FLOOD-serv

D1.5 Data Management Plan - final version

ORDP: Open Research Data Pilot

Project acronym:	**FLOOD-serv**
Project full title:	**Public FLOOD Emergency and Awareness SERvice**
Grant agreement no.:	**693599**
Responsible:	**<SIVECO>**
Contributors:	**SIVECO, all the partners**
Document Reference:	**D1.5**
Dissemination Level:	**<PU>**
Version:	**1.0**
Date:	**31/01/19**

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 693599

Change history

Version	*Date*	*Modification reason*	*Modified by*
0.1	05.12.19	Initial draft	Andrei Ogrezeanu Carmen Nitu
0.2	14.01.19	Second version	Mihaela Coman-Bitca Monica Florea Andrei Ogrezeanu

Table of contents

List of figures

List of abbreviations

<Abbreviation>	<Explanation>
ANO	A.N.O. SISTEMAS DE INFORMATICA E SERVICOS LDA
ANSWARE	ANSWARETECH SL
API	Application Integration Interface
BILBAO	AYUNTAMIENTO DE BILBAO
BSK	Bratislavsky Samospravny Kraj
CELLENT	CELLENT SA
CESIS	Emergency Communication and Information System
CMVNF	Municipio De Vila Nova De Famalicao
CPS	Cognitive Panel Survey
D&E Board	Dissemination and Exploitation Board
DDNI	INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE DELTA DUNARII
DMP	Data Management Plan
DoA	Description of the Action
ECHO	European Commission's Humanitarian Aid and Civil protection department
EMSA	European Maritime Safety Agency
ERCC	Emergency Response Coordination Centre
EU	European Union
Exdwarf	EXDWARF CONSULTING SRO
GDPR	General Data Protection Regulation (EU) 2016/679
GENOVA	COMUNE DI GENOVA
Gov2U	Government To You
H2020	Horizon 2020
ICT	Information and Communications Technologies
IP TULCEA	INSTITUTIA PREFECTULUI JUDETUL TULCEA
IPR	Intellectual Property Rights
R&D	Research and Development
SIVECO	SIVECO Romania SA
TBD	To Be Defined
WP	Work Package
QR	Quality Reviewer

Executive summary

The current deliverable belongs to WP1 - Project management and coordination.

The objective of this work package is to:

- Provide overall project management and coordination
- Ensure the delivery of the project on time and on budget, taking adequate corrective action if necessary
- Maintain good information flows amongst partners
- Provide timely and efficient legal, contractual, financial and administrative coordination of the project
- Perform risk management and contingency planning
- Perform quality assurance
- Coordinate at consortium level knowledge management and other innovation related activities
- Oversee the promotional activities and the actions towards exploitation
- Ensure that H2020 guidelines for project reporting are followed

The objective of this deliverable, *D1.5 : Data Management Plan - final version*, as per the DoA, is to present “information on the way data is handled during and after the project”.

Introduction

The Data Management Plan (DMP) final version presents information about: types of data generated/collected by FLOOD-serv project, standards that are used, how this data are exploited and/or shared/made accessible for verification and re-use and the ways that data are or will be curated and preserved.
“This document helps Horizon 2020 beneficiaries make their research data findable, accessible, interoperable and reusable (FAIR), to ensure it is soundly managed. Good research data management is not a goal in itself, but rather the key conduit leading to knowledge discovery and innovation, and to subsequent data and knowledge integration and reuse.”

Producing a DMP is good practice for all research projects and helps to ensure that research data is secured and well-maintained during the project lifecycle and after projects end when it might be shared with others.

A number of ethical and legal requirements apply to the management of research data, particularly where the research involves human subjects.

Informed consent is an ethical requirement for most research and must be considered and implemented throughout the research lifecycle, from planning to publication. Gaining consent must include making provision for sharing data and take into account any immediate or future uses of data. The procedures implemented to obtain informed consent are reported in the **Appendix A** and **Appendix B**

Research which involves collecting or processing of personal data, regardless of the method by which they are collected should comply with the EC decisions, the directives of the European Parliament and of the Council as well as on laws on privacy and data protection of the partner countries involved in the project. In particular, the collection and processing of personal data is subject to the EU General Data Protection Regulation (GDPR) EU 2016/679.

1 Running initiatives

A novelty in Horizon 2020 is the **Open Research Data Pilot** which aims to **improve and maximize access to and re-use** of research data generated by projects. In Horizon 2020, the biggest EU Research and Innovation programme, Data Management Plans (DMPs) were introduced in the Work Programme for 2014-15, and installed as a requirement for projects participating in the Open Research Data Pilot. In H2020, the DMPs describe the data generated and plans for their exploitations in terms of their curation, preservation and accessibility. In other words, the intention is a full lifecycle data management plan.

An initiative from the EC to unlock the potential of the data resources is the implementation of the FAIR-principles in H2020, a concise and measureable set of principles referred to as the FAIR Data Principles abbreviating that data should be **Findable, Accessible, Interoperable and Reusable (FAIR) (Wilkinson 2016).** The fair principles were generated to improve the practices for data management and data-curation, and FAIR intends to describe the principles in a way that is domain-independent and hence can be applied to a wide range of data management purposes, whether it is data collection of individual researcher or data management of larger research projects regardless of scientific disciplines.

OpenAIRE2020 is a project funded by the European Union (Grant Agreement No 643410). The European Commission has launched a Pilot to fund Open Access publications for finalized FP7-funded projects through **OpenAIRE** and is aligned with the Open Access.

OpenAIRE initiatives propose next alternatives to deposit:

- Institutional repository, or
- Disciplinary repository(arXiv, Europe PubMed Central, etc.), or
- Zenodo(www.zenodo.org), if none of the above is available

Remarks:
Finding a repository via registries: ROAR(http://roar.eprints.org),
OpenDOAR (http://opendoar.org), or via OpenAire
A list of publications on the project website is not sufficient
To bring all publications together, OpenAire-compatibility to enable the harvesting of metadata (more details later)

Publication costs :

Dissemination costs, e.g. for publishing in open access journals/books, are eligible costs if incurred during project duration.

Medium costs estimated:

- for established open access journals 1020EURO
- for hybrid journals 1980EURO

Publishing all the articles with Gold Open Access will generate substantial amount of the overall budget. A mixed strategy GREEN/GOLD is recommended to avoid this.

