain re/usable and for how long. Embargo periods (if any). How the data will be licensed. Data quality assurance procedures.



- **ALLOCATION OF RESOURCES and DATA SECURITY:** estimated costs for making the data open access and potential value of long-term data preservation. Procedures for data backup and recovery. Transfer of sensitive data and secure storage in repositories for long term preservation and curation

3.1.- Stakeholders' dataset

Stakeholders' Dataset

SUMMARY:

Stakeholders' opinion is a key information in the development of the Roadmap. Water-ForCE gathers these data through dedicated Workshops. The Workshops Registration Forms in the Water-ForCE webpage (www.waterforce.eu) are the channel for collecting stakeholders' personal data. These registration forms are enabled through a CRM Tool. Hubspot Inc. is a third party CRM tooling supplier, involved in Personal Data Collection software. The attendants to the workshops access entirely voluntary (free from any coercion, duress or inappropriate incentives) to these forms, providing the personal data which form the Water-ForCE CRM data base. In the HubSpot software is captured a visitor's consent for cookie tracking, a lawful basis to process and communicate and a GDPR delete function (contact request to hand over a copy of all the personal data or delete/modify it). The subject gives its consent to the (way of) processing of their personal information as well as the preference (not) to receive further communication.

The type of data collected is Personal Data: First name, last name, email, company/Institution, nature of activities, relevant thematic areas of Interest, Geographical scope of activities.

The data is stored in .txt and .csv format. All HubSpot APIs are built using REST conventions and designed to have a predictable URL structure. All HubSpot API calls are made under <https://api.hubapi.com> and all responses return standard JSON.

MAKING DATA FINDABLE

Not Open Access. This database will be only used by the Consortium Members for Communication and Dissemination purposes



<p>MAKING DATA OPENLY ACCESSIBLE</p>	<p>Not Open Access. Personal Data Protection. The data is stored inside of Hubspot and will only be accessed or modified by project partners with access rights to Hubspot (WP Leaders)</p>
<p>MAKING DATA INTEROPERABLE</p>	<p>No metadata standards are used</p>
<p>INCREASE DATA RE-USE</p>	<p>The data will only be used by project partners for the purpose of the Action. It will be deleted at the end of the Project (including the closing of the last reporting period).</p>
<p>ALLOCATION OF RESOURCES and DATA SECURITY</p>	<p>The resources dedicated to this dataset management is the Hubspot license with a total cost of 552 €/year.</p> <p>Data Security: Hubspot Hosting providers maintain an audited security program, including SOC 2 and ISO 27001 compliance. HubSpot does not host any product systems within its corporate office.</p> <p>The access to these data is restricted to the Project Partners.</p>

Table 1.- DMP for stakeholder’s dataset.



3.2.- Experts' Lists dataset

Experts' Lists Dataset

SUMMARY:

Experts feedback from every domain of the water continuum is another key source of information for the development of the Roadmap. Water-ForCE will bring together experts on water quality and quantity, in policy, research, engineering and service sectors; and will organize them into thematic Working Groups, managed by the Technical Wps (WP2-5). The Workshops Registration Forms and a dedicated Expert Registration Form located in the Water-ForCE webpage (www.waterforce.eu) are the channel for collecting Experts' personal data. These registration forms are enabled through a CRM Tool. Hubspot Inc. is a third party CRM tooling supplier, involved in Personal Data Collection software. The subjects access entirely voluntary (free from any coercion, duress or inappropriate incentives) to these forms, providing their personal data which form the Water-ForCE CRM data base. In the HubSpot software is captured a visitor's consent for cookie tracking, a lawful basis to process and communicate and a GDPR delete function (contact request to hand over a copy of all the personal data or delete/modify it). The subject gives its consent to the (way of) processing of their personal information as well as the preference (not) to receive further communication. Embedded also in the registration forms are the needed boxes to ask for the explicit willingness of the subject for being part of a Working Group; and in this case, a second explicit consent for making their personal data public as part of the list(s) of Experts of Water-ForCE.

The type of data collected is Personal Data: First name, last name, email, company/Institution, nature of activities, relevant thematic areas of Interest, Geographical scope of activities.

