MEDiate

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Multi-hazard and risk informed system for Enhanced local and regional Disaster risk management

MEDiate

Deliverable D8.1

Project Management Plan

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Date	Version	Editor	Comments
15/03/2023	1.0	NORSAR	Sent for review to Executive Board and WP Leaders
28/03/2023	1.1	NORSAR	Final version

LIST OF PARTNERS

Participant	Name	Country
NOR	NORSAR	Norway
DEL	Deltares	Netherlands
IIASA	International Institute for Applied Systems Analysis	Austria
BRGM	Bureau de Recherches Géologiques et Minières	France
EUC	Fondazione Eucentre	Italy
IMO	Icelandic Meteorological Office	Iceland
IMT	Institut Mines-Telecom	France
UIce	University of Iceland	Iceland
R2M	R2M Solution	France
RINA-C	RINA Consulting	Italy
IUSS	Istituto Universitario di Studi Superiore Pavia	Italy
OSL	Oslo kommune	Norway
NICE	Metropole Nice Cote d'Azur	France
AUS	Austurbru	Iceland
UStr	University of Strathclyde	UK
UCL	University College London	UK
ARU	Anglia Ruskin University	UK
ECC	Essex County Council	UK

GLOSSARY

Acronym	Description
CA	Consortium Agreement
DMP	Data Management Plan
DSS	Decision Support System
EC	European Commission
GA	Grant Agreement
PO	Project Officer
WP	Work Package

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1 EXECUTIVE SUMMARY OF THE PROJECT

MEDiate will develop a decision-support system (DSS) for disaster risk management by considering multiple interacting natural hazards and cascading impacts using a novel resilience-informed and service-oriented approach that accounts for forecasted modifications in the hazard (e.g., climate change), vulnerability/resilience (e.g., aging structures and populations) and exposure (e.g., population decrease/increase).

The main outcome of MEDiate will be a DSS in the form of service-orientated web tool and accompanying disaster risk management framework providing end users with the ability to build accurate scenarios to model the potential impact of their mitigation and adaptation risk management actions. The scenarios, which can be customised to reflect local conditions and needs (e.g., demographics, deprivation, natural resources), will be based on a combination of the historical records and future climate change projections. They will allow to forecast the location and intensity of climate related disaster events and other natural disaster events and to predict their impacts, including cascading impacts, on the vulnerability of the local physical, economic and social systems. The scenarios will allow end users to evaluate the potential impact of different risk management strategies to reduce hazard when possible, to reduce vulnerability and to enhance community resilience to current and future natural hazards.

Co-design, co-development and co-evaluation of the DSS, based on close and long-running interactions with end users located in four European testbeds (Oslo, Nice, Essex and Austurbrú), is central to the project's vision. This will enable more reliable resilience assessments, accounting for risk mitigation and adaptive capabilities, therefore reducing losses (human, financial and environmental) from future natural disasters.

The MEDiate consortium consists of 18 partners from 7 European countries, involving a multi-disciplinary team of meteorological, environmental, and geophysical scientists, civil and risk engineers, social scientists, information technologists, business economists and managers, and end-users (local and regional communities and authorities), working together to ensure that MEDiate will deliver solutions that are user-led and supported by appropriate technology.

2 DELIVERABLE PURPOSE AND SCOPE

This document is the first deliverable of Work Package (WP) 8 and is the Project Management Plan. It has been elaborated by the Project Coordinator (NOR) and reviewed by the Executive Board and WP Leaders of MEDiate (see Section 3). It details the planning and organization of activities related to the Project Management of MEDiate, especially activities of Task 8.2, Task 8.3, and Task 8.4. It will be complemented by the Quality Procedures Manual (D8.2).

A Project Management Plan is necessary to ensure the good progress of the project for all partners. Following the management information included in the Grant Agreement (GA) and in the Consortium Agreement (CA), this deliverable highlights the important procedures to be carried out to monitor, coordinate and evaluate the management activities of the project. The purpose of the Project Management Plan is to describe the tools that will be used for the execution of MEDiate so that the project can produce the expected outcomes with the best quality, manage time and costs correctly, and ensure good communication among all partners.

The project management structure will first be presented. Then the organization of the work in eight WPs, and the links and interdependencies between WPs will be described. Given the project Milestones and Deliverables are the most important ways to communicate project progress and results with the European Commission (EC), the management of such documents is therefore an important step. Finally, the deliverable will cover all aspects related to the data management in MEDiate. This deliverable is written primarily for all consortium members

involved in the delivery of the MEDiate project and may further act as a guide to clarify roles within the consortium and to understand the formal procedures.

3 PROJECT MANAGEMENT STRUCTURE

The MEDiate project management is based on experience gathered during previous national and international research projects, including H2020 projects, using approved methods applied in successful projects in which some of the consortium partners have been involved. This will ensure effective decision making and progress monitoring through a clear and concise flow of information and the production of high-quality reports and deliverables.

The management structure is described in the GA (DoA Part B, page 27), with further Responsibilities of Parties (Section 4, page 8) and Governance structure (Section 6, page 10) complemented in the CA. A complete overview of the project management structure is provided in Figure 1.

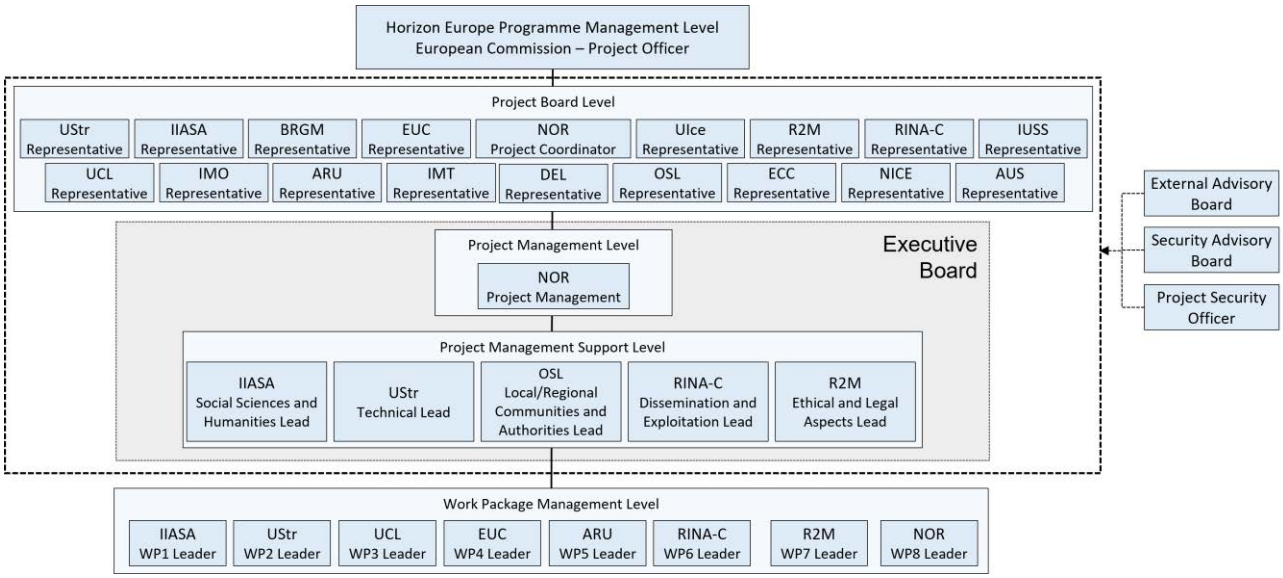


Figure 1: Project management structure

Project Board (PB)/General Assembly: the ultimate decision-making body of the consortium including one senior representative from each project partner (see Table 1).

Table 1: Project Board members

Name	Beneficiary	Country
Abdelghani Meslem	NOR	Norway
Mario Martinelli	DEL	Netherlands
Nadejda Komendantova	IIASA	Austria
Pierre Gehl	BRGM	France
Barbara Borzi	EUC	Italy
Matthew James Roberts	IMO	Iceland
Aurélie Montarnal	IMT	France
Benedikt Halldórsson	UIce	Iceland
Régis Decorme	R2M	France
Clemente Fuggini	RINA-C	Italy
Mario Martina	IUSS	Italy
Osman Mohammad Ibrahim	OSL	Norway
Romain Gitenet	NICE	France
Tinna K. Halldórsdóttir	AUS	Iceland
Christopher White	UStr	UK
Carmine Galasso	UCL	UK
Keith Jones	ARU	UK
Marc Inman	ECC	UK

Project Coordinator (PC): the authorized legal entity acting as the supervisory body and responsible for the successful delivery of the project. The PC (NOR) has the overall responsibility for the project, acting as the executive of the Consortium. The PC is accountable for:

- Day to day management of the project
- Tracking progress in line with the project schedule
- Maintaining common project agreement
- Representing the consortium when liaising with the Project officer (PO) of the EC
- Coordinating the preparation and distribution of all deliverables
- Maintaining tracking of costs, resources and scheduling
- Scheduling and arranging periodic meetings
- Maintaining the quality assurance of the technical reports and deliverables
- Supporting the technical coordination between the Work Packages (WP)
- Organizing the project reviews with the PO of the EC
- Performing risk management

Executive Board (EB): the body that supports the PC and that is formed by the:

- Social Sciences and Humanities Lead – IIASA specializes in social science, policy-oriented research and will focus on the end-user needs and decision support system.
- Technical Lead – UStr will ensure technical issues raised by WP leaders do not adversely impact the project.
- Local/Regional Communities and Authorities Lead – OSL will represent the end users in the project and will actively engage in the MEDiate project, providing its expertise in strategic and operational planning and crisis management in many sectors to co-design, co-develop and co-evaluate the tools for disaster risk management, particularly, the DSS.
- Dissemination and Exploitation Lead – RINA-C will carry out dissemination activities appropriately and in a timely fashion to ensure maximum dissemination of the project. RINA-C will also develop and maintain detailed exploitation plans (and potential business models, where relevant) for the project results and maintaining/updating these plans throughout the project in response to technical developments and consortium issues to ensure optimal exploitation at the end of the project.
- Ethical and Legal Aspects Lead – R2M specializes in innovation and sustainability consulting and market implementation and will focus on ethical, legal and societal aspects of MEDiate.

The names of the representatives of the partners represented in the EB are shown in Table 2.

Table 2: Executive Board members

Name	Beneficiary	Country
Abdelghani Meslem	NOR	Norway
Nadejda Komendantova	IIASA	Austria
John Douglas	UStr	UK
Osman Mohammad Ibrahim	OSL	Norway
Fabio Bolletta	RINA-C	Italy
Cécile Barrere	R2M	France

Work Package Leads: the Work Package management level is responsible for the coordination of work and for the milestones/deliverables in the specific WPs with input from all other named partners. The names of the WP leads are shown in Table 3.

Table 3: WP Leads

Work Package	Lead Beneficiary	WP Lead
WP1	IIASA	Nadejda Komendantova
WP2	UStr	Christopher White
WP3	UCL	Gemma Cremen
WP4	EUC	Barbara Borzi
WP5	ARU	Keith Jones
WP6	RINA-C	Rita De Stefano
WP7	R2M	Cécile Barrere
WP8	NOR	Ivan Van Bever

The decision-making mechanism is organized between the different bodies presented above as shown in Table 4.