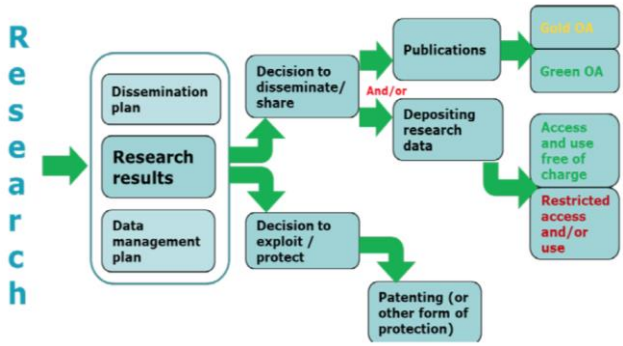


Figure 1 Data flow diagram for FLOOD-serv project aligned with OpenAIRE

2 Open access to scientific publications

The consortium needs to get aligned to the Grant agreement provisions:
Article 29.2 Open access to scientific publications:
Each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results.
In particular, it must:
(a) as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications;
Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.
(b) ensure open access to the deposited publication - via the repository - at the latest:

(i) on publication, if an electronic version is available for free via the publisher, or
(ii) within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.
(c) ensure open access - via the repository - to the bibliographic metadata that identify the deposited publication.

2.1 Dissemination and Policies for Public Access, Sharing and Publication Delays

The project partners will disseminate results through publications in national or international academic or practitioner journals or through participation in academic or practitioner conferences and events, in the field of the research activities of the project. Academic and practitioner journals where the results can be disseminated through scientific (peer reviewed) publications will be selected according to their relevance with the individual project results. These journals will target main areas of the project (e.g. Flood Risk Management, ICT-enabled government, mobile government, collective intelligence, social sensing, social innovation, decision-support ICT systems, crowd sourcing, knowledge management, semantic web, Information Systems for Crisis Response and Management, participatory democracy, social informatics etc.)

The Consortium will ensure open, free-of-charge access to the end-user to peer - reviewed scientific publications relating to the project results and to digital research data generated during the project (the data needed to validate the results presented in scientific publications and associated metadata) via a repository for scientific publications (e.g. subject-based/thematic repository) or via The Open Access Infrastructure for Research in Europe (Open Aire). This will provide readers with access to peer-reviewed scientific publications and research data free of charge as early as possible in the dissemination process, and enable the use and re-use of scientific research results.
Few suggested repositories for achieving the aforementioned are the following:

- https://www.openaire.eu/
- https://arxiv.org/corr/home
- http://citeseerx.ist.psu.edu/index
- https://hal.inria.fr/
- https://tequila.epfl.ch/tequila/help?language=en

3 Open access to research data

The consortium needs to get aligned to the Grant agreement provisions:

Article 29.3 Open access to research data

Regarding the digital research data generated in the action ('data'), the beneficiaries 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' (see Annex 1);
(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).

This does not change the obligation to protect results in Article 27, the confidentiality obligations in Article 36, the security obligations in Article 37 or the obligations to protect personal data in Article 39, all of which still apply.

As an exception, the beneficiaries do not have to ensure open access to specific parts of their research data if the achievement of the action's main objective, as described in Annex 1, would be jeopardized by making those specific parts of the research data openly accessible. In this case, the data management plan must contain the reasons for not giving access.
Research community - digital social innovation organization and networks, researchers in areas such as flood risk management, participatory open government, open data integration, human sensing, content harvesting, distributed knowledge co-creation, decision support systems, collective intelligence, data mining etc. as well as international organizations involved in flooding issues (e.g. IAHR- The International Association of Hydraulic Engineering and Research, IAHS- the International Association of Hydrological Sciences, EGS- the European Geophysical Society etc.), they could be interested to feed the project results and know-how into further RTD projects related to ICT-enabled government, collective intelligence, PSI re-use, open data, etc.

The primary responsibility for managing the data belongs to the FLOOD-serv partners which collected the data. If not available, the coordinator is able to access data and continue the data management process. It is the goal to store the data in secured servers located at the FLOOD-serv partner premises. The partners back up the data periodically. Partners can access the data via the coordinator. Any data not deemed public is kept private under strict security.

The **Consortium Agreement** defined the main specific limitations regarding the software/data/know how related to the project for each partner:

SIVECO

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
Software components, applications and libraries previously developed and owned by SIVECO	The SIVECO background software usage is limited to the project partners only and for the duration of the project implementation only, The partners will be granted access , as needed for project implementation, to internal information and documentation regarding SIVECO background software. The partners will not be granted access to SIVECO background software source code. The partners will not copy, reproduce or otherwise use the SIVECO background software for any other purposes than the current project implementation.	The SIVECO background software applications, components or parts included in the project results will only be used according to existing SIVECO licensing terms and conditions. In case of conflicts between project results and SIVECO background software licensing agreements, the SIVECO background software terms and conditions will prevail. The partners and final users of the project results will not copy, reproduce or otherwise use the SIVECO background software for any other purposes than the ones granted through project results license agreements.
SIVECO know-how and expertise in software implementation services (analysis, design, development, testing, implementation, training, technical support)	The SIVECO know-how and expertise in software implementation services will be available for consulting, usage and adaptations/ modifications for project implementation purposes. The partners will not copy, reproduce or otherwise use the SIVECO know-how and expertise for any other purposes than the current project implementation. The IPR of all the modifications of the documents and information provided by SIVECO will be vested in SIVECO after project implementation.	The access to and usage of the SIVECO know-how and expertise in software implementation services will be limited only to the project implementation period and will not be available after that period neither for partners nor for the final users of the project results.

CELLENT:

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
All components developed within the FUPOL and SMARTGOV project covering - social media - analytics - visualisation - and related documentation.	Component will be provided as an API / Web service access on remote servers or in the cloud. The partners will not copy, reproduce or otherwise use the background for any other purposes than the current project implementation.	Free access to those services will end after the project.

ANSWARE

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
Software components, applications and libraries previously developed and owned by ANSWARE	The ANSWARE background software usage is limited to the project partners only and for the duration of the project implementation only, The partners will be granted access, as needed for project implementation, to internal information and documentation regarding ANSWARE background software. The partners will not be granted access to ANSWARE background software source code. The partners will not copy, reproduce or otherwise use the ANSWARE background software for any other purposes than the current project implementation.	The ANSWARE background software applications, components or parts included in the project results will only be used according to existing ANSWARE licensing terms and conditions. In case of conflicts between project results and ANSWARE background software licensing agreements, the ANSWARE background software terms and conditions will prevail. The partners and final users of the project results will not copy, reproduce or otherwise use the ANSWARE background software for any other purposes than the ones granted through project results license agreements.
ANSWARE know-how and expertise in software implementation services (analysis, design, development, testing, implementation, training, technical support)	The ANSWARE know-how and expertise in software implementation services will be available for consulting, usage and adaptations/ modifications for project implementation purposes. The partners will not copy, reproduce or otherwise use the ANSWARE know-how and expertise for any other purposes than the current project implementation. The IPR of all the modifications of the documents and information provided by ANSWARE will be vested in ANSWARE after project implementation.	The access to and usage of the ANSWARE know-how and expertise in software implementation services will be limited only to the project implementation period and will not be available after that period neither for partners nor for the final users of the project results.