The complete personal data is stored in .txt and .csv format inside of Hubspot and in .pdf format in case of the List of Experts, in which only the name and institution of the expert will be stored. All HubSpot APIs are built using REST conventions and designed to have a predictable URL structure. All HubSpot API calls are made under <https://api.hubapi.com> and all responses return standard JSON.

MAKING DATA FINDABLE

Partially Open Access. The entire database comprising all the expert personal data will be only used by the Consortium Members for Communication and Dissemination purposes.



	<p>Part of the dataset will be made public in the form thematic lists of Experts, placed in the project website (www.waterforce.eu) in which the name and institution of the subject will appear.</p>
<p>MAKING DATA OPENLY ACCESSIBLE</p>	<p>Not Open Access. Personal Data Protection. The data is stored inside of Hubspot and will only be accessed or modified by project partners with access rights to Hubspot (WP Leaders)</p> <p>The Lists of Experts (including name and institution) will be made public through the project webpage.</p>
<p>MAKING DATA INTEROPERABLE</p>	<p>No metadata standards are used.</p> <p>The data will be in .pdf format.</p>
<p>INCREASE DATA RE-USE</p>	<p>These personal data will only be used by project partners for the purpose of the Action. It will be deleted at the end of the Project (including the closing of the last reporting period).</p>
<p>ALLOCATION OF RESOURCES and DATA SECURITY</p>	<p>The resources dedicated to this dataset management is the Hubspot license with a total cost of 552 €/year.</p> <p>Data Security: Hubspot Hosting providers maintain an audited security program, including SOC 2 and ISO 27001 compliance. HubSpot does not host any product systems within its corporate office.</p> <p>The access to these data is restricted to the Project Partners.</p>

Table 2.- DMP for Experts' Lists dataset.



3.3.- Questionnaires answers

Questionnaires answers Dataset

SUMMARY:

Both experts and stakeholders' feedback from every domain of the water continuum are key sources of information for the development of the Roadmap. Water-ForCE gather these data through dedicated questionnaires linked to the thematic workshops and through discussions inside of them.

In case any questionnaire will have personal data linked to the answers, a data anonymization procedure will be applied before the disclosure of the aggregated results. This disclosure is considered necessary for further discussion inside of the planned workshops and Working Groups to achieve the goals of the Water-ForCE.

The anonymization procedure will entail the following steps:

- Personal Data Subject identifiers and associated response will be available in a GDPR compliant survey environment, accessible only to the member of the Consortium responsible of the questionnaire
- Personal Data Subject identifiers and associated response will be shared with the consortium members involved in the Work Package in charge of the questionnaire.
- Removal of Personal Data and identifiers from the database.
- Individual responses (without identifiers) and comments will be analyzed by consortium members. Comments which reveal identities / workplace will not be disclosed.
- Comments which do not reveal identities/work place (thus considered anonymous) can be shown to workshop participants
- Aggregated results and non-personal comments (anonymous) will be available in the workshop

Data format: .xls

MAKING DATA FINDABLE

Open Access. Once the data has been anonymized and considered complete after all the thematic workshops have taken place, it will be deposited in Zenodo, following its deposition metadata.





<p>MAKING DATA OPENLY ACCESSIBLE</p>	<p>The data will be openly accessible in Zenodo, following Zenodo's deposition metadata. The data will be also accessible in the project webpage.</p>
<p>MAKING DATA INTEROPERABLE</p>	<p>Zenodo's deposition metadata .xls format</p>
<p>INCREASE DATA RE-USE</p>	<p>The anonymized data can be re-used freely. No embargo periods or restrictions are foreseen in this version of the DMP.</p>
<p>ALLOCATION OF RESOURCES and DATA SECURITY</p>	<p>No special resources have been dedicated in Water-ForCE budget to the data management of this dataset.</p>

Table 3.- DMP for Questionnaire's answers dataset.