Table 4: Project management decision-making mechanism

Management Level	Decision Scope	Escalate to:
WP Lead	Task-level or WP-level planning decisions where impact is contained within one WP and planned contingencies exist.	PC
Technical Lead	Technical issues that affect one WP but without existing contingencies to keep WP within tolerance and that could affect multiple WPs where contingencies exist.	EB
Dissemination and Exploitation Lead	IPR/Communication issues that affect one WP but without existing contingencies to keep within tolerance and that could affect multiple WPs where contingencies exist.	EB
Ethical and Legal Aspects Lead	Ethical/legal issues that affect one WP but without existing contingencies to keep within tolerance and affect multiple WPs where contingencies exist.	EB
PC / PB	Issues that affect multiple WPs but without existing contingencies to keep within project tolerance and project-level strategic or financial issues where planned contingencies exist.	PO

Security Advisory Board (SAB) and PSO (Project Security Officer): The role of the PSO is to guarantee that the rules on the handling of EU classified information and applicable security procedures are respected. The role of the SAB is to address security matters and, when necessary, liaising with the PSO in ensuring the proper handling of classified and sensitive information. The SAB must review all the project deliverables, assess whether they include any security sensitive information and propose timely measures for preventing the misuse of such information. The names of the SAB members and the PSO are shown in Table 5.

Table 5: SAB members and PSO

Name	Role	Institution	Country
Rémy Bossu	Chair of SAB	EMSC	France
Per Håkon Meland	SAB member	SINTEF	Norway
Ian Simon Gjetrang	SAB member	OSL	Norway
Clemente Fuggini	SAB member	RINA	Italy
Osman Mohammad Ibrahim	PSO	OSL	Norway

Ethics Advisory Board

The Ethics Advisory Board of MEDiate will be consulted when needed for any legal or ethical issue that may arise during the project. The Ethics Advisory Board is composed of the WP Leaders and the Executive Board members.

Expert/Advisory Group members

The Expert/Advisory Group of MEDiate is composed of the SAB and the PSO and of external experts. The Expert/Advisory Group assists and facilitates the decisions made by the General Assembly, provides advice on the progress and intermediate results and provides links with international organizations and stakeholder communities. In addition to the SAB members and the PSO, the Advisory Committee consists of the following members: Marleen de Ruiter (Risk-Kan), Philipp Ward (Myriad-EU), Cees van Westen / Funda Atun (PARATUS). The Advisory Committee members are allowed to participate in General Assembly meetings upon invitation but have not any voting rights. The PC (NOR) will ensure that a non-disclosure agreement is executed between all Parties and each Advisory Committee member.

4 WORK PLAN

The results will be achieved through eight WPs that will be conducted in parallel. The first five WPs represent the core implementation of research and innovation actions, with WP1 focused on the elicitation of stakeholder needs and preferences, as well as on the amendment of the initial MEDiate conceptual model with input from the stakeholders to provide end-user needs assessment into WP2, WP3 and WP4. The topics of the two cross-cutting WPs (WP2 and WP3) are demarcated by technical expertise: assessment of current and future multi-hazard interactions and cascading impacts for WP2 and integration of dynamic multi-hazard vulnerability and resilience into formal people-centered and forward-looking risk assessment for WP3. These research-oriented WPs feed into WP4, which is centered on the co-development with decision-makers of a multi-hazard disaster risk decision-support system. WP5 will then focus on the operational testing and co-evaluation of the decision-support system. Besides, WP6 will address all activities related to exploitation, co-dissemination, and communication with decision makers and the wider community while WP7 will monitor ethical, legal and societal aspects of MEDiate. Finally, WP8 is responsible for the overall Project and Consortium Management. The interdependencies among the WPs are the continuous interactions between the validation activities that provide inputs to fine-tune the risk management.

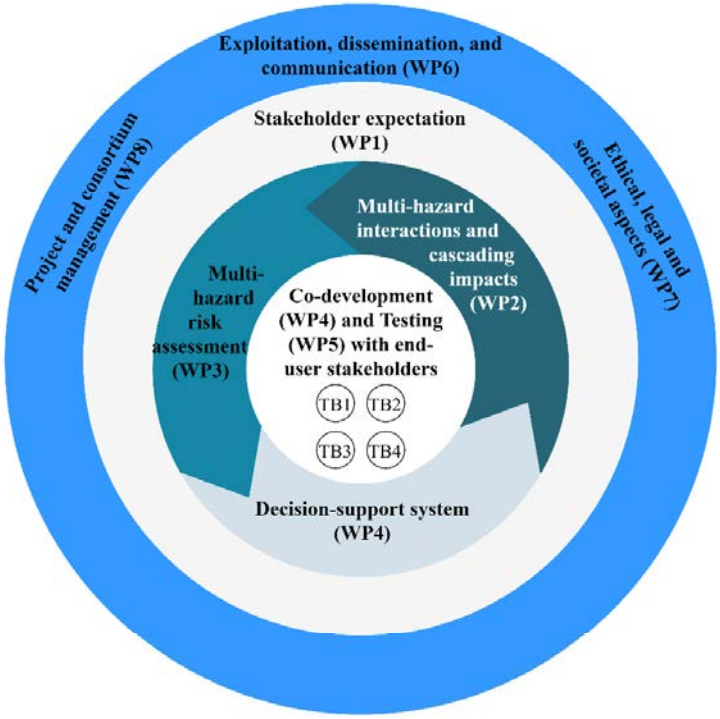


Figure 2: MEDiate work package structure and concept

5 DELIVERABLES

Due to the collaborative nature of MEDiate, as well as the size and duration of the project, there are a total of 28 deliverables planned which are required to be submitted to the EC during the project lifetime by the deadlines foreseen in the list of deliverables, as seen in the GA (DoA Part A, pages 20-31).

In order to provide an overview of these deliverables and identify their organization in time, a Gantt chart of the WPs and their tasks and deliverables has been produced to highlight the relationships and interconnectivity amongst WPs. This chart can be found in the GA (DoA Part B, page 27) and in Annex 1.

6 MILESTONES

MEDiate is an ambitious project with a large budget and a multinational partnership. To ensure that the project is effectively managed and the chances of success are maximised, we will monitor the progress through 14 milestones that reflect major stages of the project.

Deliverables have been grouped and timed strategically to coincide with milestones in the project (see Gantt chart in DoA Part B, page 27 and Annex 1, and see list in DoA Part A, page 32-33) along with specific meetings of the PB (M12 and M24) and review meetings with the EC after each Reporting Period (M18 and M36). Specific milestones will be monitored at each of these meetings (see Table 6). If delays are noticed or reported, the PC and the EB will act accordingly and develop contingency plans to keep the project on track.

Table 6: PB meetings

Meeting Title	Purpose	Month
Kick-off meeting (2022)	To formally launch the project;	M0
Annual meeting 2023	Manage Milestones 1, 2, 3, 4, 5 and 6 (approve/contingency); Review results and progress of all WPs; report to EC; approve work for next stage.	M11
Project Review 1	Manage Milestones 7 and 8 (approve/contingency); Review results and progress of all WPs; report to EC; approve work for next stage.	M18
Annual meeting 2024	Manage Milestones 9, 10 and 11 (approve/contingency); Review results and progress of all WPs; report to EC; approve work for next stage.	M23
Final project meeting	Manage Milestones 12 and 13 (approve/contingency); Review results and progress of all WPs; report to EC;	M35
Project Review 2	Manage Milestone 14; report to EC through Final Review, formally close project, approve issuing of final project report, agree post-project implementation plans	M36

7 DATA MANAGEMENT PLAN

In order to make research data Findable, Accessible, Interoperable and Re-usable (FAIR), a Data Management Plan (DMP) includes information on:

- The handling of research data during and after the project
- What data will be collected, processed or generated
- What methodology and standards will be applied
- Whether data will be shared/made open access and how
- How data will be curated and preserved (including after the end of the project)

The DMP should be updated periodically during the project lifetime if appropriate, whenever significant changes arise including (but not limited to):

- New data sets
- Changes in consortium policies (e.g., new innovation potential, decision to file for a patent) or composition (e.g., new consortium members joining or old members leaving).

7.1 Data Management in MEDiate

Data collection and management in MEDiate is relevant in different WPs. Data management aspects are also closely linked to the work done in WP7 (Ethical, legal and societal aspects of MEDiate) that is reported in separate deliverables (D7.1 in M6 and D7.2 in M36). This section provides general guidance on how the data management lifecycle for all datasets to be collected, processed or generated will be handled in MEDiate.

The goal is to aid the MEDiate project consortium to meet their responsibilities regarding research data quality, sharing and security in accordance with the EU's open science policy. In order to identify and map all aspects related to data collection and management in MEDiate, a broad view at WP level is first collected at the beginning of the project through a WP-level survey sent to all WP Leaders (WP1 to WP6) in M6 (see Annex 2). This survey will be updated regularly during the project lifetime by all WP leaders to make sure that all aspects of data management in the different WPs are captured. Then, a Task-level survey will be made available, it will show a simplified checklist to be completed and submitted to the data management responsible (NOR) prior to all instances of data collection in MEDiate. Finally, a set of Best Practice Guidelines (see D7.1) has been created and shared with all partners informing about the different steps and the procedures for data collection.

7.2 Data summary

In WP1 and WP5, the Participatory Action Research requires regular collection of data from Testbed stakeholders and sub-stakeholders (identified by the testbed stakeholders) to test, refine and co-develop the MEDiate tools, models and decision support system, including data on stakeholders needs and preferences regarding the MEDiate conceptual model at the beginning of the project. In WP1, data collection might also include data on behavioral and cognitive biases and their impacts on risks perceptions, preferences and choices derived from the multi-criteria decision analysis experiments. In WP5, in addition to PAR related data, the final version of the MEDiate DSS system will be evaluated amongst international experts using the Delphi methodology which involves successive rounds of questionnaires being completed by an expert international panel drawn from outside the project consortium.

In WP2, testbed-level information on primary interacting hazards (e.g., bivariate hazard pairings, drivers and impacts) will be collected to develop multi-hazard models, testbed-level information on primary cascading impacts (e.g., cross-sectoral impacts) will be collected to develop cascading impacts model(s) and spatial information relating to specific components of the testbed (e.g., locations of assets) will be collected to develop multi-hazard and impact maps/results

In WP3, testbed-level information on built-asset characteristics (e.g., age, construction type, height), on demographic characteristics (e.g., age ranges, gender) and spatial information on selected components of the testbed (e.g., locations of hospitals, schools) will be collected to develop physical and social impact models and risk and resilience models for different natural hazards.

In WP4, physical and social exposure information for the testbed locations, hazard scenarios and vulnerability/resilience for physical and social components will be collected as well as a set of variants of candidate solutions to mitigate the risks and preferences from stakeholders.

In WP6, the data collected will mainly be related to events and publications relevant to MEDiate and of course the personal data collected as part of the newsletter subscription. This data will be processed only for the purpose of the newsletter following the information indicated in the privacy policy accessible on the MEDiate website.

MEDiate will reuse data only when permitted to do so, in compliance with applicable regulatory or contractual restrictions (e.g., confidentiality agreements, etc.). MEDiate will use Data Sharing Agreements when appropriate. In cases where personal data may be processed, a Protection of Personal Data (POPD) procedure has been developed by MEDiate to ensure the data collection, processing and storage are GDPR compliant. In addition, when processing personal data all partners will need to use a letter of Informed Consent and will need to use a Privacy Statement as further described in D7.1.

7.3 FAIR Data

The PC (NOR) is responsible for reminding partners of the FAIR principles applied in the MEDiate project.

7.3.1 Findable

All data analyzed in the project will be made available through project deliverables and through scientific publications or through online repositories (Github for example). Depositories for deliverables and scientific publications on the MEDiate website will allow the interpreted results to be easily findable.

Versions, Keywords and Digital Object Identifiers will be explored in principle to aid the applicability of data. Identification mechanisms will be used to improve the usability of the data within differing contexts.