Gov2u

Option 2: No data, know-how or information of Government To You shall be Needed by another Party for implementation of the Project (Article 25.2 Grant Agreement) or exploitation of that other Party's Results (Article 25.3 Grant Agreement).

GENOVA

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
Open data	No limitations to Access Right in the field concerned, all datasets are ruled by Creative Commons Licenses	No limitations to Access Right in the field concerned, all datasets are ruled by Creative Commons Licenses
Existing data and services belonging to the Municipality	No limitations to Access Right will be applied to the partners during the project life. Data and services should be used according to the property licences and codes should not be copied or modified by any partner	No limitations to Access Right will be applied to the partners during the project life. Data and services should be used according to the property licences and codes should not be copied or modified by any partner

DDNI

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
Hidraulic model of the Lower Danube and Danube Delta developped with Sobek software, Digital Tterrain Model (DTM) for Danube River and Danube Delta based on LiDAR, data base for water level al gauges stations, existing data belonging to municipalities development plans.	The DDNI background is limited to the project partners only and for the duration of the project implementation only. The partners will be granted access , as needed for project implementation, to internal information and documentation regarding DDNI background. The partners will not copy, reproduce or otherwise use the DDNI background data base for any other purposes than the current project implementation.	The partners and final users of the project results will not copy, reproduce or otherwise use the DDNI background data for any other purposes than the ones granted through project results license agreements.
Existing data and services belonging to the Municipality	No limitations to Access Right will be applied to the partners during the project life. Data and services should be used according to the property licences and codes should not be copied or modified by any partner	No limitations to Access Right will be applied to the partners during the project life. Data and services should be used according to the property licences and codes should not be copied or modified by any partner
DDNI know-how and expertise in Flood Risk Management and Spatial Planing (analysis, design, development, testing, implementation, training, technical support)	The DDNI know-how and expertise in research services will be available for consulting, usage and adaptations/ modifications for project implementation purposes. The partners will not copy, reproduce or otherwise use the DDNI know-how and expertise for any other purposes than the current project implementation.	The access to and usage of the DDNI know-how and expertise in research implementation services will be limited only to the project implementation period and will not be available after that period neither for partners nor for the final users of the project results.

BILBAO

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
Open data	No limitations to Access Right in the field concerned, all datasets are ruled by Creative Commons Licenses	No limitations to Access Right in the field concerned, all datasets are ruled by Creative Commons Licenses
Existing data and services belonging to the Municipality	No limitations to Access Right will be applied to the partners during the project life provided that not implies any violation of the law related to an specific topic and specially the current Organic Law 15 / 1999, 13 December, of protection of Personal data.	No limitations to Access Right will be applied to the partners during the project life provided that not implies any violation of the law related to an specific topic and specially the current Organic Law 15 / 1999, 13 December, of protection of Personal data.

ANO

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
Software components, applications and libraries previously developed and owned by ANO	The ANO background software usage is limited to the project partners only and for the duration of the project implementation only, The partners will be granted access , as needed for project implementation, to internal information and documentation regarding ANO background software. The partners will not be granted access to ANO background software source code. The partners will not copy, reproduce or otherwise use the ANO background software for any other purposes than the current project implementation.	The ANO background software applications, components or parts included in the project results will only be used according to existing ANO licensing terms and conditions. In case of conflicts between project results and ANO background software licensing agreements, the ANO background software terms and conditions will prevail. The partners and final users of the project results will not copy, reproduce or otherwise use the ANO background software for any other purposes than the ones granted through project results license agreements.
ANO know-how and expertise in software implementation services (analysis, design, development, testing, implementation, training, technical support)	The ANO know-how and expertise in software implementation services will be available for consulting, usage and adaptations/ modifications for project implementation purposes. The partners will not copy, reproduce or otherwise use the ANO know-how and expertise for any other purposes than the current project implementation. The IPR of all the modifications of the	The access to and usage of the ANO know-how and expertise in software implementation services will be limited only to the project implementation period and will not be available after that period neither for partners nor for the final users of the project results.

	documents and information provided by ANO will be vested in ANO after project implementation.	

Exdwarf

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
FP7 project piloting- and dissemination-experience, found and on-boarded the Slovak pilot partner (Bratislava Self-governing Region or BSK) / facilitated the BSK-consortium partnership, lead and co-elaborated the Slovak project Part (BSK & Exdwarf). Slovak stakeholders network and Slovak market knowhow. Lead: Mgr. Tomas Koren. Scientific Advisory: Dr. Tommi Tervonen		Limited IT infrastructure, upgrade(s) might be necessary

IP TULCEA

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
Studies, reports, plans and strategies	IP Tulcea background studies, reports, plans and strategies usage is limited to the project partners only and for the duration of the project implementation only, The partners will be granted access, as needed for project implementation, to internal information and documentation regarding IP Tulcea background studies, reports, plans and strategies . The partners will not copy, reproduce or otherwise use the IP Tulcea background studies, reports, plans and strategies for any other purposes than the current project implementation.	The IP Tulcea background studies, reports, plans and strategies included in the project results will only be used according to existing IP Tulcea terms and conditions. The partners and final users of the project results will not copy, reproduce or otherwise use the IP Tulcea background Studies, reports, plans and strategies for any other purposes than the ones granted through project results license agreements.

BSK

Option 2: No data, know-how or information of Bratislava Self-Governing Region shall be Needed by another Party for implementation of the Project (Article 25.2 Grant Agreement) or exploitation of that other Party's Results (Article 25.3 Grant Agreement).

CMVNF

Describe Background	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for exploitation (Article 25.3 Grant Agreement)
Existing data and services belonging to the Municipality	No limitations to Access Right will be applied to the partners during the project life. Data and services should be used according to the property licenses and codes should not be copied or modified by any partner	No limitations to Access Right will be applied to the partners during the project life. Data and services should be used according to the property licenses and codes should not be copied or modified by any partner

The status presented above was presented at the time of signature of this Consortium Agreement and it remains valid until the consortium partners will decide and agree otherwise. The IPR will be discussed and detailed in D6.4 Sustainability and Exploitation First Plan and D6.5 Sustainability and Exploitation Final Plan.