3.4.- Water-ForCE Public Deliverables

Water-ForCE Public Deliverables	
SUMMARY:	
<p>Water-ForCE is a Coordination and Support Action (CSA) with the main objective of developing a Roadmap for Copernicus water services.; providing a user and stakeholder driven concept for water services by analyzing the existing and emerging needs, the opportunities presented by the current and future technical capabilities of satellite and in situ sensors, and addressing the current disconnects between remote sensing, in situ observations and modelling communities. The project will deliver a series of reports with the results of these analyses as public deliverables (for a complete list of deliverables, see Annex 1). Most of the deliverables with the dissemination level of "public" are considered to be of the interest of a wider audience.</p> <p>Data format: .pdf</p>	
MAKING DATA FINDABLE	Open Access. All the public deliverables will be available through the project website and CORDIS. The reports considered of major interest of a wider audience will be deposited in Zenodo, following its deposition metadata and identified by a DOI.
MAKING DATA OPENLY ACCESSIBLE	The data will be openly accessible in Zenodo, following Zenodo's deposition metadata. The data will be also accessible in the project webpage and CORDIS.
MAKING DATA INTEROPERABLE	Zenodo's deposition metadata .pdf format
INCREASE DATA RE-USE	The data can be re-used freely. No embargo periods or restrictions are foreseen in this version of the DMP.
ALLOCATION OF RESOURCES and DATA SECURITY	No special resources have been dedicated in Water-ForCE budget to the data management of this dataset.

Table 4.- DMP for Water-ForCE Deliverables dataset.



3.5.- Water-ForCE Contacts

Water-ForCE Contacts	
SUMMARY:	
<p>This dataset comprise basic personal data from the project participants in order to add them to the project's mailing list and give them the needed rights of access to the Shared Units for the cloud working environment of Water-ForCE. The data stored will be:</p> <ul style="list-style-type: none"> • Name and surname • Institution • Email • Role In the project (Technical/Dissemination & Communication/Administratie & Finances) • Project boards' Membership • WP Participation (lead/co-lead/participant) • Access to shared units (Units accessible, Access level) • Shared units account <p>Data format: .xls</p>	
MAKING DATA FINDABLE	Not Open Access. This database will be only used by the Consortium Members for internal communication purposes
MAKING DATA OPENLY ACCESSIBLE	Not Open Access. Personal Data Protection. The data is stored inside of private storage unit of the Project Manager and in a dedicated shared unit in the common workspace.
MAKING DATA INTEROPERABLE	No metadata are used.
INCREASE DATA RE-USE	The data will only be used by project partners for the purpose of the Action. It will be modified only by the Project manager and deleted at the end of the Project (including the closing of the last reporting period).



ALLOCATION OF RESOURCES and DATA SECURITY

No special resources have been dedicated in Water-ForCE budget to the data management of this dataset.

The data is only accessible by the members of the Consortium, for which a restricted level of access have been put in place.

Table 5.- DMP for Water-ForCE Contacts dataset.

4.- Ethics compliance

The protection of personal data (POPD) is an essential part of the Ethics Appraisal Process in projects funded through the Horizon 2020 Framework Programme of the European Commission (EC), This process is enabled to safeguard the basics rights to privacy and data protection in all H2020 funded projects. The management of POPD process in Water-ForCE is based on the General Data Protection Regulation (GDPR, Regulation (EU) 2016/679) and the rules of the Horizon 2020 Programme.

The implementation of the POPD protocol will be controlled and managed by the project Coordination Team (project Coordinator and Project Manager) with the advise of the appointed DPO at the Universty of Tartu (andmeikaitse@ut.ee) (Details given in Deliverable 9.1); POPD Requirement N°2).

4.1.- Personal Data

As it is stated in the EU General Data Protection Regulation (GDPR) (Regulation (EU) 2016/679) (Art. 4 (1)), *"personal data means any information relating to an identified or identifiable natural person ('data subject'); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person"*



Personal data only includes information relating to natural persons who:

- can be identified or who are identifiable, directly from the information in question; or
- who can be indirectly identified from that information in combination with other information.

The Protection of Personal Data to be processed during the Water-ForCE Action was fully described in POPD Requirements N° 2, 3 and 4 (D9.1, 9.2 and 9.3). A thorough description on the technical and organisational measures that will be implemented by the Water-ForCE Consortium to safeguard the rights and freedoms of the data subjects; and how all the data to be processed is relevant and limited to the purposes of the project (in accordance with the 'data minimisation' principle) has been given. A brief summary is given in this section.

4.2.- Personal Data Collection in Water-ForCE

The Workshops Registration Forms in the Water-ForCE webpage (www.waterforce.eu) will be the channel for collecting personal data. These registration form will be enabled through Hubspot CRM Tool. It has a GDPR functionality which allows compliance options to be displayed for all tools that collect personal data.