7.3.2 Accessible

Open access will be provided to all scientific publications in line with the guidance provided by the European Commission (obligation for open access to scientific publications). Each partner must ensure open access (free of charge, online access for any user) to all peer-reviewed scientific publications relating to its results. If a publisher offers an open-access version for a fee, within reasonable limits and without affecting the financial resources for the proper conduct of the project, this option may be considered, but at the initiative of each partner. In particular, each partner must:

- as soon as possible, and at the latest upon 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);
- ensure open access to the deposited publication - via the repository - at the latest:
    - upon publication, if an electronic version is available for free via the publisher, or
    - within six months of publication (twelve months for publications in the social sciences and humanities) in any other case;
- ensure open access - via the repository - to the bibliographic metadata that identifies the deposited publication.

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms ["European Union (EU)" and "Horizon 2020”]
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable, and
- a persistent identifier.

Regarding the digital research data generated in the action, the beneficiaries must:

- 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 data, including associated metadata, needed to validate the results presented in scientific publications as soon as possible;
- 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). Generic software tools, including MS Office, will be predominantly used.

As an exception, the partners do not have to ensure open access to specific parts of their research data if the achievement of the action’s main objective would be jeopardized by making those specific parts of the research data openly accessible. In this case, the DMP must contain the reasons for not giving access.

7.3.3 Interoperable

The data produced in the MEDiate project will be interoperable, meaning it will allow data exchange and re-use between researchers, institutions, organizations, countries, etc. because it adheres to standards for formats, compliant with available and open software applications. We will follow data and metadata vocabularies, standards or methodologies specified by the research community and the publishers to make the data interoperable.

Text mining tools and methods will help external actors to extract common and relevant data. A glossary of terms will be collated by project partners. Data files will be saved in an easily reusable format, commonly used by the research community.

In particular, MEDiate will use primarily digital data formats such as:

- for text data, Rich Text Format (.rtf), plain text, ASCII (.txt), eXtensible Mark-up Language (.xml), Hypertext Mark -up Language (.html) and widely used formats: MS Word (.doc/.docx);
- for documentation and scripts, Rich Text Format (.rtf) , PDF/UA, PDF/A or PDF (.pdf), XHTML or HTML (.xhtml, .htm), OpenDocument Text (.odt), plain text (.txt) widely used formats: MS Word (.doc/.docx), MS Excel (.xls/.xlsx)
- .json and .py files

7.3.4 Re-usable

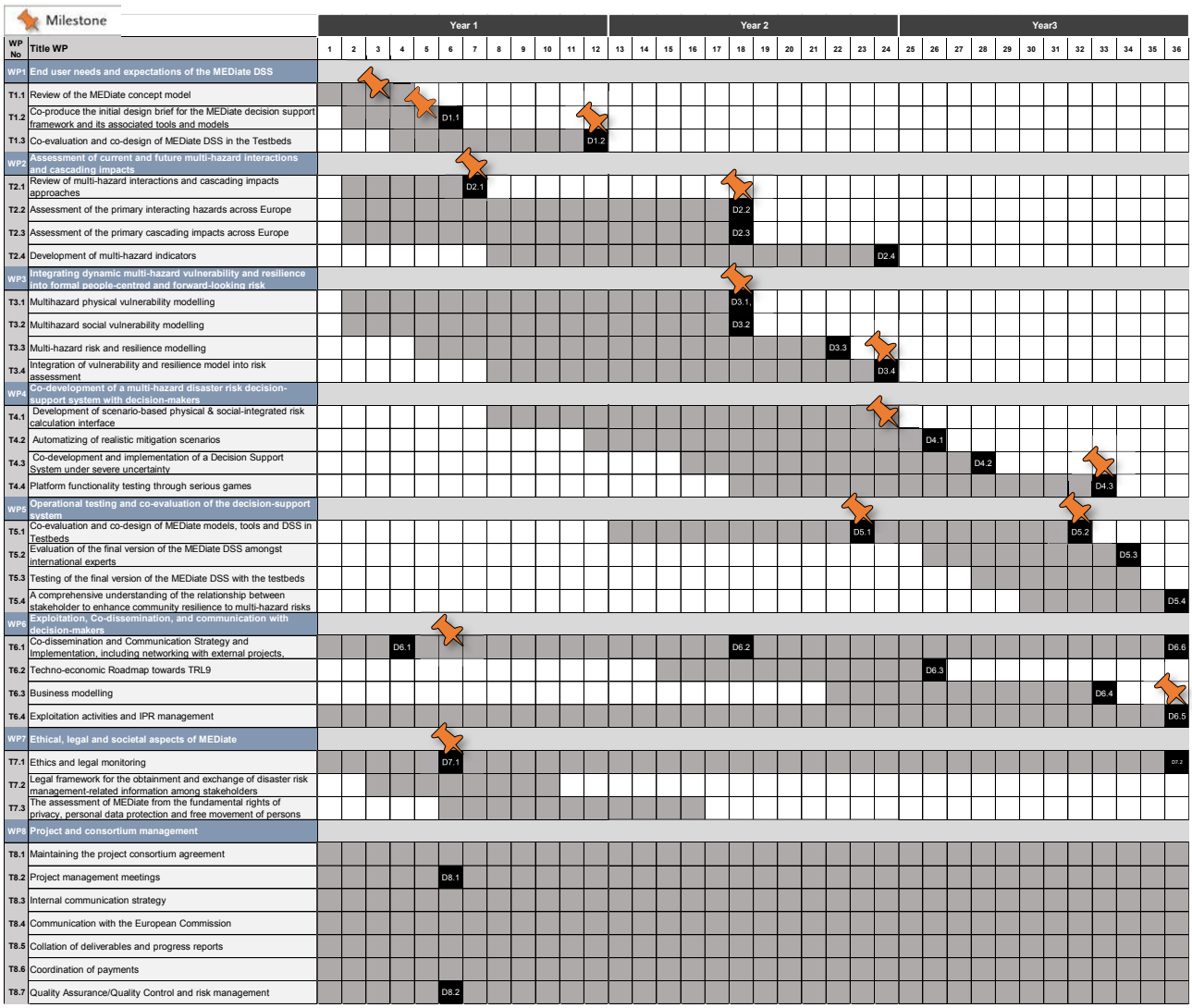
All the data will be open after validation and quality control performed by the hosting data centre. For publication, copyright rules will be followed for the use of the results produced by the MEDiate project. To have an external quality control of the results, peer-review journals will be prioritized for publication.

Data will be stored either on each institution's back-up server or on a separate data storage device that is kept in a secure and fireproof location, separate from the main data point. Data will be released no later than the publication of findings and within three years of project completion. Primary data will be securely retained, in an accessible format, for a minimum of five years after project completion.

7.4 Intellectual Property Rights

Knowledge will be disseminated as widely as possible outside the consortium, but always in accordance with applicable Intellectual Property Rights (IPR) restrictions. Formal details have been laid down in chapter 9, 10 and 11 of the Consortium Agreement. A specific ask in WP6 (Task 6.4) will deal with Exploitation activities and IPR management throughout the lifetime of the project. During the project, IPR management strategy will be identified and regularly updated: as MEDiate is mainly designed to produce and use freely available methodologies, few (if any) intellectual property concerns are likely to be raised during the project. This task also has the purpose of resolving any issues that may arrive despite licenses being granted, by referring to institutional and general practice on the protection of intellectual property derived from research.

ANNEX 1


Milestone
Year 1
Year 2
Year3
WP No
Title WP
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36
WP1 End user needs and expectations of the MEDiate DSS
T1.1 Review of the MEDiate concept model
T1.2 Co-produce the initial design brief for the MEDiate decision support framework and its associated tools and models
T1.3 Co-evaluation and co-design of MEDiate DSS in the Testbeds
WP2 Assessment of current and future multi-hazard interactions and cascading impacts
T2.1 Review of multi-hazard interactions and cascading impacts approaches
T2.2 Assessment of the primary interacting hazards across Europe
T2.3 Assessment of the primary cascading impacts across Europe
T2.4 Development of multi-hazard indicators
WP3 Integrating dynamic multi-hazard vulnerability and resilience into formal people-centred and forward-looking risk
T3.1 Multihazard physical vulnerability modelling
T3.2 Multihazard social vulnerability modelling
T3.3 Multi-hazard risk and resilience modelling
T3.4 Integration of vulnerability and resilience model into risk assessment
WP4 Co-development of a multi-hazard disaster risk decision-support system with decision-makers
T4.1 Development of scenario-based physical & social-integrated risk calculation interface
T4.2 Automatizing of realistic mitigation scenarios
T4.3 Co-development and implementation of a Decision Support System under severe uncertainty
T4.4 Platform functionality testing through serious games
WP5 Operational testing and co-evaluation of the decision-support system
T5.1 Co-evaluation and co-design of MEDiate models, tools and DSS in Testbeds
T5.2 Evaluation of the final version of the MEDiate DSS amongst international experts
T5.3 Testing of the final version of the MEDiate DSS with the testbeds
T5.4 A comprehensive understanding of the relationship between stakeholder to enhance community resilience to multi-hazard risks
WP6 Exploitation, Co-dissemination, and communication with decision-makers
T6.1 Co-dissemination and Communication Strategy and implementation, including networking with external projects,
T6.2 Techno-economic Roadmap towards TRL9
T6.3 Business modelling
T6.4 Exploitation activities and IPR management
WP7 Ethical, legal and societal aspects of MEDiate
T7.1 Ethics and legal monitoring
T7.2 Legal framework for the obtainment and exchange of disaster risk management-related information among stakeholders
T7.3 The assessment of MEDiate from the fundamental rights of privacy, personal data protection and free movement of persons
WP8 Project and consortium management
T8.1 Maintaining the project consortium agreement
T8.2 Project management meetings
T8.3 Internal communication strategy
T8.4 Communication with the European Commission
T8.5 Collation of deliverables and progress reports
T8.6 Coordination of payments
T8.7 Quality Assurance/Quality Control and risk management
D1.1
D1.2
D2.1
D2.2
D2.3
D2.4
D3.1
D3.2
D3.3
D3.4
D4.1
D4.2
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D6.5
D6.6
D7.1
D8.1
D8.2

ANNEX 2

MEDiate Ethics and Data Management Questionnaire (for WP leaders)

AIM: This questionnaire aims at identifying and mapping all aspects related to data collection in MEDiate WPs. It is intended to gather a broad view at WP level at the beginning of the project *Note: A separate Task-level questionnaire showing a simplified checklist to be completed and submitted to the data management team prior to all instances of data collection in MEDiate will be later shared.*

WP Number

Work Package 1

Questionnaire filled by

Name: Nadejda Surname : Komendantova email: komendan@iiasa.ac.at

Table of content of the questionnaire:

To be filled by all WP leaders (WP1 to WP6)

0.1 Please list and briefly describe your MEDiate activities that entail data management.

Data collection within WP1 includes data from PAR cycles, co-design and evaluation processes. It might also include data on behavioral and cognitive biases and their impacts on risks perceptions, preferences and choices derived from the multi-criteria decision analysis experiments. It also includes data on stakeholders needs and preferences regarding the MEDiate conceptual model. The data are collected through the questionnaire prepared jointly by the WP1 team members as well as during the online qualitative in-depth interviews.

0.2 Please map the foreseen data inputs to the desired research outputs.

Data input	**Output/results type**
Questionnaires with multiple choice questions as well as with open and semi-open questions distributed among MEDiate team members and test beds.	The results will be summarized in the report for the task 1 as well as during the development of design briefs.

Qualitative in-depth interviews with MEDiate team members who are also part of the PAR process	These data will be used to inform analysis within all three tasks of the Work package 1.
MCDA decision making experiments with MEDiate team members.	Data will be used for identification of choices and preferences as well as MCDA criteria.