3.1 Open data and open access principles

The technical partners follow the open data and open access principles in developing and adapting FLOOD-serv components and in the same time respect Grant Agreement and Consortium Agreement provisions as presented in the previous chapters.

3.1.1 What is open data?

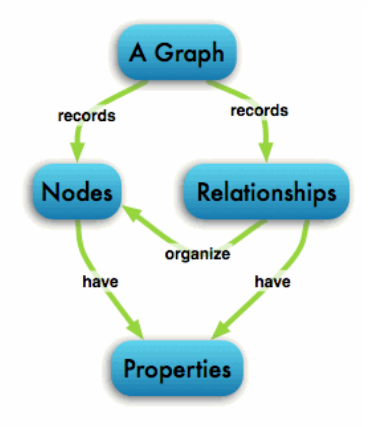
Open data is information that can be freely used, re-used and redistributed by anyone. The base principles of open data are:

a. Availability and Access: the information must be available as a hall in a free environment (not taking into consideration the cost of the internet needed to access it). Also data must be delivered in a form that can be analyzed and processed.
b. Re-use and Redistribution: the provider must take in consideration that data in their streams is intended to be reused, redistributed and completed with information from other datasets.
c. Universal Participation: the data should be available in all fields with no discrimination what so ever (Eg. Non-commercial would prevent the use in the commercial environment)

3.1.2 Benefits of open data

Many individuals and organizations collect data of different types in order to perform their tasks and make decisions. Open data adds informational value to the entities that collect it as it can be used not only as it is but also processed, mixed with other datasets to enlarge the precision and predictability of the next steps.

The representation of the information has to allow both human readability and machine processing. In order to archive this Open Data and Linked Data principles will be used. Open Data will help publishing the information in open standard formats and will create context around it and together with Linked Data will create relationships for better understanding the information and will be the building block in forming a graph database.



Graph databases are the core of semantic representation of information and use nodes, edges and properties to represent it. The links between data are ad hoc and based on the data itself.

Graph databases are represented commonly in RDF (Resource Description Framework) a standard for data interchange on the Web. It uses URIs (Uniform Resource Identifier) to name the relationships and allows data to be mixed, exposed and shared across different applications.

Even if RDF is a powerful solution for storage, mixing and interchange of data it doesn't offer any means to record the semantics and the meaning of the information. In order to have the same meaning and semantics of the information in human readable format and machine readable format the concept of Semantic Modelling of data is used.

The semantic modeling is an abstraction which defines the meaning of data within the context if its interrelationships with other data. It is defined by two main terms:

- Vocabulary – a collection of terms given a well-defined meaning that is consistent across contexts
- Ontology – allows definition of contextual relationships behind a vocabulary. A formal syntax of defining ontologies is OWL (Web Ontology Language).

By adopting the same base ontology or a common vocabulary for expressing the meaning behind the data exposed, multiple machines query each other using the same terms and assure the same context of information.

Standard vocabularies and formal ontologies representing terms within a domain of knowledge are already available and we use them to map context on our open data. A couple of examples are:

- Friend Of A Friend (FOAF) - focuses on developing a standard vocabulary/ontology for social networking purposes.
- Dublin Core Metadata Initiative (DCMI) - Creates ontologies for a range of subjects, particularly focusing on common, every day terms and terms important in media.
- OpenCyc - An ontology of everyday, common sense terms

Also for data linking there are various organizations dedicated on creating standard vocabularies, one of the most complete is DBpedia – a community that is dedicated on extracting information from Wikipedia and making this information available in the web.

3.1.3 Open Access (OA)

The Open Access principle refers to the fact that all online research information should be made available free of charge and free of copyright and license restrictions. Open access can be applied to all forms of published research output, including peer-reviewed and non peer-reviewed academic journal articles, conference papers, theses, book chapters, and monographs. By 'open access', we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, is to give authors control over the integrity of their work and the right to be properly acknowledged and cited.

3.2 Expected data

FLOOD-serv project implements a bottom-up approach in different catchment areas across Europe. There are five pilots defined in the project: Tulcea County (Including Danube Delta - Romania), Bratislava Region (Slovakia), BILBAO (Spain), Genova (Italy), Vila Nova de Famalicão (Portugal). The project deploys and pilots a user-driven participatory solution where public value is created by the ability to share, interact and collaborate between actors and by harnessing human and ICT capabilities and open data. A participatory design approach implemented by the project is expected to increase the likelihood that the public services are meaningful, useful and usable and the potential of self-supporting continuance after the design project has come to an end.

Potential users and customers (citizens, public authorities, researchers, companies, public institutions, NGO's, etc.) are empowered by the project to share their ideas, knowledge, skills, and experiences in order to explore new methods and tools that can enhance their own disaster resilience and that of their communities. The project establishes and maintains a Community of Interest around this project consisting of individuals with expertise in physical science and engineering, geographical science, social and behavioral science, economics, and public health with professional experience from research, public policy, emergency and disaster management, non-governmental organizations, the private sector, and government service from the pilot sites to ensure that pilot solution will respond to local needs.

The selection of the members of Community of Interest started with a lower number of stakeholders and later new members were be added. Key players are first contacted and invited to join the Community of Interest. After the confirmation of participation, interviews or surveys among interested organizations and people are undertaken in order to clarify their role within the Community of Interest. Some members may be interested to be involved only into the process of identifying local needs related to the flood risks and in user requirements elicitation, others in the design process or in testing the platform.

Maintaining two-way communication between the Project Consortium and the members of the Community of Interest takes place through email exchanges and interviews. The aim of dialog is to exchange information, ideas and thoughts about the platform, involve the members of the Community of Interest in the conception/design/development process to reveal some common, shared concerns as well priorities and needs and to give these members the opportunity to test the platform and to provide feedback to improve it. The members are invited to participate in a series of interviews to clarify their take on the FLOOD-serv platform and collect feedback for the consortium to work with. The Consortium

facilitates scientific and technical discussions by sending topics and/or articles directly to the members of the Community of Interest requesting their feedback directly through email.

No sensitive information is collected about the participants that apply online. Participants have the option to provide general categorization of their age range, economic and educational levels, and gender. Participants can remain completely anonymous for the rest of the project. After the revision of their application form by the FLOOD-serv project's Technical Committee, they receive a confirmation of participation together with an informed consent form that they have to electronically agree with.