Once the GDPR functionality is enabled, it will give the options to activate:

- Cookie consent banner toggled (ON by default).
- GDPR delete functionality. It gives the choice to delete the contact fully to comply with GDPR.
- GDPR-ready forms with a lawful basis notice and communication consent checkbox form field.

Embedded in the registration forms of Water-ForCE will be the needed boxes to ask, in a plain and fully understandable language, for:

- Explicit consent for storing and processing the personal data of the subjects.



- Explicit consent for sending further Information, If there is interest from the subjects.
- Explicit willingness for being part of a Working Group; and In this case a second explicit consent for making their personal data public as part of the list(s) of Experts of Water-ForCE.

,and to inform that:

- The personal data will only be processed for the purpose of the Action.
- The consents given can be withdrawn at any moment and how to do it.

None of the tick boxes will be marked in advance, needing to be activated by the subject.

4.3.- Personal Data Processing in Water-ForCE

The processing of Personal Data in Water-ForCE action will be limited to:

- Collection
- Storage
- Retrieval for further contact
- Final destruction at the end of the project

There **will not be performed** any data processing involving:

- profiling,
- systematic monitoring of individuals
- processing of large scale of special categories of data
- intrusive methods of data processing
- any other data processing operation that may result in high risk to the rights and freedoms of the participants.

There **will not be** any further processing of previously collected data.



There **will not be** transfer of personal data from EU to non-EU countries or from non EU-countries to EU countries other than the processing of Personal Data by the members of the Consortium in the UK.

5.- Conclusions

This first version of the Data management Plan (DMP) of Water-ForCE CSA describes the Data Management Policy foreseen for the entire project cycle, with the vision of the consortium in month 6 of the project. It has been developed following the H2020 Programme Guidelines on FAIR Data Management and in compliance with the ORD Pilot requirements.

The data management strategy set out in this document relies on the technical solutions and standards provided by different initiatives and commercial solutions like OpenAIRE, Zenodo, DOI, Open Definition, CrossRef and Hubspot.

This version of the Data Management Plan also describes the data that it is planned to be collected, used, generated and stored in the course of the Project.

As it has been pointed out, the DMP is a living document that will be updated whenever arise new data, changes in consortium policies or decisions regarding data management and/or changes in consortium composition and external factors; ensuring that the DMP still meets the requirements of the Water-ForCE workplan and maximizes the options for the data to be preserved and stay accessible and usable after the end of the project



6.- Relevant documents & webpages

- **Water-ForCE Consortium Agreement**, version final, 2020-09-22
- **Water-ForCE Grant Agreement**, Number 101004186
- **European Research Council (ERC) ERC Data Management Plan Template** Version 1.0 21 April 2017
- **H2020 Programme Guidelines on FAIR Data Management in Horizon 2020**. Version 3.0. 26 July 2016.
- **Horizon2020 ONLINE Manual. Data Management.** (https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/data-management_en.htm) Accessed 25/06/2021
- **OpenAIRE** (<https://www.openaire.eu/>)
- **Zenodo** (<https://zenodo.org/>)
- **Crossref Funder Registry** (<https://www.crossref.org/services/funder-registry/>)
- **Open Definition** (<http://opendefinition.org/licenses/>)
- **General Data Protection Regulation (GDPR, Regulation (EU) 2016/679)**
- **Directive (EU) 2016/680** of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, and on the free movement of such data, and repealing Council Framework Decision 2008/977/JHA