0.3 Collection of dataset(s): describe the dataset(s) you will collect, create, and/or use.

Dataset 1:
Short name of data set to be collected: Dataset on stakeholders needs and expectations
Description of dataset: completes questionnaires, interviews, stakeholders process during the PAR workshops as well as background analysis of literature and existing documents
Format/volume: Data will be collected from in-depth qualitative interviews, mainly through online communication modus, as well as from filled questionnaires and from published literature. The volume of data will be high, considering the existing background literature on the topic of resilience and the variety of expectations of the stakeholders from the textbeds.
Space/Time granularity: Data will be collected continuously during the first year of the project
Date of data gathering/dataset creation and geographic coverage: Data will be collected from the MEDiate partner institutions as well as from the 4 Testbeds

For each dataset (e.g. Dataset 1, Dataset 2…), please answer questions from 1.1 to 3.2.

1. DATA COLLECTION PROCEDURES

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

Completed questionnaires as well as provided written input and results of discussions during the workshops and online interviews.

1.1 List all methods that are used for data collection in your project.

Method 1: qualitative in-depth interviews
Method 2: questionnaires with open and semi-open questions
Method 3: workshops
Method 4: documentary analysis

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Data collection will take place among the members of the MEDiate team between the project months 2 and 12. Each work package provides 6-pager document on resilience. Each test bed provides data in the filled questionnaire. Further clarifications are provided during the online interviews and focus group discussions during the workshops.

2. DATA STORAGE AND SHARING

2.1 Where will the data collected (and associated metadata) be stored and backed up?

All data will be stored on IIASA's password protected computer system and backed up in accordance with IIASA's data management policy.

2.2 How and when will data be shared or made publicly available? (if there are restrictions to data sharing or embargo reasons, please specify them)

The data will be used for the following up analysis and will be published in the anonymized format. The Chatham House Rules will be granted during the focus group discussions and interviews. The dissemination of the analysis will be made in a format of project deliverables as well as scientific publications and inputs during the scientific public dissemination events.

2.3 Where will data be preserved long-term (for example a data repository or archive)?

Data will be stored on the password protected IIASA IT system.

2.4 What methods or software tools will be needed to access and use the data (if any)?

Data will be analysed with the help of various methods of statistical and economic analysis. They will be also used as input data for MCDA decision making experiments.

2.5 Will the application of a unique and persistent identifier (such as a Digital Object Identifier (DOI)) to each data set be ensured? (if applicable)

The deliverables of Work Package 1 will obtain a persistent identified DOI after acceptance by the European Commission. They will be uploaded in the public repositories such as Zenodo as well as in the IIASA public repository Pure.

3. RESEARCH ETHICS CHECKLIST

3.1 The ethics appraisal process in Horizon Europe includes an Ethics Self-Assessment at the application stage. MEDiate ethics self-assessment detected that the activities at risk regarding ethics are the following:

1. The handling of participant personal data through Participatory Action Research (PAR) cycles, co-design and evaluation phases (WP1, WP3, WP4, WP5), in particular for identifying any possible impact of behavioral and cognitive biases in risk perceptions (WP1).

2. The data protection of general knowledge created in WP2 relating to multi-hazard interactions and cascading impacts (e.g., such knowledge can reveal sensitivities when related to critical buildings and/or infrastructure vulnerability, etc.).
3. The exploitation of the physical and social vulnerability models to be developed in WP3.
4. The collection and elaboration of real-life data from the testbeds (e.g., historical data from past multihazard events, potential data from sensors, etc.).

Each WPL must provide a response to ALL questions (1 to 16).

	Will your research (delete YES or NO as appropriate):		
1	Involve human participants?	YES	
2	Utilise data that is not publicly available?	YES	
3	Create a risk that individuals and/or organizations could be identified in the outputs?		NO
4	Involve participants whose responses could be influenced by your relationship with them or by any perceived, or real, conflicts of interest?		NO
5	Offer financial or other forms of incentives to participants?		NO
6	Involve the discussion of topics that participants may find distressing?		NO
7	Take place outside of the country where you work and/or are enrolled to study?	YES	
8	Cause a negative impact on the environment (over and above that of normal daily activity)?		NO
9	Cause (or have the potential to cause) pain, physical or psychological harm or negative consequences to humans?		NO
10	Relate to military sites, personnel, equipment, or the defence industry?		NO
11	Risk damage/disturbance to culturally, spiritually or historically significant artefacts/places, or humanremains?		NO
12	Contain research methodologies you, or members of your team, require training to carry out?	YES	
13	Risk being construed as encouraging terrorism or inviting support for proscribed organisations and/or contain extremist views that risk drawing people into terrorism or are shared by extremist groups		NO
14	Involve you or participants in a) activities which may be illegal and/or b) the observation, handling or storage (including export) of information or material which may be regarded as illegal?		NO

15	Require ethical approval from any recognised external agencies (Social Care, Ministry of Justice, Ministry of Defence)?	NO
16	Involve processing special category data[1] and/or intend to recruit 100 or over participants?	NO

Please detail any additional ethical risks (threats) that haven't been covered in the previous questions:

Ethical risk identified	Data involved	Mitigation measure(s)
1.		
2.		
3.		

3.2 Have you identified a confidentiality risk related to the data collected?

No

3.3 For what purpose and how do you process personal data?

The data from persons including any kind of demographic data such as age, sex, income etc. will not be collected. The data from various test beds are collected in the format of filled questionnaires. This provide an option for identification of geographical scope of the collected data.

3.4 MEDiate has developed a Protection of Personal Data (POPD) procedure to ensure the data collection, processing and storage are GDPR compliant.
Are you familiar with this type of procedure? (YES/NO)

Yes

NOTE A: We inform you that when processing personal data you will need to use a letter of ***Informed Consent****. This* ***Informed Consent*** *will be used to brief your study subjects regarding the MEDiate project. You will provide information about what it means for the interviewee to take part in the survey, so they give consent to participate in the research effort providing data. It should explain in a few sentences the research goal and why the contribution that we are asking is important.*

The INFORMED CONSENT for all MEDiate data collection can be added as a click box to a digital platform such as EU Survey or it can be signed by the interviewee. Enriched by the answers WP leaders provide to this questionnaire, the final version of the INFORMED CONSENT will be shared with you ASAP.

1 Special category data is defined as personal data which reveals racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a person, and data concerning health or data concerning a person's sex life or sexual orientation.

NOTE B: We inform you that when processing personal data you will need to use a ***Privacy Statement*** *.* ***This Privacy Statement*** *will stipulate:*

1. Why and how do we process the personal data collected?
2. On what legal ground(s) do we process your personal data?
3. Which personal data do we collect and further process?
4. How long do we keep your personal data?
5. How do we protect and safeguard your personal data?
6. Who has access to your personal data and to whom is it disclosed?
7. What are your rights and how can you exercise them?
8. Contact information
9. Where to find more detailed information?

The PRIVACY STATEMENT for all MEDiate data collection will need to be consented to by the data providers in some format. For example, it can be added as a click box to a digital platform such as EU Survey or it can be signed by the interviewee. Enriched by the answers WP leaders provide to this questionnaire, the final version of the PRIVACY STATEMENT will be shared with you ASAP.

4. INVESTIGATING FOR PRIVACY STATEMENT BREACHES

4.1 Do you plan to re-use the personal data collected for later studies beyond the scope of MEDiate?

No

4.2. Is there a risk that the personal data collected, stored and/or re-used be used or accessed by an organization external to the consortium?

There will be no personal data collected

MEDiate Ethics and Data Management Questionnaire (for WP leaders)

AIM: This questionnaire aims at identifying and mapping all aspects related to data collection in MEDiate WPs. It is intended to gather a broad view at WP level at the beginning of the project *Note: A separate Task-level questionnaire showing a simplified checklist to be completed and submitted to the data management team prior to all instances of data collection in MEDiate will be later shared.*

WP Number

2

Questionnaire filled by

Name: Chris	Surname: White	Email: chris.white@strath.ac.uk

Table of content of the questionnaire:

To be filled by all WP leaders (WP1 to WP6)

0.1 Please list and briefly describe your MEDiate activities that entail data management.

Task 2.1 – Review of multi-hazard interactions and cascading impacts approaches Task 2.2 – Assessment of the primary interacting hazards across Europe Task 2.3 – Assessment of the primary cascading impacts across Europe Task 2.4 – Development of multi-hazard indicators

0.2 Please map the foreseen data inputs to the desired research outputs.

Data input	**Output/results type**
Testbed-level information on primary interacting hazards (e.g., bivariate hazard pairings, drivers and impacts)	Multi-hazard model(s)
Testbed-level information on primary cascading impacts (e.g., cross-sectoral impacts)	Cascading impacts model(s)

Spatial information relating to specific components of the testbed (e.g., locations of assets)	Multi-hazard and impact maps/results

0.3 Collection of dataset(s): describe the dataset(s) you will collect, create, and/or use.

Dataset 1: Short name of data set to be collected: Hazard data Description of dataset: Testbed-level information on multiple natural hazards Format/volume: netCDF, txt, csv Space/Time granularity: Testbed-level at the current time Date of data gathering/dataset creation and geographic coverage: Each testbed; date TBC/ongoing
Dataset 2: Short name of data set to be collected: Hazard interaction models Description of dataset: Information on appropriate hazard models selected or developed to comply with the data identified in Dataset 1 Format/volume: txt, csv, GIS Space/Time granularity: Testbed-level at the current time Date of data gathering/dataset creation and geographic coverage: Each testbed; date TBC/ongoing
Dataset 3: Short name of data set to be collected: Cascading impact data Description of dataset: Testbed-level information on demographic characteristics Format/volume: netCDF, txt, csv Space/Time granularity: Testbed-level at the current time Date of data gathering/dataset creation and geographic coverage: Each testbed; date TBC/ongoing
Dataset 4: Short name of data set to be collected: Cascading impact models Description of dataset: Information on appropriate cascading impact models selected or developed to comply with the data identified in Dataset 3 Format/volume: txt, csv, GIS Space/Time granularity: Testbed-level at the current time Date of data gathering/dataset creation and geographic coverage: Each testbed; date TBC/ongoing
Dataset 5: Short name of data set to be collected: Multi-hazard indicators Description of dataset: List of indicators, scenarios and metrics identified Format/volume: txt, csv Space/Time granularity: Testbed-level at the current time

Date of data gathering/dataset creation and geographic coverage: Each testbed; date TBC/ongoing

For each dataset (e.g. Dataset 1, Dataset 2…), please answer questions from 1.1 to 3.2.

1. DATA COLLECTION PROCEDURES

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

Dataset 1

1.1 List all methods that are used for data collection in your project.

Desktop review, online maps and datasets

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Data collection will be desk-based and take place relative to each testbed One data collection wave is planned Data collection will take approximately 12 months No person will be exposed to the procedure

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

Dataset 2

1.1 List all methods that are used for data collection in your project.

Desktop review

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Data collection will be desk-based One data collection wave is planned Data collection will take approximately 6 months No person will be exposed to the procedure

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

Dataset 3

1.1 List all methods that are used for data collection in your project.

Desktop review, online maps and datasets

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Data collection will be desk-based and take place relative to each testbed One data collection wave is planned Data collection will take approximately 12 months No person will be exposed to the procedure

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

Dataset 4

1.1 List all methods that are used for data collection in your project.

Desktop review

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Data collection will be desk-based One data collection wave is planned Data collection will take approximately 6 months No person will be exposed to the procedure

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

Dataset 5

1.1 List all methods that are used for data collection in your project.

Desktop review, possible stakeholder workshop

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Data collection will mainly be desk-based, with a possible stakeholder workshop One data collection wave is planned Data collection will take approximately 18 months No person will be exposed to the procedure

2. DATA STORAGE AND SHARING

2.1 Where will the data collected (and associated metadata) be stored and backed up?

Data will be stored in an online repository (possibly Github)

2.2 How and when will data be shared or made publicly available? (if there are restrictions to data sharing or embargo reasons, please specify them)

Data will be shared publicly through the online repository (as above), upon submission of the corresponding deliverable

2.3 Where will data be preserved long-term (for example a data repository or archive)?

In the online repository (as above)

2.4 What methods or software tools will be needed to access and use the data (if any)?

Access to Github; possibly netCDT operating tools

2.5 Will the application of a unique and persistent identifier (such as a Digital Object Identifier (DOI)) to each data set be ensured? (if applicable)

Yes

3. RESEARCH ETHICS CHECKLIST

3.1 The ethics appraisal process in Horizon Europe includes an Ethics Self-Assessment at the application stage. MEDiate ethics self-assessment detected that the activities at risk regarding ethics are the following:

1. The handling of participant personal data through Participatory Action Research (PAR) cycles, co-design and evaluation phases (WP1, WP3, WP4, WP5), in particular for identifying any possible impact of behavioral and cognitive biases in risk perceptions (WP1).
2. The data protection of general knowledge created in WP2 relating to multi-hazard interactions and cascading impacts (e.g., such knowledge can reveal sensitivities when related to critical buildings and/or infrastructure vulnerability, etc.).