The project involves the active participation of a variety of human subjects (members of the Community of Interest that will be set up in the project) in several information-gathering activities (interviews, focus groups, pilots, user surveys etc.), which may raise research-ethical concerns such as anonymity, confidentiality, privacy, data protection, data sharing and third-party use.

"The consortium requires the informed consent for all participants in the aforementioned activities. Such informed consent means that consent is given in possession and understanding of all information likely to be material to an individual's willingness to participate in the project. This includes what the project abstract, who is funding it, details of their participation, expected duration of the subject's participation, how any data collected will be used in the future, the rights of participants. Informed consent will be secured through an information letter/sheet and an informed consent form that will be signed by those involved."

The FLOOD-serv system is based on open data, open source, distributed social networking and open hardware. The proposed solution manages data acquired from various external data sources (sensors, social media, open data, etc.).

The FLOOD-serv project aims to use during the research activities and during the testing and validation phase of the proposed solution, existing data which are publicly available: statistical data related to floods, water management, spatial planning, crisis management, civil protection, environmental protection, etc. In case of data not publicly available, relevant authorizations will be provided.

The project's final goal is to create a system that can access different flood-related datasets across a broad number of different sources (sensors, social media and open data) and make sense of them on different mobile technologies – tablets and smartphones but also on laptops and PCs - in a way that helps the end users (public authorities, emergency personnel and citizens).

Additional simulation model and prototype testing data are to be generated. This data are to be retained by the partner who has generated it.

3.3 DATA management

Data should be 'FAIR' that is **f**indable, **a**ccessible, **i**nteroperable and **r**e-usable. These principles precede implementation choices and do not necessarily suggest any specific technology, standard or implementation-solution.

With the endorsement of the FAIR principles and it incorporation into the guidelines for DMPs in H2020, the FAIR principles hereby serve as a template for a full-lifecycle data management. Although the FAIR principle does not serve as an independent lifecycle data model, it assures that the most important components of a full life cycle model is covered.

Data management principles at the level of each FLOOD-serv component is detailed below by each technical partner responsible for the corresponding component.

3.3.1 Social Media Component

Responsible CELLENT

FUPOL is a social media analytics component. It uses a crawler to assemble data from social media and newspapers. Social media content is content (text) and associated meta-info (that describes the content's origin and details about the crawling task) collected from a Social Media Target during a crawling job.
A social media target is an access URL that refers to a social media site and the way that FLOOD-SERV shall collect and filter the data from there. It is one of the important features of FLOOD-SERV that data is collected in a targeted way. This reduces the “noise” (i.e. irrelevant content).
The crawler is capable of converting the proprietary social media data that FLOOD-SERV collects from the social media APIs to a standardized format in the RDBMS.
Data area managed for each client and the system is multi-client-capable. Clients in this context are emergency related entities (e.g. cities) with their own data and user base.

Data sources are public data and include

- Facebook
- Twitter
- RSS (newspapers)
- Opinion Maps
- Questionnaires (Electronic surveys)

These public data are analyzed in an analytical component, which handles:

- The visual presentation of the social media data

a. Dashboard: The Dashboard section will provide the facilitator with data aggregates in the form of charts based on social media data collected for the current campaign.
b. Heatmap: Some social media data that is collected has location information attached (some Twitter posts, for example). This information is used to build a heat map for the collected data.

- The topic clustering mechanism. It clusters postings and articles according to predefined keywords to a topic

3.3.2 Emergency Management Console- Responsible ANSWARE

The Emergency Management Console analyses the emergency event area and all the inputs received from external sensors to provide information to the Decision Support System Engine, which proposes response measures based on the data received. The more information it is provided to the system, the better and more detailed the suggestions.

In this outline version of the document, a list of sources of information that are considered necessary for the DSS engine to show the first suggestions, has been defined. In order to complete and personalize the tool to the pilot necessities, a further analysis of the sensors data and other data provided by the pilot cities will be done.

- Weather nowcast and forecast information

- Points of interest (critical infrastructures -transport, health, departments, schools, etc.. -, emergency…)
- Population data (if it is possible the number of people living on a building, or in any case the density of population by area would be interesting)
- Historical floods data (could be interesting to provide the DSS engine more knowledge)

The EMC component also generates data, based on the data (e.g., reports) generated by the users of Flood-serv and the transformation and analysis of the collected data.

The main types of data generated by this component are the followings:

- User generated reports
- Suggestions and actions to be taken according to the pilot Action Plan
- Predictions
- Dossier (summary of the emergency)
- Emergency event information (geolocated - to be stored as a historical data)

The EMC uses and will be improved with Opendata tools to develop the functionalities.

3.3.3 Territory Monitoring System- Responsible ANO

Responsible ANO

The Territory Monitoring System provides the FLOOD-Serv project with the ability to analyze vast geographical areas for key occurrences related to flood prevention, detection and impact gathering.

For this, the TMS receives pairs of images, geo-referenced, for each geographical area corresponding to two different time instances, and then outputs the key differences in that area for that time period. The more information it is provided to the system, the better and more detailed the analysis will be.

The TMS component acts as a report engine, as a service through its API, and stores a limited quantity of data:

- Data for access management
- Analysis History

Other levels of data management and responsibility are left for the EMC, or any other component that interlinks directly.

3.3.4 Citizen Direct Feedback- Responsible ANO

Responsible ANO

The Citizen Direct Feedback component focuses on gathering information related to flood prevention, detection, post-emergency management and also as an educational interface for the citizen and for other relevant stakeholders.

The CDF allows citizens to alert the authorities of any potential emergency situation through its online portal and mobile by sending a text description and a media attachment of a relevant occurrence. It also allows the pilot organizations to filter that information, to deploy specific actions and enable the citizen follow-up on those reports.

Lastly, the CDF also provides a means of broadcasting information through the portal RSS feeds and the alerts on the mobile apps.

The component uses a database to manage and store all of its information (received and generated), and an API to enable external access.

The CDF usesd and will be improved with Opendata tools to develop the functionalities.

3.3.5 Semantic Wiki and FLOOD serv platform

Responsible SIVECO

SIVECO designed and developed Semantic Wiki component applying permanent identifiers on all levels. The technical specifications include general principles for digital object identifiers, and include examples of DOI implementation useful for this component. The Semantic Wiki includes subject area (mainly floods, and flood risk management) related text and semantically annotated data provided by its users. Initially its contributors will be members of the Project Consortium, but in perspective other users will be able to contribute.
The FLOOD-serv Portal presents to its target groups (citizans and public administrators) data which originates from the Portal itself (user edited: e.g. news articles, general static pages about the Portal and Project), and data collected from other components (e.g. EMC, CDF) which is presented in the form of data reports (charts, maps, tables, etc.).