Annex 1

Water-ForCE Deliverables



Deliverables

WP	N°	Title	Lead Benef.	Nature	Diss. Level	Est. Del. Date
WP1	D1.1	List of stakeholders	USTIR	Report	Public	31/07/2021
WP1	D1.2	Sectoral policies and legislation	DotSPACE	Report	Public	31/10/2021
WP1	D1.3	Links within and between Copernicus programme	DotSPACE	Report	Public	28/02/2022
WP1	D1.4	End-user needs	ICCS	Report	Public	28/02/2022
WP1	D1.5	Business opportunities	DotSPACE	Report	Public	28/02/2022
WP1	D1.6	Satellite EO, SDGs and climate indicators	USTIR	Report	Public	28/02/2022
WP2	D2.1	Water Quality Working Group	VITO	Other	Public	31/05/2021
WP2	D2.2	Recommendations on Copernicus products - Water Quality	FVB-IGB	Report	Public	31/05/2021
WP2	D2.3	Atmospheric corrections	VITO	Report	Public	31/12/2022
WP2	D2.4	Higher-level biogeochemical products	UTARTU	Report	Public	31/12/2022
WP2	D2.5	Technical needs for future Sentinels	CNR	Report	Public	31/12/2022
WP3	D3.1	International working group in water quantity remote sensing	ANTEA	Other	Public	31/03/2021
WP3	D3.2	Copernicus products - hydrological	ANTEA	Report	Public	31/05/2021
WP3	D3.3	Copernicus products and services - water management	VUB	Report	Public	31/12/2022
WP3	D3.4	Water resources modelling	IHE	Report	Public	31/12/2022
WP3	D3.5	Sentinel missions for inland water quantity	CREAF	Report	Public	31/12/2022
WP4	D4.1	Working group for in situ and satellite EO monitoring	EMU	Other	Public	30/04/2021
WP4	D4.2	In situ data-intensive monitoring	PML	Report	Public	31/12/2022



WP4	D4.3	Combining in situ and earth observation data	USTIR	Report	Public	31/12/2022
WP4	D4.4	Alternative monitoring methods	FVB-IGB	Report	Public	31/12/2022
WP4	D4.5	New higher-level products	EMU	Report	Public	31/12/2022
WP4	D4.6	Standardization and open science	NIRDBS	Report	Public	31/12/2022
WP5	D5.1	Copernicus EO needs for modellers and decision makers	IHE DELFT	Report	Public	30/06/2022
WP5	D5.2	Copernicus Services and Products - Modelling	CREAF	Report	Public	31/10/2022
WP5	D5.3	AI for accurately correcting systematic forecast errors	ANTEA	Report	Public	31/10/2022
WP5	D5.4	Integration of satellite EO and modelling	IHE	Report	Public	31/12/2022
WP6	D6.1	Capacity Building	USTIR	Report	Public	31/12/2022
WP6	D6.2	Priorities for Research and Innovation	PML	Report	Public	30/04/2023
WP6	D6.3	Business Innovation and Service Delivery	USTIR	Report	Public	30/04/2023
WP6	D6.4	Roadmap: First draft	USTIR	Report	Public	30/06/2023
WP6	D6.5	Roadmap. Final	UTARTU	Report	Public	31/12/2023
WP7	D7.1	Public communication and dissemination plan	isardSAT	Report	Public	30/06/2021
WP7	D7.2	Website and communication tools	isardSAT	Website	Public	31/03/2021
WP7	D7.3	Workshops materials	isardSAT	Website	Public	31/12/2021
WP7	D7.4	Events dissemination and communication	isardSAT	Report	Public	31/12/2022
WP8	D8.1	Management Structures	UTARTU	Report	Public	31/01/2021
WP8	D8.2	Interim Technical report	3edata	Report	Public	31/12/2022
WP8	D8.3	Templates	3edata	Report	Public	31/05/2021
WP8	D8.4	Implementation Plan	3edata	Report	Public	28/02/2021
WP8	D8.5	Reports on WP meetings	3edata	Report	Public	30/06/2023



WP8	D8.6	Reports on Major Workshops and Boards	3edata	Report	Public	31/08/2023
WP8	D8.7	Data Management Plan. First version	3edata	ORDP	Public	30/06/2021
WP8	D8.8	Data Management Plan_2	3edata	ORDP:	Public	30/06/2022
WP8	D8.9	Data Management Plan. Final	3edata	ORDP	Public	31/12/2023
WP9	D9.1	POPD - Requirement No. 2	UTARTU	Ethics	Confid	31/03/2021
WP9	D9.2	POPD - Requirement No. 3	UTARTU	Ethics	Confid	31/03/2021
WP9	D9.3	POPD - Requirement No. 4	UTARTU	Ethics	Confid	31/03/2021





Annex 2

Consent Forms



Informed Consent Form (ICF)

Project coordinator: UNIVERSITY of TARTU

WP8-Coordination Leader: UNIVERSITY of TARTU

Name of the Coordination and Support Action: Water Scenarios for Copernicus Exploitation. Water-ForCE

Funds: EU Framework Programme for Research and Innovation – Horizon 2020

Introduction

The Water-ForCE H2020 Coordination and Support Action's main goal is to analyse current and planned EO space capacities together with innovative processing, modelling and computing techniques to reinforce the existing portfolio offered under Copernicus; and to propose an integrated approach for a coherent and consistent inland water monitoring system.