3. The exploitation of the physical and social vulnerability models to be developed in WP3.
4. The collection and elaboration of real-life data from the testbeds (e.g., historical data from past multihazard events, potential data from sensors, etc.).

Each WPL must provide a response to ALL questions (1 to 16).

	Will your research (delete YES or NO as appropriate):	
1	Involve human participants?	NO
2	Utilise data that is not publicly available?	NO
3	Create a risk that individuals and/or organizations could be identified in the outputs?	NO
4	Involve participants whose responses could be influenced by your relationship with them or by any perceived, or real, conflicts of interest?	NO
5	Offer financial or other forms of incentives to participants?	NO
6	Involve the discussion of topics that participants may find distressing?	NO
7	Take place outside of the country where you work and/or are enrolled to study?	YES
8	Cause a negative impact on the environment (over and above that of normal daily activity)?	NO
9	Cause (or have the potential to cause) pain, physical or psychological harm or negative consequences to humans?	NO
10	Relate to military sites, personnel, equipment, or the defence industry?	NO
11	Risk damage/disturbance to culturally, spiritually or historically significant artefacts/places, or human remains?	NO
12	Contain research methodologies you, or members of your team, require training to carry out?	NO
13	Risk being construed as encouraging terrorism or inviting support for proscribed organisations and/or contain extremist views that risk drawing people into terrorism or are shared by extremist groups	NO
14	Involve you or participants in a) activities which may be illegal and/or b) the observation, handling or storage (including export) of information or material which may be regarded as illegal?	NO
15	Require ethical approval from any recognised external agencies (Social Care, Ministry of Justice, Ministry of Defence)?	NO

16	Involve processing special category data[2] and/or intend to recruit 100 or over participants?	NO

Please detail any additional ethical risks (threats) that haven't been covered in the previous questions:

Ethical risk identified	Data involved	Mitigation measure(s)
1.		
2.		
3.		

3.2 Have you identified a confidentiality risk related to the data collected?

No

3.3 For what purpose and how do you process personal data?

n/a

3.4 MEDiate has developed a Protection of Personal Data (POPD) procedure to ensure the data collection, processing and storage are GDPR compliant.
Are you familiar with this type of procedure? (YES/NO)

Yes

NOTE A: We inform you that when processing personal data you will need to use a letter of ***Informed Consent****. This* ***Informed Consent*** *will be used to brief your study subjects regarding the MEDiate project. You will provide information about what it means for the interviewee to take part in the survey, so they give consent to participate in the research effort providing data. It should explain in a few sentences the research goal and why the contribution that we are asking is important.*
The INFORMED CONSENT for all MEDiate data collection can be added as a click box to a digital platform such as EU Survey or it can be signed by the interviewee. Enriched by the answers WP leaders provide to this questionnaire, the final version of the INFORMED CONSENT will be shared with you ASAP.

NOTE B: We inform you that when processing personal data you will need to use a ***Privacy Statement*** *.* ***This Privacy Statement*** *will stipulate:*
1. Why and how do we process the personal data collected?
2. On what legal ground(s) do we process your personal data?
3. Which personal data do we collect and further process?

2 Special category data is defined as personal data which reveals racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a person, and data concerning health or data concerning a person's sex life or sexual orientation.

4. How long do we keep your personal data?
5. How do we protect and safeguard your personal data?
6. Who has access to your personal data and to whom is it disclosed?
7. What are your rights and how can you exercise them?
8. Contact information
9. Where to find more detailed information?

The PRIVACY STATEMENT for all MEDiate data collection will need to be consented to by the data providers in some format. For example, it can be added as a click box to a digital platform such as EU Survey or it can be signed by the interviewee. Enriched by the answers WP leaders provide to this questionnaire, the final version of the PRIVACY STATEMENT will be shared with you ASAP.

4. INVESTIGATING FOR PRIVACY STATEMENT BREACHES

4.1 Do you plan to re-use the personal data collected for later studies beyond the scope of MEDiate?

No

4.2. Is there a risk that the personal data collected, stored and/or re-used be used or accessed by an organization external to the consortium?

No

MEDiate Ethics and Data Management Questionnaire (for WP leaders)

AIM: This questionnaire aims at identifying and mapping all aspects related to data collection in MEDiate WPs. It is intended to gather a broad view at WP level at the beginning of the project *Note: A separate Task-level questionnaire showing a simplified checklist to be completed and submitted to the data management team prior to all instances of data collection in MEDiate will be later shared.*

WP Number

3

Questionnaire filled by

Name: Gemma Surname : Cremen email: g.cremen@ucl.ac.uk

Table of content of the questionnaire:

To be filled by all WP leaders (WP1 to WP6)

0.1 Please list and briefly describe your MEDiate activities that entail data management.

1. Modelling the impact of hazards on physical assets (T3.1)
2. Modelling the social impacts of hazards (T3.2)
3. Synthesising the physical and social impacts of hazards in impact metrics (T3.3)
4. Demonstrating the risk and resilience assessment framework (T3.4)

0.2 Please map the foreseen data inputs to the desired research outputs.

Data input	**Output/results type**
Testbed-level information on built-asset characteristics (e.g., age, construction type, height)	Physical impact (i.e., fragility and vulnerability) models for different hazards
Testbed-level information on demographic characteristics (e.g., age ranges, gender)	Social impact models for different hazards
Spatial information on select	Risk and resilience results

components of the testbed (e.g., locations of hospitals, schools)	

0.3 Collection of dataset(s): describe the dataset(s) you will collect, create, and/or use.

Dataset 1: Short name of data set to be collected: Physical impact data Description of dataset: Testbed-level information on built-asset characteristics, Format/volume: csv Space/Time granularity: Testbed-level at the current time Date of data gathering/dataset creation and geographic coverage: Each testbed. Date TBD
Dataset 2: Short name of data set to be collected: Physical impact models Description of dataset: Information on appropriate physical impact models selected or developed to comply with the data in Dataset 1 Format/volume: csv Space/Time granularity: Testbed-level at the current time Date of data gathering/dataset creation and geographic coverage: Each testbed. Date TBD
Dataset 3: Short name of data set to be collected: Social impact data Description of dataset: Testbed-level information on demographic characteristics Format/volume: csv Space/Time granularity: Testbed-level at the current time Date of data gathering/dataset creation and geographic coverage: Each testbed. Date TBD
Dataset 4: Short name of data set to be collected: Exposure data Description of dataset: Spatial information on the testbed characteristics Format/volume: GIS file Space/Time granularity: Testbed-level at the current time Date of data gathering/dataset creation and geographic coverage: Each testbed. Date TBD
Dataset 5: Short name of data set to be collected: Impact metrics Description of dataset: List of impact metrics quantified as part of each risk and resilience assessment Format/volume: csv Space/Time granularity: Testbed-level at the current time Date of data gathering/dataset creation and geographic coverage: Each testbed. Date TBD

For each dataset (e.g. Dataset 1, Dataset 2…), please answer questions from 1.1 to 3.2.

1. DATA COLLECTION PROCEDURES

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

1

1.1 List all methods that are used for data collection in your project.

Literature review, google maps, field surveys

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Data collection will be desk-based and take place in each testbed
One data collection wave is planned
Data collection will take approximately 12 months
No person will be exposed to the procedure

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

2

1.1 List all methods that are used for data collection in your project.

Literature review, structural analysis methods

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Data collection will be desk-based
One data collection wave is planned
Data collection will take approximately 6 months
No person will be exposed to the procedure

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

3

1.1 List all methods that are used for data collection in your project.

Literature review and maybe stakeholder interviews/field surveys

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Data collection will be desk-based and may take place in each testbed
One data collection wave is planned
Data collection will take approximately 6 months
Stakeholder interviews/field surveys would last approximately 30 minutes

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

4

1.1 List all methods that are used for data collection in your project.

Literature review, google maps, field surveys

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Data collection will be desk-based and take place in each testbed
One data collection wave is planned
Data collection will take approximately 12 months
No person will be exposed to the procedure

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

5

1.1 List all methods that are used for data collection in your project.

Literature review, risk and resilience analysis methods

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Data collection will be desk-based
One data collection wave is planned
Data collection will take approximately 12 months
No person will be exposed to the procedure

2. DATA STORAGE AND SHARING (answers below apply to all listed datasets)

2.1 Where will the data collected (and associated metadata) be stored and backed up?

Data will be stored in an online (Github) repository

2.2 How and when will data be shared or made publicly available? (if there are restrictions to data sharing or embargo reasons, please specify them)

Data will be shared publicly through the online repository (see above), upon submission of the corresponding deliverable (except for the stakeholder/field survey information possibly used for collection of Dataset 3 - this data will not be shared publicly, without prior permission of particpants)

2.3 Where will data be preserved long-term (for example a data repository or archive)?

In the online repository (see above)

2.4 What methods or software tools will be needed to access and use the data (if any)?

Github

2.5 Will the application of a unique and persistent identifier (such as a Digital Object Identifier (DOI)) to each data set be ensured? (if applicable)

Yes

3. RESEARCH ETHICS CHECKLIST

3.1 The ethics appraisal process in Horizon Europe includes an Ethics Self-Assessment at the application stage. MEDiate ethics self-assessment detected that the activities at risk regarding ethics are the following:

1. The handling of participant personal data through Participatory Action Research (PAR) cycles, co-design and evaluation phases (WP1, WP3, WP4, WP5), in particular for identifying any possible impact of behavioral and cognitive biases in risk perceptions (WP1).
2. The data protection of general knowledge created in WP2 relating to multi-hazard interactions and cascading impacts (e.g., such knowledge can reveal sensitivities when related to critical buildings and/or infrastructure vulnerability, etc.).
3. The exploitation of the physical and social vulnerability models to be developed in WP3.
4. The collection and elaboration of real-life data from the testbeds (e.g., historical data from past multihazard events, potential data from sensors, etc.).

Each WPL must provide a response to ALL questions (1 to 16).