The FLOOD-serv Portal also manages user sign in information (Name, email address, password), which represent *personal data* accordind to GDPR. An informed consent is asked for the use of these data, and this data is stored securely and encrypted. The FLOOD-serv Portal uses cookies for 2 purposes: 1) recognize repeated visits and preferences and to 2) analyse our traffic. Users are informed about the use of cookies, these purposes and details are presented in the cookie policy of the Portal (see Appendix C).

3.4 Data Formats and Metadata

Data Formats and Metadata at the level of each FLOOD-serv component is detailed below by each technical partner responsible for the corresponding component.

3.4.1 Social Media Component

Responsible CELLENT

The input format of the data is defined by the API of the respective social media service.

- Twitter-The Twitter REST APIs provide programmatic access to read and write Twitter data. Create a new Tweet, read user profile and follower data, and more. The REST API identifies Twitter applications and users using OAuth; responses are in JSON format.
- Facebook -The Facebook Graph API is the primary way to get data in and out of Facebook's social graph. It's a low-level HTTP-based API that is used to query data, post new stories, upload photos and a variety of other tasks that an app might need to do.

- RSS (Rich Site Summary) -Originally RDF Site Summary; often called Really Simple Syndication) uses a family of standard web feed formats to publish frequently updated information: blog entries, news headlines, audio, video. A standard XML file format ensures compatibility with many different machines/programs.

Output data to be provided through a REST API in JSON format

3.4.2 Emergency Management Console- Responsible ANSWARE

For this component standard data formats (e.g., JSON and GeoJSON) are used in order to improve findability, accessibility, interoperability and re-usability of the data.

The format of the input data can be very varied. Many of them are obtained through open data portals by the pilots, but others are provided by internal services. Therefore a thorough preliminary analysis of the data was performed before determining the format of the inputs.

The output format of the data provided by the Emergency Management Console are JSON and GeoJSON.

JSON (JavaScript Object Notation) is a lightweight data-interchange format. It is easy for humans to read and write. It is easy for machines to parse and generate. It is based on a subset of the JavaScript Programming Language, Standard ECMA-262 3rd Edition - December 1999. JSON is a text format that is completely language independent but uses conventions that are familiar to programmers of the C-family of languages, including C, C++, C#, Java, JavaScript, Perl, Python, and many others. These properties make JSON an ideal data-interchange language.

GeoJSON is a format for encoding a variety of geographic data structures based on JSON. A GeoJSON object may represent geometry, a feature, or a collection of features. GeoJSON supports the following geometry types: Point, LineString, Polygon, MultiPoint, MultiLineString, MultiPolygon, and GeometryCollection. Features in GeoJSON contain a geometry object and additional properties, and a feature collection represents a list of features

The EMC uses RESTful services to provide the output data.

3.4.3 Territory Monitoring System- Responsible ANO

Responsible ANO

The TMS uses standard data formats, in order to improve find ability, accessibility, interoperability and re-usability of the data.

The input data consists of a pair of images, typically in a bitmap ou TIFF format and XML or JSON encoded geo information

The report analysis is to be provided through its API in XML or JSON format. This component stores a limited quantity of data itself as previously stated, and the API is available as standard RESTful web service.

3.4.4 Citizen Direct Feedback- Responsible ANO

Responsible ANO

The CDF uses standard data formats, in order to improve find ability, accessibility, interoperability and re-usability of the data.

At a technical level, through its API, the CDF provides access to all its data (gathered and generated) in a JSON or XML format and it is available as standard RESTful web service.

3.4.5 Semantic Wiki and FLOOD serv platform

Responsible SIVECO

The Semantic Media Wiki uses user defined data as input. This data is composed of semantic definitions of terms and semantically annotated information. The tool has also the possibility to use HTML, text and XML files for importing and mapping data but the community also provides extensions to covert data from other wiki components to its own structure. The data is processed and stored in a MySQL database and secured from alteration thru server and application level security standards.

The user added data or imported data is then exposed in the web in two main formats:

- RDF (Resource Description Framework) – which is a standard machine readable language used to create conceptual descriptions and modeling of information. It is based on a variety of syntax notations and data serialization.
- User Interface – is used to display the data in a human readable way and will expose the data as HTML to the clients (browsers).

By these two formats the Media Wiki ensure first of all the re-usability and interoperability of the data (the scope of the component) and also the accessibility and findability both for human users and search engines.

4 Data Security, storage and preservation of access

4.1 Data Security and Storage in the FLOOD-serv System and its Components

FLOOD-serv project implies usage and improvement of existing components. In the below table the lists of the components and associated responsible are presented. Each component responsible partner is responsible to store the corresponding data on secure servers on project duration and after project completion for a period agreed at consortium level.

Components	*TRL*	*Comments*	*Responsible Partner*
Social Media Sourcing and Communication	5	The prototype exists from an R&D project; needs to be integrated and improved	CELENT
Text analysis (Tagging) and visualization	4	The prototype exists from an R&D project, needs to be integrated and improved	CELENT
Sensor integration	3	Lab tested, but currently not rolled out	ANSWARE
Emergency Management Console	5	The prototype exists from an R&D project; needs to be integrated and improved	ANSWARE
Territory Monitoring System	6	Technology validated in relevant environment	ANO
Citizen Direct Feedback	6	Technology validated in relevant environment	ANO

Figure 2 Existing components used in FLOOD-serv platform

It is the goal to store the data on servers at a secured location in the premises of the partner who was in charge with collecting the data.

FLOOD-serv project has 5 public institution that are in charge of collecting the data from Community of Interest:

BILBAO	AYUNTAMIENTO DE BILBAO
BSK	Bratislavsky Samospravny Kraj
GENOVA	COMUNE DI GENOVA
IP TULCEA	INSTITUTIA PREFECTULUI JUDETUL TULCEA
CMVNF	MUNICÍPIO DE VILA NOVA DE FAMALICÃO

The data will be archived at grant completion. The individual's privacy will be ensured by removing any identifiable information. Some of the data collected will be publicly available via our website. The access to the data will comply with the all national and EC requirements. Any reference to FLOOD-SERV data should be made explicit in any third party publication or dissemination, including grant agreement number.