Given your expertise and knowledge in one or several of the fields under study inside of the Action, you have been asked to **be part of WG/AB [...]**.

The purpose of this "informed consent form" is to inform you that your name and institution will be made public in the public documents and deliverables in which the WG/AB [...] will be mentioned, which also includes the Action's webpage and Social Media channels.

Withdrawal of consent

If you wish to withdraw your consent, you can do so by either contacting the Coordinator at UNIVERSITY of TARTU (see the contact details below) or to the Project Manager (see contact below) who will then immediately forward the request to the Coordinator. The request can be made by any means of communication and does not have to conform to any special format. It is not necessary to give a reason for the withdrawal and you will not suffer any repercussions. Once the Coordinator receives the request for withdrawal, all data relating to you will no longer be processed and all data already collected will be deleted.

Data protection / confidentiality / privacy

The only data that will be made public is your name and institution. These data will be deleted from the public documents from the date you request a withdrawal.

These data will only be used for the objectives of the Water-ForCE Action.

Who to Contact

If you have any questions regarding the project, please contact:

- Prof. Tiit Kutser (Project Coordinator): tiit.kutser@ut.ee
- University of Tartu DPO (andmeikaitse@ut.ee)
- Dr. Carmen Cillero (Project Manager): carmen.cillero@3edata.es



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 101004186

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Consent:

I have read the foregoing information, or it has been read to me. I consent voluntarily to participate in the **WG/AB [...]** of Water-ForCE CSA. I agree that my name and institution will be made public in the public documents and deliverables in which the **WG/AB [...]** will be mentioned.

Name Surname and Signature



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 101004186.

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Contact title

Please Select

First name *

Please complete this required field.

Last name *

Please complete this required field.

Email *

Please complete this required field.

Organisation *

Please complete this required field.

Session attendance: Please indicate your intention to attend the three workshop sessions (attending all sessions is recommended). Each session will take up to 3 hours and start no earlier than 1pm CET. The final schedule will be circulated among registered participants in the coming weeks. A preparatory survey will be sent within several days after registration. Please complete the survey by 1st May for the response to be included. Reminders will be sent.

17th May: Data Availability, Accessibility and quality: required in situ variables for satellite validation compared to current offering in repositories and networks. Workshop element: gap analysis: recommend and quantify how the identified gaps should be met in terms of cost, data quality/uncertainty, accessibility/impact. This analysis and discussion will be informed by the survey result.

18th May: Technical capabilities - the state-of-the-art, horizon scanning. Presenters of existing and new in situ observation solutions will be asked to introduce solutions to the gaps identified. Workshop element: discussion on remaining gaps and definition of a tiered qualification of in situ systems to provide satellite cal/val capabilities.

20th May: Data sharing, harmonisation - Presenters of existing and new data platforms will be asked to highlight how their solutions fill any of the identified gaps. Workshop element: discussion on remaining gaps, scalability, and continued definition of a tiered qualification of in situ systems to provide satellite cal/val capabilities Draft of "The 10 principles of in situ satellite cal/val" to be adopted by experts."

Water-ForCE is committed to protecting and respecting your privacy, and we will only use your personal information to manage your account and to share the workshop outcomes with you. We would also like to occasionally contact you about our Project outcomes and events, as well as other content that may be of interest to you.

Furthermore, we invite you to join the Water-ForCE expert group on in situ and satellite Earth Observation. Experts Lists contributing to Water-ForCE will be made public as part of Project Activities and Outcomes.

If you consent to us contacting you for any of these purposes, please tick below:

I agree to receive other communications from Water-ForCE.

I agree that my name and institution will be made public as part of the Water-ForCE List of Experts.

In order to provide you the content requested, we need to store and process your personal data. If you consent to us storing your personal data for this purpose, please tick the checkbox below.

I agree to allow Water-ForCE to store and process my personal data. *

You can unsubscribe from these communications at any time. For more information on how to unsubscribe, our privacy practices, and how we are committed to protecting and respecting your privacy, please review our Privacy Policy.

Submit

Example.- Workshop web-based consent form