	Will your research (delete YES or NO as appropriate):	
1	Involve human participants?	NO
2	Utilise data that is not publicly available?	NO
3	Create a risk that individuals and/or organizations could be identified in the outputs?	NO
4	Involve participants whose responses could be influenced by your relationship with them or by any perceived, or real, conflicts of interest?	NO
5	Offer financial or other forms of incentives to participants?	NO
6	Involve the discussion of topics that participants may find distressing?	NO
7	Take place outside of the country where you work and/or are enrolled to study?	YES
8	Cause a negative impact on the environment (over and above that of normal daily activity)?	NO
9	Cause (or have the potential to cause) pain, physical or psychological harm or negative consequences to humans?	NO
10	Relate to military sites, personnel, equipment, or the defence industry?	NO
11	Risk damage/disturbance to culturally, spiritually or historically significant artefacts/places, or humanremains?	NO
12	Contain research methodologies you, or members of your team, require training to carry out?	NO
13	Risk being construed as encouraging terrorism or inviting support for proscribed organisations and/or contain extremist views that risk drawing people into terrorism or are shared by extremist groups	NO
14	Involve you or participants in a) activities which may be illegal and/or b) the observation, handling or storage (including export) of information or material which may be regarded as illegal?	NO
15	Require ethical approval from any recognised external agencies (Social Care, Ministry of Justice, Ministry of Defence)?	NO
16	Involve processing special category data[3] and/or intend to recruit 100 or over participants?	NO

3 Special category data is defined as personal data which reveals racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a person, and data concerning health or data concerning a person's sex life or sexual orientation.

Please detail any additional ethical risks (threats) that haven't been covered in the previous questions:

Ethical risk identified	Data involved	Mitigation measure(s)
1.		
2.		
3.		

3.2 Have you identified a confidentiality risk related to the data collected?

No

3.3 For what purpose and how do you process personal data?

Personal data may be processed to develop social impact models

3.4 MEDiate has developed a Protection of Personal Data (POPD) procedure to ensure the data collection, processing and storage are GDPR compliant.
Are you familiar with this type of procedure? (YES/NO)

Yes

NOTE A: We inform you that when processing personal data you will need to use a letter of ***Informed Consent****. This* ***Informed Consent*** *will be used to brief your study subjects regarding the MEDiate project. You will provide information about what it means for the interviewee to take part in the survey, so they give consent to participate in the research effort providing data. It should explain in a few sentences the research goal and why the contribution that we are asking is important.*

The INFORMED CONSENT for all MEDiate data collection can be added as a click box to a digital platform such as EU Survey or it can be signed by the interviewee. Enriched by the answers WP leaders provide to this questionnaire, the final version of the INFORMED CONSENT will be shared with you ASAP.

NOTE B: We inform you that when processing personal data you will need to use a ***Privacy Statement*** *.* ***This Privacy Statement*** *will stipulate:*

1. Why and how do we process the personal data collected?
2. On what legal ground(s) do we process your personal data?
3. Which personal data do we collect and further process?
4. How long do we keep your personal data?
5. How do we protect and safeguard your personal data?
6. Who has access to your personal data and to whom is it disclosed?
7. What are your rights and how can you exercise them?
8. Contact information
9. Where to find more detailed information?

The PRIVACY STATEMENT for all MEDiate data collection will need to be consented to by the data providers in some format. For example, it can be added as a click box to a digital platform such as EU Survey or it can be signed by the interviewee. Enriched by the answers WP leaders provide to this questionnaire, the final version of the PRIVACY STATEMENT will be shared with you ASAP.

4. INVESTIGATING FOR PRIVACY STATEMENT BREACHES

4.1 Do you plan to re-use the personal data collected for later studies beyond the scope of MEDiate?

No

4.2. Is there a risk that the personal data collected, stored and/or re-used be used or accessed by an organization external to the consortium?

No

MEDiate Ethics and Data Management Questionnaire (for WP leaders)

AIM: This questionnaire aims at identifying and mapping all aspects related to data collection in MEDiate WPs. It is intended to gather a broad view at WP level at the beginning of the project *Note: A separate Task-level questionnaire showing a simplified checklist to be completed and submitted to the data management team prior to all instances of data collection in MEDiate will be later shared.*

WP Number

4

Questionnaire filled by

Name: Francesca Surname: Bozzoni email: francesca.bozzoni@eucentre.it

Table of content of the questionnaire:

To be filled by all WP leaders (WP1 to WP6)

0.1 Please list and briefly describe your MEDiate activities that entail data management.

1. Development of exposure databases at testbeds (ST4.1.1)
2. Implementation of primary-risk based product (ST4.1.2)
3. Implementation of cascading impacts and multi-risk assessment (ST4.1.3)
4. Automatizing realistic mitigation scenarios (T4.2)
5. Implementing a multicriteria decision analysis module (T4.3)
6. Platform functionality testing through serious games (T4.4)

0.2 Please map the foreseen data inputs to the desired research outputs.

Data input	**Output/results type**
Physical and social exposure information for the testbed locations, hazard scenarios, vulnerability/resilience for physical and social components	Web-based graphical user interface (GUI) module and corresponding user manual, in which the physical and integrated risk calculation results (according to WP3 procedures) are visualized. Cascading impacts (from WP2) and multi-risk assessment (from WP3) are implemented as an extension of the platform

A set of variants of candidate solutions to mitigate the risks and preferences from stakeholders	Decision Support Systems operating under severe uncertainty implemented in the platform. Platform functionality tested through serious games thanks to the involvement of representatives of citizen, civil society, etc. (see WP1/WP5)

0.3 Collection of dataset(s): describe the dataset(s) you will collect, create, and/or use.

Dataset 1:
Short name of data set to be collected: Exposure at the testbeds (TBs)
Description of dataset: Several layers of data useful for calculations in the platform for each TB, including:
- area of interest, i.e. the boundary of the TBs, municipalities, etc.
- land-use polygons - present-day configuration and possible, future configuration/s distribution of the population (census tract or finer as possible)
- data for characterizing residential, industrial, and commercial building stock
- location and data on strategic buildings (e.g. hospitals, schools, etc.)
- location and data on critical infrastructures (e.g. bridges, tunnels, ports, airports, etc.)
- location and data on lifelines
- map for geomorphology characterization (i.e. DEM)
- map for ground characterization, i.e. average shear-wave velocity for upper 30-m depth Vs30

Format/volume: CSV files, Shapefile files for vector type geometry data, GeoTIFF files for raster data
Space/Time granularity: Testbed-level present-day configuration and possible, future configuration/s
Date of data gathering/dataset creation and geographic coverage: Once data from TBs are provided - Boundary of each TB

Dataset 2:
Short name of data set to be collected: Scenario-based physical and social-integrated risk calculation at TBs
Description of dataset: Data to enable the physical and social-integrated risk calculation results in the platform
Format/volume: CSV files, Shapefile files for vector type geometry data, GeoTIFF files for raster data
Space/Time granularity: Testbed-level present-day configuration and possible, future configuration/s
Date of data gathering/dataset creation and geographic coverage: Once Dataset 1 is ready and models from WP2/WP3 are defined - Boundary of each TB

Dataset 3:
Short name of data set to be collected: Realistic mitigation scenarios at TBs for DSS
Description of dataset: Generated mitigation processes as response of hazard scenarios and their inherent risks evaluation

Format/volume: CSV files, Shapefile files for vector type geometry data, GeoTIFF files for raster data
Space/Time granularity: Testbed-level present-day configuration and possible, future configuration/s
Date of data gathering/dataset creation and geographic coverage: Once Dataset 2 is built and input from WP1/WP5 are ready - Boundary of each TB

For each dataset (e.g. Dataset 1, Dataset 2…), please answer questions from 1.1 to 3.2.

1. DATA COLLECTION PROCEDURES

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

Dataset 1 Exposure at the testbeds (TBs)
Dataset 2 Scenario-based physical and social-integrated risk calculation at TBs
Dataset 3 Realistic mitigation scenarios at TBs for DSS

1.1 List all methods that are used for data collection in your project.

Dataset 1
Data will be collected from TBs leaders and, when necessary, integrated with information published in available open datasets.
Dataset 2 and 3
Data will be generated by using tools set-up in the project.

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Dataset 1
Data collection will be desk-based and take place in each TB.
One/two data collection wave is planned.
Data collection will take approximately 8-10 months.
No person will be exposed to the procedure.
Dataset 2
Data generation will be desk-based and take place in each TB.
One/two data generation wave is planned.
Data generation will take approximately 12 months.
No person will be exposed to the procedure.
Dataset 3
Data generation will be desk-based and take place in each TB.
One/two data generation wave is planned.
Data generation will take approximately 10-12 months.
No person will be exposed to the procedure.

2. DATA STORAGE AND SHARING

2.1 Where will the data collected (and associated metadata) be stored and backed up?

Dataset 1, 2 and 3
Data will be collected in a PostgreSQL relational database. Data will be backed up on a daily basis.

2.2 How and when will data be shared or made publicly available? (if there are restrictions to data sharing or embargo reasons, please specify them)

Dataset 1, 2 and 3
Depending on the data format, they will be made available as shapefiles, CSV tables, etc. If needed, data will be downloadable from a public repository (e.g. Github, Gitlab)

2.3 Where will data be preserved long-term (for example a data repository or archive)?

Dataset 1, 2 and 3
Data will be preserved in a cloud repository.

2.4 What methods or software tools will be needed to access and use the data (if any)?

Dataset 1, 2 and 3
Data will be available through the platform developed in WP4.
Anyway, raw data can be managed (depending on the data type) by Excel or QGIS/ArcGIS/etc.

2.5 Will the application of a unique and persistent identifier (such as a Digital Object Identifier (DOI)) to each data set be ensured? (if applicable)

Dataset 1, 2 and 3
Journal and conference papers prepared using the dataset will have a permanent DOI or the ISSN or ISBN.

3. RESEARCH ETHICS CHECKLIST

3.1 The ethics appraisal process in Horizon Europe includes an Ethics Self-Assessment at the application stage. MEDiate ethics self-assessment detected that the activities at risk regarding ethics are the following:

1. The handling of participant personal data through Participatory Action Research (PAR) cycles, co-design and evaluation phases (WP1, WP3, WP4, WP5), in particular for identifying any possible impact of behavioral and cognitive biases in risk perceptions (WP1).
2. The data protection of general knowledge created in WP2 relating to multi-hazard interactions and cascading impacts (e.g., such knowledge can reveal sensitivities when related to critical buildings and/or infrastructure vulnerability, etc.).
3. The exploitation of the physical and social vulnerability models to be developed in WP3.

4. The collection and elaboration of real-life data from the testbeds (e.g., historical data from past multihazard events, potential data from sensors, etc.).

Each WPL must provide a response to ALL questions (1 to 16).

	Will your research (delete YES or NO as appropriate):		
1	Involve human participants?	YES	**NO**
2	Utilise data that is not publicly available?	**YES**	NO
3	Create a risk that individuals and/or organizations could be identified in the outputs?	YES	**NO**
4	Involve participants whose responses could be influenced by your relationship with them or by any perceived, or real, conflicts of interest?	YES	**NO**
5	Offer financial or other forms of incentives to participants?	YES	**NO**
6	Involve the discussion of topics that participants may find distressing?	YES	**NO**
7	Take place outside of the country where you work and/or are enrolled to study?	**YES**	NO
8	Cause a negative impact on the environment (over and above that of normal daily activity)?	YES	**NO**
9	Cause (or have the potential to cause) pain, physical or psychological harm or negative consequences to humans?	YES	**NO**
10	Relate to military sites, personnel, equipment, or the defence industry?	YES	**NO**
11	Risk damage/disturbance to culturally, spiritually or historically significant artefacts/places, or humanremains?	YES	**NO**
12	Contain research methodologies you, or members of your team, require training to carry out?	YES	**NO**
13	Risk being construed as encouraging terrorism or inviting support for proscribed organisations and/or contain extremist views that risk drawing people into terrorism or are shared by extremist groups	YES	**NO**
14	Involve you or participants in a) activities which may be illegal and/or b) the observation, handling or storage (including export) of information or material which may be regarded as illegal?	YES	**NO**
15	Require ethical approval from any recognised external agencies (Social Care, Ministry of Justice, Ministry of Defence)?	YES	**NO**

16	Involve processing special category data[4] and/or intend to recruit 100 or over participants?	YES	**NO**

Please detail any additional ethical risks (threats) that haven't been covered in the previous questions:

Ethical risk identified	Data involved	Mitigation measure(s)
N.A.	N.A.	N.A.