The new data collected by partners will be available for a 3-year period after completion of the project, if the consortium does not decide to extend it. After this period the data will be destroyed, both in electronic and paper format.

For each component the general principles that will be applied for security, preservation of access will be detailed by each technical partner responsible:

4.1.1 Social Media Component

Responsible CELLENT

The information/data related will be stored on secured servers of the CELLENT data center for the duration of the project. They will be included in the standard back-up cycle with onsite and off-site back-up.
Access restrictions both to premises and servers follow corporate standards.

4.1.2 Emergency Management Console- Responsible ANSWARE

The EMC component has two ways of preserving data security:

On the one hand, all the information/data related to those systems will be stored on secured servers on the project duration. These data are collected by the tool and will have their respective backups in other servers with equal security. According with the limitation in the policies of the European Commission, it is not possible to have two copies of the data on two servers hosted in the same site.On the other hand, the data may be accessible only by persons with access permissions, performing with a user access control to this data. Each user will have their credentials to access the application. For this purpose, authentication and authorization protocols may be used.

4.1.3 Territory Monitoring System

ANO has an ISO 27001 certification and thus information security and protection are one of its top priorities.

On one hand, all the data gathered and generated by the TMS will be stored on a secured server during the project duration. The data is collected by the tool and will have their respective backups in other servers with equal security. According with the limitation in the policies of the European Commission, it is not possible to have two copies of the data on two servers hosted in the same site.

On the other hand, the data may be accessible only by persons with access permissions, performing with a user access control to this data. Each user will have their credentials to access the application. For this purpose, authentication and authorization protocols will be used, along with SSL encrypted access.

4.1.4 Citizen Direct Feedback

ANO has an ISO 27001 certification and thus information security and protection are one of its top priorities.

On one hand, all the data gathered and generated by the CDF will be stored on a secured server during the project duration. The data is collected by the tool and will have their respective backups in other servers with equal security. According with the limitation in the policies of the European Commission, it is not possible to have two copies of the data on two servers hosted in the same site.

On the other hand, the data may be accessible only by persons with access permissions, performing with a user access control to this data. Each user will have their credentials to access the application. For this purpose, authentication and authorization protocols will be used, along with SSL encrypted access.

4.1.5 Semantic Wiki and FLOOD serv platform

Responsible SIVECO

The project Coordinator will be responsible for developing Semantic wiki component and FLOOD-serv collaborative and personalized citizen-centric platform. All the information/data related to those systems will be stored by the project coordinator on secured servers on project duration and after project completion for a period agreed at consortium level.

Data Security can be seen in two main ways:

1. **Protecting the data from destructive forces (theft, natural hazards etc.)**

Exposure of hardware infrastructures to attacks and natural hazards are a real issue even in our days. For protecting data in these kinds of cases specialized datacenter procedures have been put in place: reinforcement of building walls, wind and water protection, flooding protection, lightning strikes protection and fire protection.

Also backing up data is still the best practice of protecting and recovering data.

2. **Protecting the data from unwanted actions or unauthorized access**

This type of data security flaw can be covered by a series of digital privacy measures that are applied to prevent unauthorized access to the datacenter, computer or websites. Data security measures also prevent data from corruption.

4.2 Other Data Security and Storage Issues

Aside from the data use by FLOOD-serv System and its Components, Specific personal data about individuals to be processed during the *WP5: Verification, Piloting, Evaluation and Validation* of the FLOOD-serv Project include personal data about individuals participating in the testing/piloting process. Such individuals include:

1. Employees of the pilot cities;
2. Employees/representatives of external stakeholders;
3. Citizens.

For proper recording and documenting of the testing/piloting process, individual data will have to be included about all individuals participating in the testing process, from either of the categories above. To be able to process such data, GDPR, Article 6, stipulates that "processing [of individual data] shall be lawful if one of the following applies:

(a) the data subject has given consent to the processing of his or her personal data for one or more specific purposes;
(b) processing is necessary for the performance of a contract to which the data subject is party or in order to take steps at the request of the data subject prior to entering into a contract; (…)"

An informed consent form, to be used by all participants in the piloting process is present in Appendix B. This form provides information to the participants about the FLOOD-serv Project, what their participation would consist of, what personal data will be collected and with what objectives, what their rights are under GDPR, and asks specific consent for participation and for each type of use of personal or other data.

One or several (e.g. one for each type of involved person) registries are kept by each Pilot City institution. The registry(es) will centralize all information provided by participants and will generate a unique identification code for each participant (pseudo anonymization). The

instruments used in the testing process (forms, questionnaires, tables, etc.) do not contain personal information about participants, but will contain their unique identification code. Personal data obtained by the informed consent form by Pilot City organizations shall not be shared with any other Consortium members (except the Consortium leader acting as an intermediary at the request of the European Commission) or other third parties (except the European Commission – for verification purposes).

5 Conclusions

The *Data Management Plan – final version* discussed how various types of data are and are to be handled during the FLOOD-serv Project and after its official conclusion. Issues related to the use and access to scientific data generated by the project; data management formats, storage and security within the FLOOD-serv (Information) System and its Components; as well as data use by Project Activities outside the FLOOD-serv System were presented.

Despite it being a final version, as per the schedule of deliverables defined by the Project DoA, the DMP, being a document on which ongoing data use is based, may evolve and incur modifications and additions until the end of the Project. Should such need for update arise, we shall inform the Project Officer, and, based on her recommendation we may update this deliverable. This Deliverable may further be revised at the request of Project Officer and monitors, based on the review of deliverables.

6 References

[1] Grant Agreement

[2] Description of the Action(DoA)

[3] Horizon 2020 INSO-1-2015

[4] AGA – Annotated Model Grant Agreement

[5] Guidelines on FAIR Data Management in Horizon 2020

Appendix A: Procedures to Get Informed Consent

Obtaining genuine informed consent from research participants is a process of sharing information and addressing questions and concerns, rather than simply obtaining a signature on a prescribed form. In the specific case of FLOOD-SERV we will follow the steps described in the sequel.

1. The first step starts with the researchers developing awareness on EC directives but also national or regional specific guidelines and it must involve discussion and participation of the educators of the partner schools involved in the pilot tests, as well as the of family members of potential participants among the students' population. Participants must then give their individual consent to participate on an informed consent form developed specifically for the research project.
2. Researchers should follow an appropriate and culturally-sensitive process of information sharing leading up to obtaining the participant's signature on the informed consent form.
3. This process may continue even after the signature is obtained as it is often appropriate for researchers to check back with participants throughout the research to ensure continued consent or because a new consent is required for an additional or changed activity.