3.2 Have you identified a confidentiality risk related to the data collected?

No

3.3 For what purpose and how do you process personal data?

N.A.

3.4 MEDiate has developed a Protection of Personal Data (POPD) procedure to ensure the data collection, processing and storage are GDPR compliant.
Are you familiar with this type of procedure? (YES/NO)

No

NOTE A: We inform you that when processing personal data you will need to use a letter of ***Informed Consent****. This* ***Informed Consent*** *will be used to brief your study subjects regarding the MEDiate project. You will provide information about what it means for the interviewee to take part in the survey, so they give consent to participate in the research effort providing data. It should explain in a few sentences the research goal and why the contribution that we are asking is important.*

The INFORMED CONSENT for all MEDiate data collection can be added as a click box to a digital platform such as EU Survey or it can be signed by the interviewee. Enriched by the answers WP leaders provide to this questionnaire, the final version of the INFORMED CONSENT will be shared with you ASAP.

NOTE B: We inform you that when processing personal data you will need to use a ***Privacy Statement*** *.* ***This Privacy Statement*** *will stipulate:*

1. Why and how do we process the personal data collected?
2. On what legal ground(s) do we process your personal data?
3. Which personal data do we collect and further process?
4. How long do we keep your personal data?
5. How do we protect and safeguard your personal data?
6. Who has access to your personal data and to whom is it disclosed?
7. What are your rights and how can you exercise them?

4 Special category data is defined as personal data which reveals racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a person, and data concerning health or data concerning a person's sex life or sexual orientation.

8. Contact information

9. Where to find more detailed information?

The PRIVACY STATEMENT for all MEDiate data collection will need to be consented to by the data providers in some format. For example, it can be added as a click box to a digital platform such as EU Survey or it can be signed by the interviewee. Enriched by the answers WP leaders provide to this questionnaire, the final version of the PRIVACY STATEMENT will be shared with you ASAP.

4. INVESTIGATING FOR PRIVACY STATEMENT BREACHES

4.1 Do you plan to re-use the personal data collected for later studies beyond the scope of MEDiate?

N.A.

4.2. Is there a risk that the personal data collected, stored and/or re-used be used or accessed by an organization external to the consortium?

N.A.

MEDiate Ethics and Data Management Questionnaire (for WP leaders)

AIM: This questionnaire aims at identifying and mapping all aspects related to data collection in MEDiate WPs. It is intended to gather a broad view at WP level at the beginning of the project *Note: A separate Task-level questionnaire showing a simplified checklist to be completed and submitted to the data management team prior to all instances of data collection in MEDiate will be later shared.*

WP Number

WP5

Questionnaire filled by

Name: Keith	Surname : Jones	email: keith.jones@aru.ac.uk

Table of content of the questionnaire:

To be filled by all WP leaders (WP1 to WP6)

0.1 Please list and briefly describe your MEDiate activities that entail data management.

The Participatory Action Research requires regular collection of data from testbed stakeholders and sub- stakeholders (identified by the testbed stakeholders) to test, refine and co-develop the MEDiate tools, models and decision support system. The data collected as part of the PAR will take place throughout the 2nd and 3rd years of the project and will be reported in deliverables D5.1, D5.2 and D5.4. In addition to PAR related data, WP5 will evaluate the final version of the MEDiate DSS system amongst international experts through the use of the Delphi methodology which involves successive rounds of questionnaires being completed by an expert international panel drawn from outside the project teams. The output of the Delphi study will be reported in D5.3.

0.2 Please map the foreseen data inputs to the desired research outputs.

Data input	Output/results type
Interviews, meetings, workshops, questionnaire surveys and document analysis	The results will inform the development of the MEDiate tools, models and DSS through feedback at regular meetings of PAR teams and periodic PAR workshops.

from testbed stakeholders	The summary of all outputs and results will be presented in Deliverables D5.1, D5.2 and D5.4.
Delphi Survey involving the formation of an expert panel and 3 rounds of opinion questionnaires	The results will inform the potential post-project routes to exploitation for the MEDiate DSS. The results will be reported in D5.3
A range of data collection techniques will be applied to a 3-day residential workshop of MEDiate project members, and possibly members from other related projects will reflect on the degree to which the MEDiate project has achieved its stated objectives.	The data will inform on the potential impact that has, or can be in the near future, delivered from the MEDiate project. The results will be reported in D5.4

0.3 Collection of dataset(s): describe the dataset(s) you will collect, create, and/or use.

Dataset 1: Short name of data set to be collected: **PAR dataset** Description of dataset: **interviews, meetings, workshops, questionnaire surveys and document analysis** Format/volume: **data collection will be conducted either face-to-face or in a virtual/hybrid mode. Volume of data is likely to be high, particularly document analysis.** Space/Time granularity: **data will be collected continually throughout the 2nd and 3rd years of the project from across the Testbeds**. Date of data gathering/dataset creation and geographic coverage: **data collection will start in the project month 12 and continue until project month 36. Data will be generated within each of the 4 Testbeds.**
Dataset 2: Short name of data set to be collected: **Delphi Study** Description of dataset**: an international expert panel will be established comprising between 25-35 members. Successive rounds of opinion questionnaire will be circulated to the members to assess their level of agreement with a series of statements about the MEDiate DSS solution. The process is cyclical and repeated until expert opinions converge or remain stable. A maximum of 3 rounds of questionnaire will be administered.** Format/volume: **expert panel and online questionnaires.** Space/Time granularity: **the study will start in project month 28 and continue until project month 34.**

Date of data gathering/dataset creation and geographic coverage: **data collection will start in project month 28 and continue until project month 34. The expert panel will be drawn from the global expert population.**
(add more if needed)

For each dataset (e.g. Dataset 1, Dataset 2…), please answer questions from 1.1 to 3.2.

1. DATA COLLECTION PROCEDURES

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

Dataset 1 PAR: Dataset 2: Delphi Study

1.1 List all methods that are used for data collection in your project.

Dataset 1 interviews, meetings, workshops, questionnaire surveys document analysis **Dataset 2** expert panel questionnaire survey

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

Dataset 1 Data collection will take place across all the testbeds between project months 12 and 34. Members of the MEDiate Testbed lead organisations will be involved continually between the project months 12 and 34. Testbed sub-stakeholders (i.e., organisations and individuals identified by the Testbed leads) will be contacted 2-3 times between months 12 and 34. It is difficult to estimate the total time that anyone sub- stakeholder organization will be engaged with the project, but it is likely to be in the region of 2-4 weeks between project months 12-34. All datasets will be securely stored in the ARU password protected system and will be anonymized for publication purposes and for long-term data storage.

Dataset 2
An expert panel will be constituted in project month 28. Experts will be invited to join the panel and asked to complete a Delphi questionnaire on 3 occasions between project month 28 and project month 34. Each iteration of the questionnaire should take no more than 30 minutes to complete. The questionnaire will be carried out online through the EUSurvey system. The dataset will be anonymized for publication purposes and for long-term data storage.

2. DATA STORAGE AND SHARING

2.1 Where will the data collected (and associated metadata) be stored and backed up?

Dataset 1
All data will be stored on ARU's password protected computer system and backed up in accordance with ARU's data management policy.

Dataset 2
All data will be stored on ARU's password protected computer system and backed up in accordance with ARU's data management policy.

2.2 How and when will data be shared or made publicly available? (if there are restrictions to data sharing or embargo reasons, please specify them)

Dataset 1:

Some data will be anonymized, analyzed and made available in deliverables D5.1 and D5.2. These deliverables are currently classified as 'EU confidential' and, as such they will not be placed into the public domain. Negotiations are currently underway to get these deliverables reclassified as 'sensitive' in which case the deliverables will be put into the public domain after the end of the project. The rest of the data will be anonymized, analyzed and made available in Deliverable D5.4, which is designated as public and will be placed into the public domain once it is accepted by the EU.

Dataset 2
The data will be anonymized, analyzed and made available in Deliverable 5.3 once the deliverable is accepted by the EU.

Journal and conference papers drawing on both datasets will be published throughout the duration of the project in compliance with the dissemination levels.

2.3 Where will data be preserved long-term (for example a data repository or archive)?

Dataset 1
All data will be stored long-term on ARU's password protected IT system.

Dataset 2
All data will be stored long-term on ARU's password protected IT system.

2.4 What methods or software tools will be needed to access and use the data (if any)?

Dataset 1
To access data: ARU email service, EUSurvey, MSTeams, meetings in person.
To use the data: MSOffice, Q-GIS, MATLAB.

Dataset 2
To access data: ARU email service, EUSurvey.
To use the data: MSOffice, MATLAB.

2.5 Will the application of a unique and persistent identifier (such as a Digital Object Identifier (DOI)) to each data set be ensured? (if applicable)

Dataset 1
Deliverables D5.1 and D5.2 will only obtain a persistent identifier if they are declassified and it is possible to upload them to a repository such as Zenodo.

Deliverable D5.4 will obtain a persistent identified DOI after it is accepted by the EC and uploaded to a repository such as Zenodo.

Journal and conference papers prepared using not-classified data will have a permanent DOI or the ISSN or ISBN.

Dataset 2
Deliverable D5.3 will receive a DOI after it is uploaded to a repository such as Zenodo.

Journal and conference papers prepared using this dataset will have a permanent DOI or the ISSN or ISBN.

3. RESEARCH ETHICS CHECKLIST

3.1 The ethics appraisal process in Horizon Europe includes an Ethics Self-Assessment at the application stage. MEDiate ethics self-assessment detected that the activities at risk regarding ethics are the following:

1. The handling of participant personal data through Participatory Action Research (PAR) cycles, co-design and evaluation phases (WP1, WP3, WP4, WP5), in particular for identifying any possible impact of behavioral and cognitive biases in risk perceptions (WP1).
2. The data protection of general knowledge created in WP2 relating to multi-hazard interactions and cascading impacts (e.g., such knowledge can reveal sensitivities when related to critical buildings and/or infrastructure vulnerability, etc.).
3. The exploitation of the physical and social vulnerability models to be developed in WP3.
4. The collection and elaboration of real-life data from the testbeds (e.g., historical data from past multihazard events, potential data from sensors, etc.).

Each WPL must provide a response to ALL questions (1 to 16).

	Will your research (delete YES or NO as appropriate):		
1	Involve human participants?	**YES**	NO
2	Utilise data that is not publicly available?	**YES**	NO
3	Create a risk that individuals and/or organizations could be identified in the outputs?	**YES**	NO
4	Involve participants whose responses could be influenced by your relationship with them or by any perceived, or real, conflicts of interest?	**YES**	NO
5	Offer financial or other forms of incentives to participants?	YES	**NO**
6	Involve the discussion of topics that participants may find distressing?	**YES**	NO
7	Take place outside of the country where you work and/or are enrolled to study?	**YES**	NO
8	Cause a negative impact on the environment (over and above that of normal daily activity)?	YES	**NO**
9	Cause (or have the potential to cause) pain, physical or psychological harm or negative consequences to humans?	**YES**	NO
10	Relate to military sites, personnel, equipment, or the defence industry?	YES	**NO**
11	Risk damage/disturbance to culturally, spiritually or historically significant artefacts/places, or humanremains?	YES	**NO**
12	Contain research methodologies you, or members of your team, require training to carry out?	YES	**NO**
13	Risk being construed as encouraging terrorism or inviting support for proscribed organisations and/or contain extremist views that risk drawing people into terrorism or are shared by extremist groups	YES	**NO**
14	Involve you or participants in a) activities which may be illegal and/or b) the observation, handling or storage (including export) of information or material which may be regarded as illegal?	YES	**NO**
15	Require ethical approval from any recognised external agencies (Social Care, Ministry of Justice, Ministry of Defence)?	YES	**NO**
16	Involve processing special category data[5] and/or intend to recruit 100 or over participants?	YES	**NO**

5 Special category data is defined as personal data which reveals racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a person, and data concerning health or data concerning a person's sex life or sexual orientation.