D.1 Awareness of/consultation with national and/or regional bodies

Before starting the research, we will develop awareness of existing and/or regional human research guidelines which may set out specific expectations to protect interests and well-being of participants. This will be done by consulting the national and/or regional bodies on any proposed human subject research which will take place within their boundaries.

Moreover, at all the stages of the informed consent process we will be prepared to discuss the capacity-building potential of the research and the benefits for the community/country/region, as well as the benefits for the individual participants.

D.2 Recruiting and informing research participants

We will follow the steps described below:

1. Research may meet individually or in small groups with potential participants in order to inform and recruit them for participation.
2. In some cases, broader and more open approaches, such as information posters, brochures, announcement and wider community meetings will be used to introduce the research to a larger number of potential participants.
3. In all situations, the information that is shared with the potential participants will be provided in a manner that is understandable and adapted to all the target subjects of the research (i.e. educators, parents and students with or without disabilities) and which, therefore, allows them to make an informed decision.

Appendix B-Informed Consent Form

Project Summary

The overall objective of FLOOD-serv is to develop and to provide a pro-active and personalized citizen-centric public service application that will enhance the involvement of the citizen and will harness the collaborative power of ICT networks (networks of people, of knowledge, of sensors) to raise awareness on flood risks and to enable collective risk mitigation solutions and response actions.

Other general objectives are:

1. Empowering local communities to directly participate in the design of emergency services dealing with floods mitigation actions.
2. Harness the power of new technologies, such as social media, and mobile technologies to increase the efficiency of public administrations in raising public awareness and education regarding floods risks, effects and impact.
3. Encourage the development and implementation of long-term, cost-effective and environmentally sound mitigation actions related to floods though an ICT-enabled cooperation and collaboration of all stakeholders: government, private sector, NGOs and other civil society organizations as well as citizens.

This project is funded through European Union's Horizon 2020 Programme

Participation in the Testing and Piloting of the FLOOD-serv System

You are being asked to participate in the testing of the FLOOD-serv System. This will involve activities like:

- Testing functionalities of the FLOOD-serv System;
- Filling in Project related questionnaires and forms;
- Participation in discussions, workshops or focus groups.

Duration

The testing of the FLOOD-serv System starts in May 2018 and ends in June 2019.

The FLOOD-serv Project will end in July 2019. Personal data collected in the project will be kept 3 more years after the Project's end (until July 2022) and then it will be deleted.

Voluntary Participation

Taking part in testing the FLOOD-serv System is voluntary. Every individual is free to participate or not to participate in testing activities. Every individual is free to withdraw from participation in this project at any time without penalties.

Your rights

In accordance with the General Data Protection Regulation (EU 2016/679) you have the following rights:

1. The right to Transparent information, communication and modalities for the exercise of the rights of the data subject (Art. 12);
2. The right to be informed where personal data are collected from you (Art. 13);
3. The right to be informed where personal data have not been obtained from you (Art 14);
4. Right of access (Art. 15);

5. Right of rectification of inaccurate information (Art. 16);
6. Right of erasure ('right to be forgotten') (Art. 17);
7. Right to restriction of processing (Art. 18);
8. Right to notification regarding rectification or erasure of personal data or restriction of processing.
9. Right to data portability;
10. Right to object (Art. 21);
11. Right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her.

Objectives of data use

There are three objectives of data collection and use in the testing and piloting of the FLOOD-serv System:

1. Personal data is going to be used for communicating and organizing testing activities with participants;
2. Answers to questionnaires or other forms will be used anonymously (without knowledge of who the respondent is) for improving the FLOOD-serv System and its components;
3. Answers to questionnaires or other forms may be used, but only anonymously without possibility of identifying respondents, for scientific research and publication.

Privacy of information

Personal data collected through this form will be securely stored by the {PILOT INSTITUTION NAME HERE}. This data will be used in organizing testing sessions with participants like you. We will collect the following personal data about you:

- Name (first, middle, last);
- Email address;
- Mobile telephone number.

Other information that you will provide by filling in testing instruments or questionnaires will be treated anonymously and will not be linked back to your personal data. To anonymize you, a unique Piloting Participation Identification Code, is going to be issued to you and written on your copy of this consent form. This number will be used such that we know that your answers in different forms come from the same person, but will not be linked back to your personal data.

All information collected about you during the project will be kept confidential. Your personal data provided in this form shall be kept by the PILOTING INSTITUTION NAME HERE and shall not be shared with any third party, not even with other Project Consortium Members. Your data may be required to be shared with public authorities only within the condition of the law (for example the European Commission may need to check that participants to testing activities were real individuals). Other information you will provide, such as the answers to questionnaires or other testing instruments may be shared with the Consortium Members but in way that cannot be traced back to the respondent.

Inclusiveness

Within the process of selection of participants, the partners of this project will aim to promote equality and to prevent discrimination on the grounds of gender, civil status, family status, sexual orientation, religion, age, disability and race.

Piloting Participation Identification Code _____

(This code should be given to you by the PILOTING INSTITUTION NAME HERE)

First Name: _____Middle Name(s): _____

Last Name _____

Email Address

_____

Mobile phone no. _____

I agree to the following:

- I have read the information above. ☐
- I will voluntarily participate in testing and piloting activities in the FLOOD-serv Project ☐
- My personal data will be used by PILOTING INSTITUTION NAME HERE to organize testing activities;
- My answers to forms and questionnaires will be used anonymously to improve the FLOOD-serv System and its components ☐
- My answers to forms and questionnaires will be used anonymously for scientific research and publication ☐

Participant's Signature _____

Date _____

Appendix C – FLOOD-serv Portal Cookie Policy

This is the cookie policy of the FLOOD-serv Portal as it is presented to users of the Portal.

What are cookies?

Cookies are small files which store identifying information on your device (computer, phone, tablet, etc.). These files are passive, they do not contain executable software, viruses or spyware.

What are cookies used for?

Cookies help with recognizing the device of the user such that you don't have to resubmit information again and again. They store user's preferences in order to adapt content and deliver a more pleasant experience and in order for us to be able to analyse our traffic so that we can improve the content and structure of our Portal.

Concretely we use cookies for the following purposes:

1. Recognize repeated visits by the same user and the user's preferences. For example once you have chosen the language and pilot city of your interest, when you return to the FLOOD-serv Portal we know to direct you to that particular instance of the portal.

2. Analyse the traffic on this site in order to understand the number of visits various pages and improve the content and structure of the Portal.

We do not use cookies for advertising.