Please detail any additional ethical risks (threats) that haven't been covered in the previous questions:

Ethical risk identified	Data involved	Mitigation measure(s)
1. Some data might be classified, so subject to security restrictions.	Dataset1	Security panel will review the deliverables, and suggest whether they could be declassified.
2.		
3.		

3.2 Have you identified a confidentiality risk related to the data collected?

Dataset 1
Yes

Dataset 2
Yes

3.3 For what purpose and how do you process personal data?

Personal data will not be collected, but organisational data will be. There is a remote risk that in referring to an organization it may be possible to identify the individual within the organization who provided information. To mitigate this risk, all data placed in the public domain will be aggregated data across a number of respondent organisations or individuals. No single source data will be used without the express consent of the individual who provided it. A withdrawal option will be provided until the data analysis begins.

3.4 MEDiate has developed a Protection of Personal Data (POPD) procedure to ensure the data collection, processing and storage are GDPR compliant.
Are you familiar with this type of procedure? (YES/NO)

Yes

NOTE A: We inform you that when processing personal data you will need to use a letter of ***Informed Consent****. This* ***Informed Consent*** *will be used to brief your study subjects regarding the MEDiate project. You will provide information about what it means for the interviewee to take part in the survey, so they give consent to participate in the research effort providing data. It should explain in a few sentences the research goal and why the contribution that we are asking is important.*

The INFORMED CONSENT for all MEDiate data collection can be added as a click box to a digital platform such as EU Survey or it can be signed by the interviewee. Enriched by the answers WP leaders provide to this questionnaire, the final version of the INFORMED CONSENT will be shared with you ASAP.

NOTE B: We inform you that when processing personal data you will need to use a ***Privacy Statement*** *.* ***This Privacy Statement*** *will stipulate:*

1. Why and how do we process the personal data collected?
2. On what legal ground(s) do we process your personal data?
3. Which personal data do we collect and further process?
4. How long do we keep your personal data?
5. How do we protect and safeguard your personal data?
6. Who has access to your personal data and to whom is it disclosed?
7. What are your rights and how can you exercise them?
8. Contact information
9. Where to find more detailed information?

The PRIVACY STATEMENT for all MEDiate data collection will need to be consented to by the data providers in some format. For example, it can be added as a click box to a digital platform such as EU Survey or it can be signed by the interviewee. Enriched by the answers WP leaders provide to this questionnaire, the final version of the PRIVACY STATEMENT will be shared with you ASAP.

4. INVESTIGATING FOR PRIVACY STATEMENT BREACHES

4.1 Do you plan to re-use the personal data collected for later studies beyond the scope of MEDiate?

No

4.2. Is there a risk that the personal data collected, stored and/or re-used be used or accessed by an organization external to the consortium?

There is a remote risk that data could be stolen by and unauthorized 3rd party. To mitigate this risk all data will be stored in a password protected system and will be anonymized as soon the withdrawal deadline has passed.

MEDiate Ethics and Data Management Questionnaire (for WP leaders)

AIM: This questionnaire aims at identifying and mapping all aspects related to data collection in MEDiate WPs. It is intended to gather a broad view at WP level at the beginning of the project *Note: A separate Task-level questionnaire showing a simplified checklist to be completed and submitted to the data management team prior to all instances of data collection in MEDiate will be later shared.*

WP Number

6

Questionnaire filled by

Name:Fabio Surname :Bolletta email: fabio.bolletta@rina.org

Table of content of the questionnaire:

To be filled by all WP leaders (WP1 to WP6)

0.1 Please list and briefly describe your MEDiate activities that entail data management.

(1)To create awareness of the project results within local, regional communities and authorities as well as with relevant stakeholders within the disaster risk prevention and management fields, the research community and security organizations in Europe and elsewhere; (2) To disseminate the existence and outcomes of the project to academic and professional communities, and the general public; (3) To engage stakeholders and the general public with MEDiate; (4) To prepare a set of best-practice manuals, training materials and demonstrations to raise awareness amongst public/private organizations and individuals of the benefits of the MEDiate DSS system; (5) To develop a strategic exploitation approach, including the definition/elaboration of an appropriate business model, considering intellectual property, that can support the potential exploitation of the project's outcomes; including the development of short, medium and long-term pathways to impact; (6) To coordinate the dissemination, communication and exploitation activities of all partners to ensure no efforts are duplicated or any stakeholder neglected.

0.2 Please map the foreseen data inputs to the desired research outputs.

Data input	**Output/results type**

Relevant events	Dissemination of the events and project
Schedulated Publications	Dissemination of the publications and project
Data of external users	Sending newsletter

0.3 Collection of dataset(s): describe the dataset(s) you will collect, create, and/or use.

Dataset 1: Short name of data set to be collected: schedulated events and pubblications Description of dataset: date of events, collegues involved, references. Format/volume: papers, digital post Space/Time granularity: post or link Date of data gathering/dataset creation and geographic coverage: n.a./ Europe
Dataset 2: Short name of data set to be collected: external stakeholders Description of dataset: name, e-mail address, body/company Format/volume: excel file Space/Time granularity: dataset Date of data gathering/dataset creation and geographic coverage: n.a.
(add more if needed)

For each dataset (e.g. Dataset 1, Dataset 2…), please answer questions from 1.1 to 3.2.

1. DATA COLLECTION PROCEDURES

1.0 Dataset number (referring to question 0.3) of the dataset analyzed from question 1.1 to question 3.7

variable number depending on desires

1.1 List all methods that are used for data collection in your project.

Method 1: events collection and open source papers Method 2: …

1.2 Data collection characteristics: indicate where the data collection will take place, how many waves/number are you planning, how long the data collection process will take, and how long (on average) any single study subject (i.e., person) will be exposed to your procedure (if applicable).

2. DATA STORAGE AND SHARING

2.1 Where will the data collected (and associated metadata) be stored and backed up?

We do not collect data. these will be public. Stakeholders list in project repository

2.2 How and when will data be shared or made publicly available? (if there are restrictions to data sharing or embargo reasons, please specify them)

Information that depends on the type of publication and the type of event

2.3 Where will data be preserved long-term (for example a data repository or archive)?

10 years for stakeholders lists as European law

2.4 What methods or software tools will be needed to access and use the data (if any)?

Excel file

2.5 Will the application of a unique and persistent identifier (such as a Digital Object Identifier (DOI)) to each data set be ensured? (if applicable)

n.a.

3. RESEARCH ETHICS CHECKLIST

3.1 The ethics appraisal process in Horizon Europe includes an Ethics Self-Assessment at the application stage. MEDiate ethics self-assessment detected that the activities at risk regarding ethics are the following:

1. The handling of participant personal data through Participatory Action Research (PAR) cycles, co-design and evaluation phases (WP1, WP3, WP4, WP5), in particular for identifying any possible impact of behavioral and cognitive biases in risk perceptions (WP1).
2. The data protection of general knowledge created in WP2 relating to multi-hazard interactions and cascading impacts (e.g., such knowledge can reveal sensitivities when related to critical buildings and/or infrastructure vulnerability, etc.).
3. The exploitation of the physical and social vulnerability models to be developed in WP3.
4. The collection and elaboration of real-life data from the testbeds (e.g., historical data from past multihazard events, potential data from sensors, etc.).

Each WPL must provide a response to ALL questions (1 to 16).

	Will your research (delete YES or NO as appropriate):	
1	Involve human participants?	NO
2	Utilise data that is not publicly available?	NO

3	Create a risk that individuals and/or organizations could be identified in the outputs?	NO
4	Involve participants whose responses could be influenced by your relationship with them or by any perceived, or real, conflicts of interest?	NO
5	Offer financial or other forms of incentives to participants?	NO
6	Involve the discussion of topics that participants may find distressing?	NO
7	Take place outside of the country where you work and/or are enrolled to study?	NO
8	Cause a negative impact on the environment (over and above that of normal daily activity)?	NO
9	Cause (or have the potential to cause) pain, physical or psychological harm or negative consequences to humans?	NO
10	Relate to military sites, personnel, equipment, or the defence industry?	NO
11	Risk damage/disturbance to culturally, spiritually or historically significant artefacts/places, or humanremains?	NO
12	Contain research methodologies you, or members of your team, require training to carry out?	NO
13	Risk being construed as encouraging terrorism or inviting support for proscribed organisations and/or contain extremist views that risk drawing people into terrorism or are shared by extremist groups	NO
14	Involve you or participants in a) activities which may be illegal and/or b) the observation, handling or storage (including export) of information or material which may be regarded as illegal?	NO
15	Require ethical approval from any recognised external agencies (Social Care, Ministry of Justice, Ministry of Defence)?	NO
16	Involve processing special category data[6] and/or intend to recruit 100 or over participants?	NO

Please detail any additional ethical risks (threats) that haven't been covered in the previous questions:

Ethical risk identified	Data involved	Mitigation measure(s)
1. n.a.	n.a.	n.a.

6 Special category data is defined as personal data which reveals racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a person, and data concerning health or data concerning a person's sex life or sexual orientation.

3.2 Have you identified a confidentiality risk related to the data collected?

the only data collected will be processed for the purposes also indicated in the privacy policy accessible on the site https://mediate-project.eu/privacy-policy/

3.3 For what purpose and how do you process personal data?

Sending project newsletter

3.4 MEDiate has developed a Protection of Personal Data (POPD) procedure to ensure the data collection, processing and storage are GDPR compliant.
Are you familiar with this type of procedure? (YES/NO)

yes

NOTE A: We inform you that when processing personal data you will need to use a letter of ***Informed Consent****. This* ***Informed Consent*** *will be used to brief your study subjects regarding the MEDiate project. You will provide information about what it means for the interviewee to take part in the survey, so they give consent to participate in the research effort providing data. It should explain in a few sentences the research goal and why the contribution that we are asking is important.*

The INFORMED CONSENT for all MEDiate data collection can be added as a click box to a digital platform such as EU Survey or it can be signed by the interviewee. Enriched by the answers WP leaders provide to this questionnaire, the final version of the INFORMED CONSENT will be shared with you ASAP.

NOTE B: We inform you that when processing personal data you will need to use a ***Privacy Statement*** *.* ***This Privacy Statement*** *will stipulate:*

1. Why and how do we process the personal data collected?
2. On what legal ground(s) do we process your personal data?
3. Which personal data do we collect and further process?
4. How long do we keep your personal data?
5. How do we protect and safeguard your personal data?
6. Who has access to your personal data and to whom is it disclosed?
7. What are your rights and how can you exercise them?
8. Contact information
9. Where to find more detailed information?

The PRIVACY STATEMENT for all MEDiate data collection will need to be consented to by the data providers in some format. For example, it can be added as a click box to a digital platform such as EU Survey or it can be signed by the interviewee. Enriched by the answers WP leaders provide to this questionnaire, the final version of the PRIVACY STATEMENT will be shared with you ASAP.

4. INVESTIGATING FOR PRIVACY STATEMENT BREACHES

4.1 Do you plan to re-use the personal data collected for later studies beyond the scope of MEDiate?

The data collected in this WP refer to research carried out, therefore public and protected by copyright

4.2. Is there a risk that the personal data collected, stored and/or re-used be used or accessed by an organization external to the consortium?

Personal data are related to the name of the colleague who worked on a paper or presented at an event, so anyone can take that data for illicit purposes, of course not identifiable in this step. the other data collected will be processed for the purposes also indicated in the privacy policy accessible on the site https://mediate-project.eu/privacy-policy/ for sending newsletter to interested users.